2.1 INTRODUCTION

An essential aspect of research report is the review of related literature. Every investigator must know what sources are available in his field of enquiry, which of them he likely to use and how to find them. To avoid duplication and makes the research work a perfect and unique one and it is essential for the researcher to go through the related literature. A careful review of the research journals, books, dissertation, theses and other sources of information on the problem to be investigated are one of the important steps in the research study. It helps him to make a sound foundation for this investigation. According to Best (1963), related literature helps the research worker to find what is already known, what others have attempted to find out, what methods of attack have been promising or disappointing and what problems remain to be solved. It furnishes him with indispensable suggestions about comparative data, good procedure, and likely methods and tried techniques. It gives the research worker an excellent overview of the work that has been done in the field and helps him to keep up with recent development.

2.2 RESEARCH STUDIES

The scope of review of literature is limited to the reported studies with particular reference to the behavioural problems, teacher attitude, stress, adjustment and teaching competence.
In this chapter the researcher has reviewed the researches on teachers attitude, stress, adjustment, teaching competency, academic achievement and home environment conducted in India as well as in foreign countries. These researches helped the present Investigator in planning, defining and delimiting the present study. This review has also been helpful in deciding the procedure of the present study and the interpretation of the findings. The researches reviewed in this chapter are divided into five sections.

Studies related to stress levels

2.2.1 Studies related to Stress levels Identification

2.2.2 Studies related to Adjustment

2.2.3 Studies related to Teacher Competence

2.2.4 Studies related to Academic Achievement

2.2.5 Studies related to Home Environment

2.2.1 Studies Related to Stress level Identification

Stress is a natural and unavoidable feature of life experienced at one time or another by the vast majority of those engaged in professional work. The definitions of stress are many and varied, ranging from simple one word statements such as tension or pressure to complex medical explanations for the physiological responses of the human body to certain stimuli. There is a general consensus, however, that stress is a physical, mental or emotional reaction resulting from an individual’s response to environmental tensions, conflicts, pressures, and similar stimuli. It is more than nervous anxiety and feelings of tension and tightness as has been suggested (e.g., Greenberg, 1984), and Fontana (1989) defines it as ‘a demand made upon the
adaptive capacities of the mind and body’, a demand which, if continued beyond the ability of these capacities to respond, leads to the physical and psychological exhaustion and possibly ultimate collapse referred to by Selye (e.g., 1976).

Responses to potentially stressful situations can vary greatly from individual to individual, as discussed more fully in Fontana (1989), and there is in consequence a need for research designed to identify the particular variables such as personality, age and sex which may render certain individuals more prone than others to experience debilitating levels of stress; nowhere is this more true than in professions such as teaching, where practitioners are subject to a high incidence of potentially stressful situations (Wilkinson, 1988).

Borg (1990) in a review of teacher stress research, concludes that although a number of studies have been published the great majority of them are now somewhat dated or are based upon very small samples. In addition, the successive rapid changes with which teachers are having to come to terms, such as the national curriculum, statutory assessment and school reorganisation, may conspire to alter somewhat the picture of teacher stress revealed by existing research. In urging this point, Borg concludes that the studies he reviews may thus no longer accurately reflect the current state of affairs.

In the present study, the focus is upon the correlates between teacher-related variables-specifically personality factors — and teacher stress. The literature shows that this is particularly a neglected area, in spite of the conclusion by Kyriacou and Sutcliffe (1978) that the response of a teacher to the demands made upon him/her will depend upon the interaction between the teacher’s individual characteristics
(personality traits, biographical details etc.) and the teacher’s perception of these demands (see also Gray and Freeman, 1987). Capel (1990) therefore suggests the need to identify teacher characteristics as a way of arriving at predictor variables, and also as a way of understanding why certain individuals succumb to professional pressure more readily than others.

It is difficult to present an adequate definition of stress which is acceptable to although McGrath’s suggestion that stress is “a (perceived) substantial imbalance between demand and response capability, under conditions where failure to meet demand has important (perceived) consequences” (1970, p. 20), has found wide acceptance. It certainly seems helpful to recognise that stress is situation-specific.

Approaches to the study of stress using questionnaire techniques have been used among teachers and other white collar workers (e.g., Kyriacou, 1980), among sixth formers (Dobson, 1980), and among undergraduates (Furnham, 1981). The instruments used by Kyriacou and by Dobson were specifically work-related, and reflected the multidimensional nature of stress. Furnham was concerned with stress in social situations.

McGrath (1976) distinguished six sources of work-related stress, viz task (e.g., difficulty, ambiguity); role (e.g., conflict, ambiguity); physical environment (e.g., extreme cold); behavioural setting (e.g., crowding); social environment (e.g., hostility); intrapersonal environment (e.g., anxiety, perceptual style). The sources are not seen as independent of one another, and there is likely to be two-way interaction between perceived stress and its source or sources. Thus, for example, uncertainty or ambiguity, which elicits exploration, may also be a key stimulus to anxiety (e.g.,
Cattell, 1966); and Houston (1977) reported significant relationships between dispositional anxiety and induced stress.

The convergent validity of the Kyriacou instrument is suggested by a significant correlation between stress and locus of control; it was argued that higher levels of stress would be expected among persons who perceived control over their lives to be largely external. Positive relationships may be expected between stress and reported anxiety, though they would not necessarily be statistically significant since certain types of stress are unlikely to manifest themselves as anxiety.

Rutter (1981) believes that the concept of psychosocial stress in childhood is too general and that various life events experienced by children, particularly those involving loss or separation, should be analysed more carefully. He further believes that individual characteristics such as personality factors, vulnerability to stress and inability to cope with it deserve special consideration, thus, implying its multidimensional nature.

School pupils and college students generally distinguish between masculine and feminine subjects when asked to rate academic and practical disciplines along a dimension ranging from masculine to neutral to feminine. Wood work and metal work are rated as highly masculine, followed by the physical sciences and mathematics; cookery and typing are rated as highly feminine, followed by modern languages, biology and psychology (Weinreich-Haste, 1979, 1981; Archer and Freedman, 1989).

Only one of these rating-scale studies (Weinreich-Haste, 1981) involved secondary school age pupils. A decade has passed since it was carried out, and during
this time there have been strong directions from the UK central government to encourage girls to enter scientific and technological training (e.g., Department of Education and Science, 1980), as well as a number of specific initiatives, such as Women into Science and Engineering (WISE), the Nuffield Science Project, the Technical and Vocational Educational Initiative (TVEI), and Girls Into Science and Technology (GIST: Kelly et al., 1987). Computers have entered the classroom, and there have been a number of curricular innovations, such as CDT (craft, design and technology) emerging as a compulsory subject for both sexes. For this reason, it was decided to carry out a study similar to that of Weinreich-Haste (1981) on a sample of young secondary school pupils in the UK, using a range of subjects which are now on the comprehensive school curriculum.

First year pupils were asked to rate each of 17 subjects on a semantic differential, which consisted of a series of seven-point scales (4 being the neutral point), containing masculine-feminine and other descriptive dimensions, chosen from those used by Weinreich-Haste (1981) as representing ones familiar to children of this age. Masculine-feminine ratings for each discipline were tested statistically to determine whether they were significantly different from neutral (Walker et al., 1986; Archer and Freedman, 1989), and their relationship to other dimensions was investigated separately for boys and girls (since other studies have found a different pattern of inter correlations between questionnaire measures for males and females: Archer, 1989a; Granleese et al., 1988).

A major problem in conducting research into stress-related factors in adolescents, particularly in the school-related area, is the selection of a measurement
The selection difficulties are shaped by (a) the variety of theoretical orientations about stress, (b) the frequent unavailability of information about validity and reliability, (c) the relevance of the instrument to the focus and geographical context of the research and (d) the proliferation of available instruments.

The problems of instrument selection are illustrated in the field of life events research. Holmes and Rahe’s (1967) pioneering work in this area has generated considerable research. However, although Holmes and Rahe’s Social Readjustment Rating Scale (SRRS) is widely acknowledged (Bee and Mitchell, 1980; Rathus and Nevid, 1983; Girdano and Everly, 1986; Johnson, 1986), many researchers have found it necessary to modify the SRRS, sometimes quite extensively, in an attempt to tailor it to the specific contexts of their research. The result is instruments like the Positive and Negative Impact Scale (Zimmerman, 1983), the College Schedule of Recent Experiences (Marx et al., 1985), and the Academic Stress Scale (Kohn and Frazer, 1986), all of which seek information about stress among college students; the Adolescent Life Change Events Scale (Yeaworth et al., 1980), the Junior High Life Experiences Survey (Swearingen and Cohen, 1985), and the Life Events Questionnaire (Newcomber et al., 1981, 1986; Compas et al., 1986) which are used with adolescents; and the Coddington Life Stress Scale (Coddington, 1972a, 1972b) and the Life Events Checklist (Johnson and McCutcheon, 1980; Brand and Johnson, 1982; Johnson, 1986) which are used with both children and adolescents.

Similarly, wide-ranging variations are found in stress instruments which are derived from other theoretical orientations. For example, in Type A/Type B research many instruments have been devised for use with children and adolescents (e.g.,
Siegel and Leitch, 1981; Wolf et al., 1982; Murray and Bruhn, 1983; Fontana and Dovidio, 1984; Gerace and Smith, 1985; Kirmil-Gray et al., 1987). Additionally, measures of stress have been made through the State-Trait Anxiety Inventory (Wehr and Kaufman, 1987), the children’s version of the Student Stress Inventory (Stanton, 1985), the College Student’s Life Events Inventory (Hart et al., 1987), the Uplifts and Hassles Scales (Kanner et al., 1981), Berkman’s Life Events Scale (Kanner et al., 1981), the Perceived Competence Scale for Children (Harter, 1982), as well as through the various daily hassle and major event inventories used by Elwood (1987).

The measurement of coping mechanisms used by adolescents to deal with stressors has received less attention in the literature than the measurement of stressors, but similar problems apply when attempting to identify good instruments. The confusing array of instruments includes the Matson Evaluation of Social Skills in Youngsters (Kazdin et al., 1986), the Perceived Competence Scale for Children (Harter, 1982), and the Self-Efficacy Index (Holahan et al., 1984). Elwood (1987) measured coping responses among Year 4 and Year 7 using the Coping Response Inventory. Hart et al. (1987) and Rim (1987) used the Ways of Coping Checklist to measure coping and well-being among college students. In most of these coping instruments, little attention has been given to assessing validity and reliability. The exception was Patterson and McCubbin’s (1987) Adolescent Coping Orientation for Problem Experiences. Construct validity was assessed using factor analysis and 12 factors, some with as little as two items loading significantly, were identified. Reliability data were presented for the 12 factors.
It is clear that few of the instruments reviewed were devised using stringent statistical procedures to develop instruments with valid and reliable subscales. Very few studies reported statistics relating to validity and reliability.

The aim of this study was to produce two valid and reliable scales with meaningful subscales. The first would measure the school-related stressors experienced by a sample of adolescents attending secondary school. The second would assess the coping mechanisms used by adolescents to handle their problems and stressors.

2.2.2 Studies Related to Adjustment

A number of recent studies have shown that teachers in English schools experience their work as stressful in varying degrees. Dunham (1976) produced evidence that the experience of stress increased with the reorganisation of secondary education in the U.K., and later (1980) found that both English and German teachers perceived ‘poor staff communications’ and ‘disruptive pupil behaviour’ as major stress situations. Kyriacou and Sutcliffe (1978) identify four main sources of stress which they describe as ‘pupil misbehaviour’, ‘poor working conditions’, ‘time pressures’ and ‘poor school ethos’. Fletcher and Payne (1982) also found reports of high levels of stress among teachers who identified ‘demands made by individual children’, ‘not having enough time’ and ‘the continual need to be creative’ as the main job demands.

The data supporting these findings are based on questionnaire responses, with the exception of Dunham (1980), who added a half hour interview. Smilansky (1984) related self-reported levels of stress in Israeli teachers to ratings by principals, other
teachers, parents and pupils regarding their quality as teachers. The ‘better’ teachers reported higher levels of stress. Smilansky suggests that the ‘better’ teacher has the professional confidence to admit to the experience of stress, which may be seen as a weakness. This casts doubt on the validity of data that rely solely on questionnaire responses.

The experience of stress has been linked to the extent individuals perceive themselves to be in control of a particular situation and Miller (1980), on the basis of tightly controlled laboratory experiments, argues that to be ‘in control’ of a situation makes it more predictable and hence less stressful. The same notion of being “in control’ can be applied to the teachers in the classroom, even though the variables are more complex.

The relationship between the effects of stress (teacher burnout) and locus of control, the degree to which individuals see themselves as responsible for what happens to them, was explored by McIntyre (1984). He showed that, on his measures, the two areas were positively related at a statistically significant level. Stress was measured on subscales of the Maslach Burnout Inventory (1981) and locus of control on the Nowicki-Strickland Adult Scale (1973). However, since the variance common to the two measures was little more than 2 per cent this means that the relationship is of low predictive value.

Ways for teachers to reduce stress are described by Iwanicki (1983). He advises working directly on symptoms of stress using techniques such as relaxation, exercise, improved diet and not dwelling on problems. Improved communication and shared power in the organisation can also reduce stress and techniques to improve
these are put forward. An integration of both approaches has been developed by Hall et al. (1984). In their in-service courses they invite members to take more responsibility for the means they use to relate to themselves and to others. Evaluation of these courses permitted inference of a relationship between control and stress which was made without the use of conventional questionnaire data.

The courses offered 6 days of experiential learning sessions during a 7-day period. A small group experience (Rogers, 1971) took up about one-third of this time, and a range of more structured learning situations dealt with counseling and interpersonal skills, assertion training, non-verbal communication, values clarification and the management of stress. The course members were not told what to learn, but were invited to develop their awareness of what they did and to explore new ways of behaving. In the light of this increased awareness they were encouraged to re-evaluate their responsibility, especially where habit may have led them to misperceive it. In psychological terms, they were encouraged to develop a more internal locus of control where this seemed to them appropriate.

The term “Emotional Intelligence” was coined by Mayer and Salovey (1989) they defined “emotional intelligence” as “the ability to monitor one’s own and others feelings and emotions, to discriminate among them and to use information to guide one’s thinking and action.” This definition talks mostly about perceiving and regulating emotions. More recently they (Mayer and Salovey 1997) have updated their definition by stating “Emotional intelligence as “the ability to perceive accurately, appraise and express emotions, generate feelings that facilitate thoughts and an ability to regulate emotions to promote growth.”
The concept of emotional intelligence has its roots in the concept of Social Intelligence – ability to understand and relate to people. Gardner in his book “Frames of Mind” has established “personal intelligence” as an important domain characterized by interpersonal understanding and interpersonal understanding. The five main components of emotional intelligence at work identified by Goleman are self awareness, managing emotions, motivating oneself, empathy and handling relationships.

Social scientists are identifying the relationships between emotional intelligence to various phenomenon such as leadership, group performance individuals achievements and success. Goleman (1995) stated that emotional intelligence, the skills that help people to harmonize should become increasingly valued as a” workplace asset” in the work life and it has become important ingredient of individuals and team success.”

Mere assessment of Intelligence Quotient or technical skills is not helpful. Identifying successful leadership requires assessing emotional intelligence of the individual. According to Aleen Cameron who has developed ‘work profile questionnaire emotional intelligence version’ (WPQEI) many successful companies have mission statements and values placed on positive emotions which they want their employers - and customers to feel. Studies on emotional stability and jobs related variables have shown that emotional stability moderately predicting performance on job satisfaction (Yoon 1997).

There is now little doubt that continuous exposure to high stress has a number of negative psychological, behavioral and physiological consequences and certain
personality and social factors help to resist the negative consequences of stress. Such factors are generally clubbed under a common rubric “stress resistance resources”. Social support is one of the most widely studied resistance resource in the area of stress and stress-outcomes research. The perception/belief that someone is ready to extend help or provide assistance either in emotional, informational or in practical terms generally helps to reduce stress experience and may also enhance the psychological and physical well-being of the individual.

Researches dealing with the role of social support have suggested different paths through which it is linked with stress and stress outcomes. A sizable number of researches have demonstrated a moderating/buffering effect of social support (Brown and Harris, 1978; Cobb, 1976; Lim, 1996; Manning, Jackson and Fusilier, 1996; Singh, Srivastava, and Mandal, 1997; Sud and Malik, 1999; Turner, 1983.) while others have obtained its main/direct effect on stress’ as well as on stress outcomes. Moderating buffering effect assumes an interaction effect of stress X social support on health, and suggest a stress magnitude specific positive (health protecting) effect of social support. On the other hand, a number of researches suggest that social support has a positive effect on health, regardless of the level of stress experienced (Cohen Wills, 1985; Shumaker and Brownell, 1984). Researches demonstrating the positive main effect of social support suggest that it promotes health and well-being by satisfying the needs of affiliation and affection as well as by enhancing self esteem and self efficacy (Cohen and Wills, 1985).

Contrary to it, the “stress prevention” function of social support has also been observed by a number of researchers (Erera, 1992; Ganster, Fusilier and Mayes, 1986;
Lim, 1996; Manning et al. 1996; Singh, Srivastava and Mandal, 1997; Srivastava, 1996) and has been labeled as “negative main effect” of social support (e.g., Parsuraman et al., 1992; Singh and Srivastava, 1997). According to this hypothesis the availability of social support reduces the perceived discrepancy between the environmental demands and the coping resources and thereby the stress experience, which in turn decreases the possibility of health problem (Erera, 1992: Lim, 1996; Manning et al., 1996).

The third variable sometimes also works as a mediator of the relationship between two variables by causally influencing (directly or indirectly) both the variables (Bramwell, 1996). The evidence for a strong main effect of (or a significant relationship with) social support on stress and health suggests its causal priority over stress for explaining the observed variations in health. Given the significant correlation of social support with both stress and health, it is speculated that partialling out the covariance of social support from these variables will nullify or atleast, significantly reduce their relationship. This mediating effect hypothesis of social support assumes that social support has a two way influence on health i) a direct positive influence by promoting self esteem, self efficacy and by fulfilling needs for affection and affiliation and ii) an indirect influence by reducing stress experience (see Turner, 1983 for a review).

Though, stress may lead to a number of negative health and behavioral consequences, the burnout syndrome (prevalent in helping profession) has received more attention in the recent literature because of its severity in terms of impairment of global functioning. The term burnout refers to a work-related stress syndrome
characterized by depersonalization, emotional exhaustion, cynicism and loss of personal accomplishment (Maslach and Jackson, 1981). It is viewed as a psychological strain due to very peculiar stress of constant interpersonal interaction, particularly with people in need such as patients, students, etc. One of the most influential definitions of burnout defines it as “a syndrome of physical and emotional exhaustion involving the development of negative self concept, negative job attitudes and loss of concern and feelings for clients” (Pines and Maslach, 1978, p. 233.). Though a bulk of research evidences provide support to the occupational stress-burnout relationship (e.g., Bartz and Maloney, 1986; Spoth and Konewko, 1986), the researches dealing with the role of social support in protecting from burnout syndrome have presented mixed findings. Some researchers have obtained a moderating effect of social support on stress-burnout relationship (Cronin-stubbs, 1985; Mohl, 1982; Pines, 1982) while others failed to obtain the same (Andrews, 1978).

In the light of foregoing discussion the present study makes an attempt to examine the nature of influence exerted by social support on occupational stress and burnout relationship. It has been hypothesized that if social support will highly correlate with both stress and burnout, then its mediation effect is more likely than the moderating effect in as much as the multicolinearity of the predictors will suppress the covariance of the interaction term. The study has also tried to differentiate the role of social support received from organizational and extra organizational sources in preventing burnout.
Over the years, research into occupational health and stress has concentrated on jobs suspected of being ‘stress risks’, such as air traffic controllers (Crump, Cooper and Maxwell, 1981), the police (Cooper et al., 1982), executives (van der Ploeg, Vis, Cooper and Spielberger, 1986), nurses working with the critically ill and dying (Cooper and Mitchell, 1990) and so on. Until recently, little systematic empirical work has been conducted to explore occupations or groups of workers undergoing transformation and change, although normally no thought to be under particular stress. One occupation which has undergone enormous legislative and occupational change during the last five years or more is the teaching profession (Cole and Walker, 1989). As the pressure has grown for those in teaching, more research in identify occupational stress has been undertaken, particularly on front line teachers themselves (Kyriacou and Pratt, 1985; Kyriacou, 1989).

2.2.3 Studies Related to Teacher Competence

Stress is an inevitable component the execution of any job and teaching is no exception to it. Teachers in any culture, face considerable number of problems in their day to day work life. In the Indian context factors like multiplicity of tasks and duties which include clerical work done by teachers, heavy work load, frequent transfers, physical facilities and implementation of government management policies like eradication of illiteracy, enumeration of cause, canvassing family planning programmes etc., were found to be among the factors influencing dissatisfaction and severe stress among primary school teachers.

Teacher stress may be defined as a “response of negative affect (such as anger or depression) by a teacher usually accompanied by potentially pathogenic and
biochemical changes (such as increased heart rate on release of adrenocorticotropic hormones into the blood stream) resulting from aspects of teacher’s job and mediated by the perception that the demands made up on the teacher constitute a threat to his self esteem on well being and by coping mechanism activated to reduce the perceived threat” (Kyriacou and Sutcliffe, 1978).

The problem of teachers stress has received increasing recognition over recent years (e.g., Borg, 1990; Capel, 1987; Fontana and Abouserie, 1993; Perlberg and Keinan, 1986; Wearing, 1989) Inspite of the fact that some investigations have played down the importance of occupational stress (e.g., Milstein and Farkas, 1988), the fact that stress in teachers is such a serious problem that it often requires therapeutic intervention. Several surveys’ of the sources of teacher stress have revealed teaching as highly stressful (Borg and Falzon, 1989; Broiles, 1982; Spooner, 1984; Ushasree, 1993). Although there are obvious differences in socio-demographic variables such as age, experience, gender and teacher rank, evidence suggests that stress has a discernible impact on most teachers (Brown and Ralph, 1992; Laughlin, 1984). In attempts to identify the major dimensions of teacher stress, a number of exploratory factor analytic studies have been undertaken (Clark, 1980; Dewe, 1986). At least five major dimensions of teacher stress have emerged from these various empirical studies.

The first component, labelled pupil misbehaviour, loads significantly on aspects of teaching such as noisy pupils, difficult class, large class size, pupils poor attitudes to work, having to supervise too many children because of teacher absence and so on. A second component (time/resource difficulties) exhibits substantial
loading on lack of sufficient time for individual instruction, a vague insufficiently detailed syllabus, shortage of equipment and poor facilities, administrative work, liaison and so on. A third dimension (professional recognition needs) involves the perception of a poor career structure with few promotional opportunities, inadequate salary and lack of good recognition for good teaching, while a fourth component (poor colleague, relations) concerns the attitudes of one’s peers, pressure from officers and parents. The fifth dimension involves heavy work load (Borg and Falzon, 1989).

Considerable number of studies focused their attention on teachers stress and burnout from various angles in the USA and the UK. However, there are not many investigations on teachers stress, teacher effectiveness and behavioural programme on Indian primary teachers. Therefore, in the present research an attempt has been made to conduct a study in our culture, to reveal the efficacy of behavioural programme in managing teacher stress and improving teacher effectiveness.

The features of this reaction are organized around the pituitary-adrenal cortical axis. Selye describes the triad of the alarm reaction as enlargement of the adrenals, shrinkage of the thymus and lymph nodes, and gastrointestinal ulceration.

This, like Cannon’s earlier proposal of a sympathetic nervous system/adrenal medulla stress reaction (Cannon, 1932), was made within the concept of systemic equilibrium. The general effect of the stress syndrome appears to be the modification of bodily processes so as to make available the energy resources normally kept in reserve or used for other functions such as digestion or anabolism (Cofer and Appley, 1964). Selye describes antecedents of the stress concept in the Hippocratic view of
disease not only as suffering but as toil: the fight of the body to restore itself. A recurring theme is a finite amount of “adaptation energy” which gets “used up” (Selye, 1950); or physiological and psychological integrative capacities which are taxed to the limit (Basowitz et al., 1955).

The nature of pituitary-adrenal involvement has been much debated, and the physiological (hormonal, metabolic, and so on) mechanisms involved in the stress reaction have been extensively investigated (Goldstein and Ramey, 1957; Oken, 1967).

The effectiveness of the behavioural approach to teaching in the normal classroom has been demonstrated in a wide variety of experimental studies carried out not only in American but also in British educational settings (O’Leary and O’Leary, 1972, 1977; Merrett, 1981; Wheldall, 1981a). These studies have focused on altering a diversity of class behaviours including classroom conduct, academic performance and aspects of social interaction. In these studies, behavioural intervention programmes were set up to change the undesirable behaviour of a single child or a small group or class of children from a wide range of educational populations from pre-school children (e.g., Wheldall and Wheldall, 1981) to college/university students (e.g., Pickthorne and. Wheldall, 1982).

The increased interest in the application of behavioural principles and techniques in the normal educational setting gave rise to the problem of how best to train teachers in the application of such methods. A thorough review of the literature on training teachers to use behavioural methods is provided in Merrett and Wheldall (1984). It soon became evident that the teacher could not be trained to use these
techniques effectively merely by reading behavioural manuals and/or attending courses (Cook, 1975). Training in behavioural approaches must go beyond the mere provision of theoretical knowledge. The emphasis should be on training teachers how to apply the behavioural approach rather than teaching them about behavioural principles per se (Berger, 1980). In the absence of skills-based training, teaching about can be useful but can never be a substitute for teaching how, as Merrett and Wheldall (1982) have shown. Their study failed to show any significant differences in tutors’ ratings of key teaching behaviours between student teachers who had and those who had not previously experienced a lecture course on the behavioural approach to teaching.

The Behavioural Approach to Teaching Package or BATPACK (Wheldall et al., 1983) was developed by a project team based in the Centre for Child Study at the University of Birmingham, made up of Kevin Wheldall (project director), Frank Merrett (research fellow) and, in the early stages, Alan Russell (an LEA educational children in the present study were involved in a highly intensive integration effort, the signs of segregation were clear and striking. Further research is needed to identify the source of these segregational tendencies in order to design effective programmes for their amelioration.

2.2.4 Studies Related to Academic Achievement

A number of studies have indicated a positive association between self-reported teacher stress and overall measures of mental ill-health (e.g., Pratt, 1978; Galloway, 1982; Tellenback et al., 1983). However, one drawback from employing overall measures of mental ill-health is that they do not enable the identification of
any particular pattern of mental symptoms to be made which would better inform a consideration of coping strategies (Beech et al., 1982; Fletcher and Payne, 1982).

A particularly useful measure of mental ill-health which provides a profile of psychoneurotic symptoms is the Middlesex Hospital Questionnaire (MHQ) (Crisp et al., 1978). The MHQ has been widely used in studies of occupational stress and mental ill-health (see Broadbent et al., 1982).

The present study sought to explore the association between self-reported teacher stress using the TESI (described below) and mental ill-health using the MHQ. It was hoped that by employing the MHQ, the study would provide some indication of whether this association was particularly strong in specific symptom areas. In the light of studies of teacher stress dealing with stress reactions (e.g., Dunham, 1976; Kyriacou and Sutcliffe, 1978) it was expected that the association would be particularly strong for the somatic scale of the MHQ.

Studies carried out in several countries indicate that a substantial proportion of teachers report relatively high levels of occupational stress (see, for instance, reviews by Borg, 1990; Kyriacou, 1987; Turk, Meeks and Turk, 1982). Widely cited major stressors for teachers generally have to do with pupil behaviour, time demands, work conditions, and staff relationships (e.g., Borg, Riding and Falzon, 1991; Clark, 1980; Galloway, Panckhurst, Boswell, Boswell and Green, 1987; Kyriacou and Sutcliffe, 1978a; Laughlin, 1984; Okebukola and Jegede, 1989; Payne and Furnham, 1987; Travers and Cooper, 1990).

In order to gain insight into the phenomenon, researchers have also investigated the role of such variables as teacher sex, age, and teaching experience in
the level of occupational stress. Generally speaking, these studies attest to a very little association suggesting, as some writers argue (e.g., Kyriacou and Sutcliffe, 1978a; Tellenback, Brenner and Lofgren, 1983) that personality characteristics rather than biographical ones are the more important determinants of individual differences in teacher stress. Several studies have addressed this issue and focused on the association between teacher stress (and burnout) and aspects of personality such as extraversion, neuroticism, locus of control and hardiness (e.g., Kyriacou and Sutcliffe, 1979; Pierce and Molloy, 1990; Soh, 1986; Wilson and Mutero, 1989). Generally speaking, results indicate a tendency for teachers who report greater stress to be introverts, ‘neurotic’, and hold external control expectancies; hardy teachers (i.e., those with ‘hardy personality’ (cf. Kobasa, 1979)) experience lower levels of burnout.

One personality related construct whose potentially important role in the experience of stress has been largely neglected is cognitive style; that is, the manner in which information is habitually perceived, processed and organised. Payne (1991) draws attention to how few studies there are that relate cognitive variables (abilities and styles) to ‘real world’ stress. The perception and evaluation of information, Kagan (1989) points out, are integral elements of both feelings of occupational stress and cognitive style; it is therefore not unreasonable to expect some relationship between the two.

‘Cognitive style’ has been defined as ‘... an individual’s characteristic and consistent manner of processing and organising what he sees and thinks about’ (Harre and Lamb, 1986, p. 46). In-built and enduring, cognitive (or learning) style is seen as an automatic, habitual, way of appraising information and situations. It is thought to
affect an individual’s ideas and attitudes, and the manner in which one thinks and makes decisions. Cognitive style also affects the ways in which the individual responds to events in his or her life, and the ways in which one relates to other people (Riding, 1991a).

Cognitive style is different from cognitive ability: ‘ability’ may be inferred from performance on cognitive tests, ‘style’ from the manner in which a test is completed (Hockey, 1990). Cognitive styles, Riding (1991a) points out, are intimately related to an individual’s personality and temperament.

In one of three articles which are broadly related to style Herbster, Abel and Prince (1988) surveyed 62 secondary (grades 7-12) student teachers in Montana to investigate the relationship between the individual’s preferred learning style and teacher stress, as well as with specific dimensions of stress. Learning style was defined as distinctive behaviours which serve as indicators of how a person learns from and adapts to the environment, and assessed by the Gregorc Transaction Ability Inventory. This diagnoses learning style as related to individual means of transacting with the environment in the process of acquisition of information. It is based on the use of abstract or concrete reference points for thinking and sequential or random preference for ordering. Four learning styles are possible: Concrete Sequential (CS), Abstract Random (AR), Abstract Sequential (AS), and Concrete Random (CR). The Wilson Stress Profile For Teachers was employed to yield the self-report stress measures: a stress score for each of nine dimensions and a composite score. One-way ANOVA on the composite stress score indicated no statistically significant differences for the four learning styles. Results also indicated one significant result
involving the dimension ‘intrapersonal conflicts’ (p<.05); with a significant difference between the two sequential learning style groups (i.e. CS, and AS). Moreover, t-tests on the concrete-abstract and the sequential-random continua almost reached statistical significance at the 5 per cent level suggesting that there might be some relationship between self-reported stress and abstract Vs concrete learner.

In a replication of the above study, Abel, Herbster and Prince (1989) surveyed 78 teachers in grades K-8 from across Northwest Georgia. Results confirmed the earlier finding of a lack of relationship between the composite measure of stress and the four learning styles, and attest to significant differences of the dimension ‘stress management techniques’ (p=.05) and or the concrete-abstract continuum (p=.05) (abstracts reported a higher level of stress than the concretes). The authors concluded that there is very little relationship between learning style and stress levels. This is possibility, they add, to the fact that most teachers are capable of operating in more than one learning style. They also recommend studies employing learning style instruments other than the one used in their studies (Herbster et al., 1988) with larger and more homogeneous samples of teachers (Abel et al., 1989).

Kagan (1989) carried out a study of the relationship between the teachers’ cognitive styles, the kind of preferred leadership style, and the types of occupational stress experienced. Defining cognitive style as an individual’s way of perceiving and organising information about people and events, Kagan focuses on the dimension labelled ‘inquiry mode’; that is, the way the individual attends to data, assesses problems and chooses alternatives. Employing the Inquiry Mode Questionnaire, five modes of thought were assessed: ‘synthesist’, ‘idealist’, ‘analyst’, ‘realist’ and
‘pragmatist’. The Teacher Occupational Stress Factor Questionnaire was used to indicate the level of perceived stress due to five dimensions. Seventy elementary public school teachers in Omaha (80 per cent of whom were females) participated in the study. Results showed that teachers who fitted the pragmatist profile (i.e., those having a tendency to evaluate situations in terms of subjective costs and benefits) reported relatively high scores on ‘lack of administrative support’, ‘working with teachers’ and ‘task overload’. Also, teachers who were more analytic (i.e. who consider method and plan, seek predictability through ordering of data, and attend to concrete detail), I really (i.e., those who would point to available resources and consider variability and immediately comprehensible facts) reported greater stress due to ‘task overload’. A negative relationship involving the latter factor and teachers who tended to fit the idealist profile (i.e., those who focus on process, values, and aspirations) was reported. In concluding, Kagan (1989) observes that ‘. . . relatively non analytic teachers . . . appeared to be relatively unsusceptible to many sources of occupational stress’.

Although these three studies are not directly comparable, they do draw attention to a possible link between teacher stress and cognitive style, generally. In addition, one may argue that ‘inquiry mode’ (Kagan, 1989), for instance, is essentially a very specific manifestation of an aspect of cognitive strategy and not the underlying cognitive style as such. Also, the assessments of cognitive styles employed above are introspective as opposed to measures like the Cognitive Styles Analysis (Riding, 1991) (described below) which allow people to operate in their habitual mode of behaving and which are essentially objective (‘objective’ in the sense that the
construct being assessed is not obvious from the nature of the task). Clearly, therefore, on account of this, and in view of the general dearth of studies addressing the issue, the relationship between teacher stress and cognitive style warrants further investigation.

In a paper which considers various conceptual formulations commonly referred to by theorists as cognitive or learning styles, and which represents an attempt to exert some conceptual cohesion among these formulations, Riding and Cheema (1991) conclude that research ‘... suggests that there are two basic dimensions of cognitive style: (1) the wholist-analytic style of whether an individual tends to process information in wholes or parts and (2) the verbal-imagery style of whether an individual is inclined to represent information during thinking verbally or in images’. These styles are thought to be orthogonal, such that an individual’s position on one dimension does not affect his or her position on the other.

Riding and Cheema identify various terms which have been used in the literature to describe what are believed to be different conceptions of essentially the same cognitive style. Within the confines of the wholist-analytic cognitive style family, for instance, the authors include such constructs as impulsivity-reflectivity, leveller-sharpener, holist-serialist and field dependence-independence.

The verbaliser-imager cognitive style family is said to incorporate the following terms; sensory modality preferences; verbaliser-imager; and verbaliser-visualiser. Riding and Cheema (1991) cite several studies in support of the view that verbalisers are extraverts and imagers are introverts.
The two styles may be assessed by the computer-presented Cognitive Styles Analysis (Riding, 1991b). This consists of three subtests. The first assesses the verbal-imagery style dimension by presenting, one at a time a number of statements (either containing information about conceptual categories or the appearance of items), to be judged true or false. As this instrument is used in the present study, it is described in detail. What distinguishes this from other similar measures (for a discussion of these see Riding and Cheema, 1991) is that whereas these other measures are very much introspective questionnaires which require subjects to say whether they think they can or cannot easily generate images, the present test of verbal-imagery allows people to actually respond in their habitual manner of behaving. Riding and Cheema (1991) also note that as the respondent has to read both the verbal and the imagery items, ‘... it is not a test of reading ability or of reading speed’.

The remaining two subtests, which assess the wholist-analytic dimension, consist of pairs of geometric figures. In the first of these subtests the subject is required to judge whether pairs of complex figures are either the same or different. In the second, the respondent has to decide whether a simple geometric shape is contained in a complex geometric figure; thereby the tank involves a certain degree of disembedding. As compared with the traditional method of assessing field dependence (e.g., the Embedded Figures Test), the present test, as Riding and Cheema observe, is different in three important ways. First, unlike the traditional method, it does not assume that if performance on the disembedding task is poor then the respondent is field-dependent; that is, it ‘positively measures’ the wholist
tendency. Second, the present test compares the individual’s relative performance on the two halves of the continuum. Third, by virtue of computer presentation, more sensitive timing of the disembedding task is possible.

The main purpose of this study was to investigate the relationship between the teacher’s cognitive style and self-reported teacher stress, as well as the stress due to various major aspects of the teacher’s work (as identified in Borg and Riding, 1991). It also sought to investigate the role in this relationship of other demographic variables of teacher sex, age, type of teaching post, type of school (selective or non-selective, boys’ or girls’ schools), and curriculum subjects taught (compulsory or non-compulsory).

Following Kyriacou and Sutcliffe (1976), teacher stress is here defined as the experience by a teacher of unpleasant emotions (such as anger, anxiety, tension, frustration and depression) resulting from aspects of the teacher’s job which are perceived by the teacher as a threat to his or her psychological and physical well-being.

The rationale underlying the study is that the appraisal process which mediates the experience of stress is influenced by cognitive functioning generally. While acknowledging that cognitive abilities may play an important role in this regard (cf. Payne, 1991), it is the personality-related construct of cognitive style that the present study addresses. Since cognitive style reflects the habitual manner in which the individual sees the world and reacts to the environment then persons with certain cognitive style characteristics may be more ‘stress prone’ than others. If this link is established then such knowledge may be useful for prediction and clinical purposes.


2.2.5 Studies Related to Home Environment

The relationship between home environment and cognitive development has been and continues to be a controversial issue in developmental psychology. It is an issue of both theoretical and practical significance. Theoretically, it is important to ascertain the environmental factors that correlate with cognitive development and the extent to which they account for unique variance in developmental status. This information is necessary for understanding the construct of cognitive development and the degree to which environmental processes regulate it. With respect to the applied significance of this issue, determining the environmental factors that correlate with cognitive development should provide an empirical foundation for the curricula of environmental enrichment and parent education programs aimed at enhancing children’s cognitive skills.

The arduous longitudinal investigations were not conducted to determine whether there exists a relationship between home environment and cognitive development. It is an empirical fact that environmental variables within the home correlate significantly with cognitive development, and this was demonstrated as early as 1929 by Van Alystne. However, because of advancements in statistical techniques, elaborations in methodological designs, more precise and direct assessments of home environment, and the research questions asked becoming more complex, we are now able to pursue the issue in greater depth.

Although the central issue investigated concerns the proximal home environmental variables that correlate with cognitive development and the magnitudes of these relationships, the researchers of the longitudinal studies
presented here have investigated a number of related issues. One of these issues involves the correlations of home environmental variables and cognitive development in different populations. There is no basis to assume that the environmental correlates of cognitive development are the same across populations. In fact, there is evidence indicating differential relationships across populations. Recently, Blau (1981) has shown that the socialization and social structural models that predicted intellectual performance in school children varied for blacks and whites. The researchers in this book examine the relationship between home environment and cognitive development in young children of white, black, and Hispanic families. Furthermore, the home environment-cognitive developmental relations are compared in males and females, first- and later-borns, children differing in perinatal risk and gestational age, and children from different socio-economic groups and whose parents differ in educational achievement.

By conducting multiple cross-time home and developmental assessments, the investigators are able to address another set of issues:

1. Age trends in magnitudes and patterns of relationships between home environment and cognitive development.
2. Stability of home environmental variables across various time intervals during infancy and the preschool years.
3. Whether the correlations between early home environment and subsequent cognitive development are due to early home environment per se, or are a function of the stability of home environment during the early years.
4. Whether early and later home environments have a cumulative effect in predicting subsequent developmental status.

5. The importance of receiving a consistently high quality of home stimulation compared to an inconsistent pattern of stimulation, as they relate to cognitive development.

6. Which of the different developmental tests or abilities are the most sensitive to home environmental variables, based on the variety of developmental assessments that have been employed across the time spans investigated.

Another major issue investigated concerns whether there is a direct relationship between home environment and cognitive development or whether the relationship is spuriously due to variables related to both young children’s home environment and their cognitive development. Specifically, the authors determine whether there is a significant correlation between home environment and cognitive development when socio-economic status (SES), and mothers’ intelligence and educational achievement are statistically controlled. Similarly, the correlations of SES and mothers’ intelligence with young children’s cognitive development is ascertained when home environmental variables are held constant. These relationships, particularly with that of mothers’ intelligence, have recently generated a considerable amount of controversy.

The predictive value of home environmental variables is an issue of concern to all of the investigators. In addition to determining the bivariate correlations between home environment and subsequent cognitive development, the relative contribution of home environmental variables among a set of preselected predictor variables is
examined. In particular, the results of stepwise multiple regression analyses are presented, comparing the relative predictive value of home environmental variables, mothers’ intelligence, SES, and developmental tests to young children’s subsequent developmental status.

With the relationship of home environment and cognitive development being examined across a wide range of proximal variables, in different populations, at various ages, and on a variety of cognitive abilities, it is important to begin developing a model that would best characterize and explain the network of relationships. Thus, it must be considered whether the most accurate and comprehensive model is one that focuses on specific or on global relationships or one that encompasses both types of relationships or processes. Moreover, whether a home environmental model should be restricted to proximal variables or should include distal variables must be given consideration as well. Certainly, the model would serve as a heuristic for future research investigating functional or causal relationships between home environment and cognitive development and would have implications for intervention programs.

Most of the research presented in recent times addresses issues relating home environment to cognitive development. However, several of the researchers are also concerned with the relationships of home environment and demographic factors, social and family configurational variables, and parental characteristics. The quantity and quality of home stimulation is compared in children differing in race, gender, birth order, gestational age, and developmental status (i.e., delayed versus non-delayed). Furthermore, many researchers explore the correlations of home
stimulation variables and SES, parental education and occupation, mothers’
intelligence and attitudes, number of children in the home, crowding, quality of
family relationships, and preschool attendance. The results of these analyses should
give direction regarding potential mechanisms within the context of the family, which
regulate the home stimulation and experiences available to infants and preschools.

Finally, an empirical issue that emerges concerns the extent to which there is
comparability and generalizability of findings across our current longitudinal studies.
This is of utmost importance for developmental psychologists to establish if we are to
make rapid progress at both the theoretical and the practical levels.

In most of the studies done since 1968 the researchers have used the Home
Observation for Measurement of the Environment (HOME Inventory) as a measure of
the quality of the environment available to a child in the home. The HOME Inventory
is a combination observation-interview technique. It is administered in a child’s home
at a time when the child is present and awake. The subject for the interview is the
child’s primary caregiver (usually the mother).

There are currently two versions of the HOME Inventory, one for use with
families of infants (birth to age 3 years), and one for use with families of preschoolers
(3 to 6 years). The infant version of the HOME was previously referred to as the
Inventory of Home Stimulation, but all references in this book are to the newer name,
HOME.

The infant version of the inventory contains 45 items scored in binary
(“yes-no”) fashion. The 45 items are clustered into six subscales: (1) Emotional and
Verbal Responsivity of Mother; (2) Avoidance of Restriction and Punishment;
(3) Organization of the Physical and Temporal Environment; (4) Provision of Appropriate Play Materials; (5) Maternal Involvement with Child; and (6) Opportunities for Variety in Daily Stimulation. For ease of discussion, the subscales are often referred to by the shortened name given in italics. It is important to note that we are going to rename the second subscale, “Acceptance of Child”; thereby giving a positive name to all six subscales. However, because most of the existing literature has referred to the second subscale as Avoidance of Restriction and Punishment.

Items in the HOME Inventory catalog a variety of interactions, events, and objects from the child’s family environment. The items were selected because a review of existing research and theory indicated that such factors were related to children’s cognitive, social, and emotional development.

This was designed to explore the very important scientific question of exactly when the decline in rate of development so often observed in children from disadvantaged circumstances begins. A second purpose of the study was to compare the effectiveness of different types of intervention in preventing this decline. Thus represents a continuation of the work begun in Syracuse by Caldwell, Richmond, and their colleagues (Caldwell and Richmond, 1967, 1968; Caldwell, Wright, Honig, and Tannenbaum, 1970) and the work of researchers such as Golden and Birns (1968) and Bayley (1965). Studies of the development of infants from all types of social backgrounds revealed no measurable differences during the first year (Knoblock and Pasamanick, 1960), up to 15 months of age (Bayley, 1965), and at 24 months of age (Golden and Birns, 1968). Yet, comparative studies of children aged 3 years and
beyond, from different social class backgrounds, have consistently shown a difference in favor of the more socially and economically privileged children. The studies suggested that the divergence of developmental curves begins somewhere between 24 and 36 months of age. More recently, Wachs, Uzgiris, and Hunt (1971) have documented that such differences occur as early as 7 months of age.

Recruitment of the subjects for this study began in November 1970. Well-baby clinics, birth records from hospitals, and personal contacts in the community all served as sources of subjects, who were drawn from both middle- and lower-SES backgrounds.

Each infant was assigned to one of four groups on the basis of their HOME scores (Caldwell and Bradley). Each group, which consists of 30 to 32 infants, received a different level of educational intervention. For the 2½ year duration of the experiment, there was approximately 30% attrition from the various groups.

Level 1 consisted solely of testing the infant with age-appropriate measures (The Bayley Scales of Infant Development or the Stanford-Binet) at 12, 24 and 36 months of age.

Level 2 consisted of testing the infants every month from 8 through 12 months and then every 3 months from 12 to 36 months. This group formed as a means of gauging the impact of frequent testing on the development of children. Because all testing was done in the presence of the mother, the mothers were afforded the opportunity to notice behavior that the examiner considers important. To control for any modeling or “testing” effects, it was decided to have two groups that were tested: one infrequently and one frequently.
Level 3 consisted of testing the infant on the same testing schedule as Level 2. In addition, mother was given some suggestions about ways to help her baby “learn new things.” They were also given a paper bag full of toys to help teach their babies. The paper bags also contained some simple suggestions about the interaction between mother and child during the play sessions which might be most beneficial to the child. The examiner demonstrated, with the toys contained in the bag, the kinds of teaching activities likely to be of value to the child. The toys and the suggested activities are, in effect, transfer items for each of the items found at a particular age range on the Bayley test. Teaching activities were individualized and were based upon the infant’s pattern of strengths and weaknesses as revealed on the Bayley test.

Level 4 infants were tested on the same schedule as in Levels 2 and 3. Unlike Level 3, however, intervention in this group was provided in the home. Home visitors attempted to establish a relationship with the mother. In sum, target of the intervention was the parent-child unit. The home visits occurred biweekly.

Follow-up assessments were done on children from all four levels at 54 months.

The causal connection between life stress and illness is hardly a new idea. Physicians, philosophers and persons concerned about health have long wondered about the etiological significance of stressful life events. The distinctiveness of recent research lies in its attempt to define and measure life stress. Studies in India prior to 1977 were mainly concerned with acculturative stress due to migration from rural to urban settings (Bhaskaran, R.C. Seth and Yadav, 1970; Channabasavanna Rao, Embar and Sharieff, 1970; K.C. Dube, 1970; B.P. Sethi, G.C. Gupta, Mahendru and
Kumari, 1972; Thacore, 1973). All these studies found a higher rate of morbidity among the migrant population. Further, K.C. Dube (1970), and Thacore, G.C. Gupta, and Suraiya (1971) concluded that the joint family system produces a greater amount of stress. But Verghese, Beig, Senseman, S.S.S. Rao, and Benjamin (1973), and B.P. Sethi, G.C. Gupta, Mahendru, and Kumari (1974) noted that the nuclear family created more stress for individuals. In an excellent study of three contrasting communities of Kota situated in South India (Brahmins, Bants and Mogers), Carstairs and Kapur (1976) documented as to how socio-cultural and economic changes induce stress and mental disorders in a rural community. For example, male Bants, who were mainly tenant farmers, were found to have a higher rate of mental disorder than Brahmins and Mogers. The investigators explained these findings in terms of traditional competition of Bants with Brahmins, who were farmers like them; the growing threat to their social status from Mogers who were growing richer and the non-materialization of benefits in terms of land ownership rights expected from the Indian Land Act. Among the female Bants, the changes in the conjugal residential pattern, i.e., change over to patrilineal system of residence, appeared to be a greater source of stress and consequent somatic and psychological symptoms than the insecurity concerning the socio-economic status which influenced their male counterparts. However, the family constitution, joint or nuclear, did not significantly influence the mental disorder rate among them. The authors speculate that the advantages and disadvantages of the two kinds of family settings appear to be equally balanced.
Studies conducted in India have used life events lists prepared in other countries either without change (R. Prakash, Trivedi and B.B. Sethi, 1980; Venkoba Rao and Nammalvar, 1976) or after modification (Chatterjee, S.P. Mukerjee and Nandi, 1981; S. Dube, Sundaram, Mohan and Jain, 1980; Wig, Menon and Chawla, 1980). L.N. Gupta, Bhatia, Godara, Vyas, and Singhal (1981), however, used only a “subjective report” of the patient in a specific area without the help of an event list.

A major methodological advancement in this area was made by Holmes and Rahe (1967), and Holmes and Masuda (1974). The instrument constructed by these researchers was called the Schedule of Recent Experiences (SRE). In India, S. Dube et al. (1980), and G. Singh, D. Kaur, and H. Kaur (1981) made the most systematic attempts in the scaling of stressful life events. Dube et al. (1980) studied 110 normal persons for their severity ratings on a 7-point scale for readjustment required by life events. They reported only moderate consensus among their subjects and drew up a hierarchical list of events based on their perceived stressfulness. They added new items on issues like joint family, dowry, spiritual search, and dropped items on dating and breaking engagement. In another sample of 200 normal subjects from the metropolitan city of Delhi, means, standard deviations and rank orders of 52 life events deafly showed that subjects within a shared frame of socio-cultural background can scale, with moderate consensus, the degree of stressfulness on a 7-point rating scale. G. Singh et al. (1981) have also constructed the Stressful Events Scale for use in India. They initially used four categories based on severity but later switched over to a continuous rating with a maximum score of 100. The authors noted that, on an average, on adult experiences 10 common stressful life events without
suffering any obvious physical or psychological disturbance. Some interesting gender
differences were also observed indicating that women were more bothered by various
family conflicts. These gender differences were in the area of intra-familial settings
which reflect the predominance of the household role of Indian women. S. Dube et al.
(1980) also reported significant gender differences in the perception of different life
events as stressful. They have drawn attention to the problem of clustering of those
life events which trigger psychiatric symptoms and those which do not. S. Saxena,
D. Mohan, S. Dube, Sundaram, and Chawla (1983a) ascertained the reliability of life
events information obtained from a mixed group of 83 psychiatric patients by
comparing it with the reports about the same patients as given by their close relatives.
The overall reliability was 86% which appears satisfactory. They concluded that the
use of the semistructured interview method is preferable to paper and pencil
questionnaire especially in regions where the literacy rate is low. Similarly, checking
reliability from informants appears to have advantages over the test-retest method.

Venkoba Rao and Nammalvar (1976) found that depressives experienced an
average of 12.82 events compared to 11.72 experienced by controls. However, they
did not specify as to where their control groups were taken from. R.N. Chatterjee
et al. (1981) found significant differences only for personal health, bereavement and
interpersonal social events using the ENT patients as controls. In a study by
S. Saxena, Mohan, D. Dube, Sundaram, and Chawla (1983), psychiatric outpatients
were compared with normal subjects, 14 out of 44 events showed significant
differences in their frequencies between the groups. The mean number of events
experienced by patients was more than 2½ times that experienced by normal controls.
Moreover, all the categories of events (personal, occupational, financial, familial, and marital) were experienced by a significantly greater number of patients than controls. Chaturvedi (1983) concluded that patients with stress disorders cognize their life events as more distressing than normal controls. As stated earlier, gender differences in the perception of stressful life events have been found (S. Dube et al., 1980; G. Singh et al., 1981). A significantly larger number of patients suffering from coronary heart disease report a major change in work responsibility and the death of a close relative as compared to normal controls (S.C. Bhargava, S.N. Sharma and B.V. Agarwal, 1982). Recently, Chatto-padhyay and Das (1983) showed that neurotics displayed significantly higher life stress scores than psychotics and normals with regard to both recent and remote events (mostly concerning undesirable events). Normals showed higher stress scores on desirable events only, whereas for psychotics no such difference could be found either with regard to recent-remote of desirable-undesirable events. While measuring the impact of life events on short-term prognosis of schizophrenia, Wig, Menon, and Chawla (1982) found a considerably lower incidence of life events in their study as compared to that done in the United States. While these researchers speculate about the influence of the more relaxed “slower life style in India” as a possible explanation, the other possible reason of the lower incidence of stressful events may be the scale itself which was standardized on the western male middle-class samples.

Recently, some research has been done in India on the correlation between experience of life events and the development or precipitation of physical and psychiatric illness, particularly depression (R.N. Chatterjee et al., 1981; L.N. Gupta
et al., 1981; R. Prakash et al., 1980; Venkoba Rao and Nammalvar, 1976). Stress relating to life events has also been demonstrated to be associated with coronary heart disease (S.C. Bhargava, S.N. Sharma and B.V. Agarwal, 1982), alcoholism (Rangaswami, 1983), and ulcerative colitis (Chakraborty, Shah and Parikh, 1983; Khorana, 1983). While Christopher (1979) reported a significant correlation between breast cancer and the occurrence of subjectively stressful events up to 15 years before the appearance of breast cancer; Udupa (1980) observed that stress plays an important role in the development and progress of carcinoma (a cancer) in various parts of the body. L.N. Gupta and D. Srivastava (1983) studied the effect of stressful life events on the course of pulmonary tuberculosis and concluded that patients who face continued stressful situations responded poorly to treatments as compared to those who were free from such situations.

Another group of studies has focused on the stressors inherent in marital life or the family setup. A.K. Agarwal, Mehta and S.C. Gupta (1978) observed that the spouses of neurotic patients suffered from anxiety neurosis and neurotic depression to a moderate degree. Further, they concluded that spouses from nuclear families reported significantly more psychiatric illness than those belonging to joint families. It seems that the support of a joint family acted as a buffer against die stress of the husband’s illness. However, Sampurna, Ansari, P. Agarwal, and Udupa (1979) reported that the joint family system gives rise to stress disorders like hypertension, peptic ulcer, bronchial asthma, anxiety neurosis and thyrotoxicosis more often than the intermediate or nuclear family. J.R. Srivastava and S.B. Singh (1979) highlighted the importance of the parents’ personality, especially that of the mother, in producing
psychosomatic disorders in children to a large extent. The role of undesirable parental models, death of parents, or demanding, strict and disciplinarian parents in causing psychosomatic (stress) disorders has also been documented by Chaturvedi (1983). He has further demonstrated the distressful impact of unhappy and hazardous married life, death of spouse or offspring, and hazardous family relations on psychosomatic disorders. In another study the role of marital stress on anxiety neurosis has also been reported (V.N. Rao, Channabasavanna and Parthasarthy, 1982). Marital disharmony is also associated with ulcerative colitis (Khorana, 1983).

In a different group of studies, personality variables have been considered along with stress measures or diagnosis. Verma (1977) reported that psychosomatic patients were characterized by mental withdrawal, apathy and logical contradiction. Ansari, Sampurna, Udupa, and P. Agarwal (1979) showed that patients with stress disorders had a high level of anxiety as well as stronger achievement motive than controls. Chaturvedi’s (1983) study revealed that patients with stress disorders tended to be aloof, pessimistic, tender-minded, apprehensive, and had undisciplined self-concepts. Nathawat and Tiwari (1983) found a consistent tendency among persons with stress disorders to display a high degree of neuroticism, criticism of others, intrapunitiveness and hopelessness as compared to their surgical counterparts who served as controls. According to Naidu (1983), the profile of high stress tolerators indicates that they generally think positively about themselves and others, believe in the existence of God and take life to be meaningful. They also engage relatively more in task relevant rather than in defensive behaviors. Other studies have focused on specific life stressors like the effects of postpartum, sterilization and medical
termination of pregnancy (Ammal and George, 1980; S.C. Saxena, Ghosh and C. Srivastava, 1979; Sreedevi, 1983) and approaching surgery or anesthesia (Paul, 1981). While S.B. Chatterjee (1978) has discussed the role of environmental situations like military aggression, economic conditions, industrialization and social change as possible stressors leading to psychosomatic illness, Bhujanga and Zubair (1979) have studied the impact of cyclonic stress on psychiatric morbidity. It has also been reported that psychic stress plays an important role in the precipitation of thyrotoxicosis (Udupa, 1971) where neurotransmitters are considered to be transducers of the various changes in the body following stress. It has further been reported that the melatonin level and its synthesizing enzyme activity increases after stress (P.M. Singh, 1980). In another study P.M. Singh, R.C. Gupta, G.C. Prasad, and Udupa (1980) have confirmed that there is a pineal response to psychic stress.

Not much has been published on the techniques of coping with stress. Udupa (1979), while discussing the management of stress disorders, has recommended the use of ancient Indian methods, especially the practice of Yoga, as an adjunct to existing therapeutic regimes. In a study on stress and coping mechanisms of orthopedically handicapped children, Srivastava (1981) concluded that those who cope more effectively with their stresses are people with more positive orientation to life in general and employ a judicious mixture of coping and defense responses.

Methodological problems in the study of life stress in India were first taken note of by Murthy (1975). However, with recent advances in this area methodological issues have received increasing importance. S. Saxena and D. Mohan (1982), and Evans, Palsane, and D’Souza (1983) have dealt with most of these issues, e.g.,
selection of events and formation of event lists, severity of rating of individual events, summation of event scores, reliability of reporting, provision of adequate control groups, and large within-group variance found in various studies. They have also discussed the different modes of categorization of events and have cautioned against the straight correlation of experienced events with an illness. They have especially emphasized the necessary methodological modifications for life events research in India. These include the issue of culture-specificity of events and relatively prolonged stresses, reliability testing from a family member and the use of semi-structured interview method in preference to paper and pencil questionnaire. The scales developed by S. Dube et al. (1980) and G. Singh et al. (1981), however, represent a definite advancement in the area of life events research in India. The following questions still need clear cut answers: Do these instruments measure life stress? How shall we weigh the events? How reliable is the recall? Should desirable events be included? Do values derived from group ratings accurately reflect the impact of events on particular individuals? While life change units may provide a quantitative index of life change, they may not reflect the actual amount of stress resulting from specific events due to ambiguities inherent in the scales themselves and the fact that individuals vary in their perceptions of the desirability and undesirability of events. Yet another problem with the existing life change measures is that many items which are designed to assess stressful life events may themselves be viewed as symptoms and consequences of illness, e.g., sexual difficulties, changes in eating and sleeping habits and problems with one’s boss. While discussing the monitoring of stressors associated with daily life, Evans et al. (1983) have recommended that life stress
studies in India should focus on common irritations, frustrations, distressing demands of everyday life, hassles of urban and rural people and suburban inhabitants. An instrument based on a systematic description of daily hassles in India could serve as a useful tool for basic comparative studies on stress and well-being among different groups of population. To date, there has been no systematic description of daily hassles compiled in India.

In addition to the assessment issues just discussed, there are other factors which hamper the interpretation of the findings of life stress research. One such factor is “retrospective contamination”. For example, depressive individuals, because of their mood state, may simply recall more negative life changes than individuals who are not depressed. If required to rate the stressfulness of life events themselves, they may assign more negative weightings to reported events. A similar case may be made regarding correlations between life stress and other variables. A prospective approach can eliminate some of the problems associated with retrospective contamination. Moreover, the correlational research reported, to date, does not permit causal inferences regarding the effects of life stress. A potentially fruitful approach to investigating the possibility of a causal relationship in the life stress area would involve the use of cross-lagged correlational methodology (Kenny, 1975). Further, studies investigating such variables as low or high socio-economic status which might exert a common influence on both life stress, health and adjustment will be in order. In fact, poverty as a constant source of stress must be studied not only in the Indian setting but also in the context of all other developing countries where large segments of the population live below the poverty line. Moreover, a large number of
individuals, particularly of low socio-economic class, are undergoing drastic changes in life circumstances by migrating from village to urban centers. While modernization and economic development undoubtedly improve the quality of life for those belonging to the lower classes, the changes involve considerable stress and strain along with potential health consequences. Thus studies are needed on the consequences and adaptive strategies in urban migration as a stressful event (Evans et al., 1983). Studies are also needed to assess the merits of the person-environment fit theory (French et al., 1974) in Indian settings (see Caplan, R.C. Tripathi and Naidu, 1985). These researchers have pointed out that knowledge of the psychology of stress will greatly increase if future research measures P and E separately, builds on current hypotheses about the perceived controllability and stability of stressors, recognizes the potential contribution to the well-being and strain of the person’s ongoing thoughts about different time frames and explores the dynamics of these relations over time. Little is known about how combinations of coping responses — patterns and constellations — influences well-being over a broad range of life settings (see Caplan, Naidu and Tripathi, 1984). These researchers have suggested further research to determine the extent to which different combinations of coping and defense promote and inhibit well-being.

The lack of attention to moderator variables (relatively stable personal characteristics like locus of control, sensation seeking and environmental factors such as available social support) constitutes a major limitation of most of stress research in India. As the mediators of life stress are identified, life measured reliably and included in research designs, increased effectiveness in prediction is likely. For
instance, studies in the west have consistently demonstrated that social support moderates the stress-well-being relationship (buffering effect). The role of the Indian joint family as directly affecting the amount of stress experienced as well as buffering between daily hassles and health, is an important research topic (Evans et al., 1983). An important aspect of the joint family system and social support worthy of research is the relationship of the wife with the husband’s family. Obviously, the close, physical proximity of other family members can prove deleterious as well as buffer the negative consequences of environmental stressors. Finally, the development of stress management programs designed to help individuals cope more effectively with life stress seems to be a major challenge of the future. In this respect, the depth and spread of the insights concerning stress and how to handle it, provided by ancient thinkers of India, are impressive. For instance, the Gita provides a new framework for coping behavior, where task performance is made independent of the anticipation of outcome. Ramachandra Rao (1983b) has outlined the strategy of coping with life stresses adopted in the Gita. It seeks to focus attention on the reality of stress in life situations, the value of enlightened appraisals of oneself, the task-based environment and the threats inherent in it. The text crystallizes the Indian point of view regarding the importance of cognitive processes in minimizing role conflicts and eliminating tensions between evaluation, anticipation and performance processes. In addition to the sound stress coping strategies outlined in the Gita, the Ayurveda, the Yoga-Sutra and in the Smritis, Ramachandra Rao (1983) has further pointed out that there are didactic works dealing with Niti, and Subhashitas that highlight the coping techniques suitable to the Indian culture. There is a need to identify and integrate these
viewpoints for developing a stress management program that will be effective in the Indian culture.

Indian researchers have discussed stress at work, at least implicitly, while dealing with subjects like absenteeism, leadership, motivation, quality of working life and participative management. However, a systematic study of organizational stress is a recent phenomenon in this country. B. Singh, Malhan, and Agarwala (1979), and Agarwala, Malhan, and B. Singh (1979), after reviewing related studies, lamented that researchers in India have primarily concerned themselves with physical hazard stressors (i.e., effects of stresses such as dust, dirt, noise, temperature, long working hours, and dangerous and unguarded machines) and have largely neglected psychological hazards like role conflict, role ambiguity, role overload and other organizational role stressors, which are equally important in affecting the quality of working life.

Defining role efficacy as the potential effectiveness of a role of an individual in an organization, Pareek (1980a, 1980b) has developed a 20-item Role Efficacy Scale (RES), which covers 10 dimensions. The RES has been used in some studies (S. Sharma and U. Sharma, 1983; Surti, 1983). More recently, Pareek (1982a) has standardized three Role Stress Scales (RSS), i.e., Entrepreneurial Role Stress (ERS) Scale; General Role Stress (GRS) Scale, and Organizational Role Stress (ORS) Scale. The ERS is a 27-item scale measuring 9 entrepreneurial role stresses; the GRS (a 12-item scale) is designed to measure 4 general role stresses; and the ORS is a 50-item scale for assessing 10 organizational role stresses. In addition, A.K. Srivastava and A.P. Singh (1981) have standardized the Occupational
Stress Index (OSI) which assesses the extent of employees’ stress in relation to 12 dimensions of their job life.

After identifying eight styles of coping with stress (four functional and four dysfunctional), Pareek (1982b) also standardized a semi-projective instrument for assessing styles or strategies used by a respondent to cope with role stress. This instrument, known as “Role Pics”, has several forms, and Role Pics (O) is one of the forms to be used to assess coping styles in relation to organizational role stress. Singhvi and Pareek (1982) have recommended that criteria of significance of trends (positive or negative) must be developed empirically and should be based on the distribution pattern of Role Pics (O) responses of a large sample.

Some attempts have been made to analyze the nature of organizational stressors. M.V. Deshpande (1978) has provided an indepth analysis of the facilitating and restraining forces that impinge upon senior executives in terms of management policies, manpower planning, appraisal system, promotions, work routines, interpersonal relations, lack of coordination and the perception that their abilities remain unutilized. In addition, divergent objectives of individuals and organizations, lack of communication, general socio-political and economic environment, poor interpersonal relationship have been highlighted as organizational stressors by A.K. Shah (1978, 1980) and Kumar (1981). In fact, Kumar (1981), while emphasizing the harmful consequences of such stressors for the individual and the organization, has pleaded for serious research in the virgin field of industrial psychiatry.

Role stresses have also been studied in relation to job level, length of service, and different occupational groups. Natha (1980) showed that role conflict is
experienced more frequently at the middle management rather than at the lower management level; supervisors manifest relatively higher role conflict than managers, whereas both managers and supervisors manifest higher role conflict than workers. This study also demonstrated that role conflict decreases with an increase in job tenure in an organization. Surti (1983) observed that nurses and bank employees experience minimum role stress, while university and college teachers experience maximum role stress. In addition, social workers and gazetted officers feel more efficacious in their roles, while researchers and bank employees feel less efficacious.

While Harigopal (1979) showed that job tension and job satisfaction have a significant inverse relationship across different job levels, Mehta (1978) concluded that life satisfaction promotes a positive response to the work situation. Narayanan and Venkatachalam (1979) found organizational stress and motivation to be negatively related. In two well-designed studies by Harigopal and Ravikumar (1978, 1979), it was observed that (a) role ambiguity is positively related to perceived deficiency of social and self-actualization needs, but it is negatively related to job involvement and intrinsic motivation; and (b) there is a negative relationship between company satisfaction, role ambiguity and role conflict. In another study, Madhu and Harigopal (1980) showed that in the case of non-technical supervisors, a negative relationship exists between role ambiguity and job involvement and performance. Recently, S. Sharma and U. Sharma (1983) found that in the case of gazetted officers only, role efficacy has a positive relationship with job satisfaction, and this relationship is stronger in the case of on-the-job factor of job satisfaction. Thus, job level appears to be a moderator of the role stress-job attitude relationship. B. Singh,
Agarwala, and Malhan (1981) reported that general role conflict is negatively related to job satisfaction and satisfaction with working life. In a study of officers of a private sector organization, Pestonjee and V.B. Singh (1982) found that the overall indices of role stress are negatively associated with all the dimensions of job satisfaction with the exception of the social relations aspect of job satisfaction; self-role distance has a significant negative correlation with all the dimensions of job satisfaction; inter-role distance, role stagnation, role ambiguity, and role inadequacy are negatively related to job satisfaction, except in the case of social relations. Surti (1983) also found that role stress and job satisfaction are negatively related. In addition, it was noted that fear of success is positively related with role stress, whereas participative and consultative organization climate has a negative relation with role stress. Earlier, Sen (1982) had studied the personal and organizational correlates of role stress. Further, Das (1982) has reported that work group climate is an important cause of managerial stress, and perceived power is the second most potent cause of managerial stress. Contrary to other findings, role ambiguity did not emerge to be a significant cause of stress. Thus, a negative group climate and powerlessness may be dominant causes of stress experienced by Indian managers.

In another group of studies, the relationship of organizational role stress with adjustment and health-related variables has been considered. A.K. Srivastava and A. Krishna (1981) have demonstrated that high job-related anxiety is associated with lower satisfactory social relations and adjustment. Severe physiological, psychological and behavioral consequences of managerial stress have been highlighted by A. Shah (1978). General role conflict has been shown to be positively
associated with job-related tension and work alienation by B. Singh et al. (1981a). Recently, S. Sharma and U. Sharma (1983) have reported that role efficacy has a negative relationship with general and job anxiety measures, and that the role efficacy-job anxiety relationship is stronger than the role efficacy-general anxiety relationship. A. Singh, Krishna, and N. Singh (1972) studied the effect of occupational stress on the cardiogram or rickshaw pullers, and Barnes (1983) highlighted the negative consequences of occupational hazards on merchant marine officers. Recently, Srivastava (1983) studied a group of white-collar employees and concluded that the high-stress group had significantly higher free-floating anxiety, obsessive neurosis, phobic anxiety and hysterical symptoms. Further, patients with psychosomatic complaints described their job as overtaxing, demanding and marked by a series of disagreements with their authorities (Chaturvedi, 1983).

Nothing significant has been brought out on the moderators of organizational stress-well-being connection. Harigopal (1980) studied personality factors (ego-strength, dominance-submissiveness) as mediators of role stress-company satisfaction relationship. He concluded that (a) high and low ego-strength supervisors differ significantly on role ambiguity and role conflict; (b) ego-strength moderates the relationship between role ambiguity and company satisfaction, and between role ambiguity and job involvement; (c) submissive supervisors experience more role ambiguity than their dominant counterparts, and dominance vs. submissiveness dimension of personality moderates the relationship between role conflict and job involvement. B. Singh, U.N. Agarwala, and Malhan (1981), studying a sample of supervisors, demonstrated the moderating effects of individual differences (locus of
control and work values) and situational variables (group cohesiveness and supervisory support) on the relationship of role conflict with different indices of wellbeing. The moderating effect of supervisory support was pervasive and profound. In some studies, job/managerial level has also emerged as a moderator of the stress-well-being relationship (Harigopal and Ravikumar, 1978, 1979; S. Sharma and U. Sharma, 1983). In another study, Das (1982) concluded that higher feelings of power, stronger perceived group support, more open communication, more knowledge-based risk taking act as a buffer against managerial stress. Of these, work group climate emerged to be a major moderator of the managerial stress-well-being relationship.

Only one study (Surti, 1983) offers an insight into the different styles of coping used by eight professional groups of working women in dealing with occupational role stressors. Some of the major conclusions of this pioneering study are: (a) defensiveness is used more as a style to cope with role stress by professional working women, followed by intrapersistive style. The reversed pattern is found in women entrepreneurs; and (b) avoidance-oriented coping styles have a positive and approach-oriented coping styles have a negative relationship with role stress. In his publications, Pareek (1976, 1977a) has suggested the use of Inter-Role Exploration (IRE) for strengthening various roles and to increase role effectiveness through a joint effort of the role occupants. It works by increasing mutuality, creativity, exploration and confronting strategies. Later, Pareek (1977, 1981) explained in detail only two kinds of strategies through which any role conflict or role stress could be managed. It has been suggested that, in order to use them, it is essential to work out systematic
ways of implementing them which would require a lot of work as well as some organizational developmental effort to obtain good results.

The first group of these studies dealing with role conflict, role ambiguity, role overload utilized western tools (see Harigopal, 1980; Harigopal and Ravikumar, 1979; Madhu and Harigopal, 1980; Natha, 1980) and considered samples mainly at managerial levels. However, recent development of indigenous scales (Pareek, 1981a, 1982a, 1982b) has stimulated a meaningful, systematic and comprehensive inquiry in this area (e.g., Das, 1982; Pestonjee and V.B. Singh, 1982; Sen, 1982; S. Sharma and U, Sharma, 1983; Surti, 1983). As is evident, the research on stress at work in India is in its infancy and has mainly dealt with the correlates of stress. The moderating influences of personality, behavioral characteristics and organizational/social support on the organizational stress-well-being relationship have not been adequately examined. Except for two studies (Sen, 1982; Surti, 1983), no systematic attempt has been made to investigate the mechanisms utilized by various professional groups to cope with stresses at work.

It has been suggested that future research in this area must concentrate on (a) stressors at work; (b) persons stressed; (c) the interaction between stressors and the person; and (d) strategies for arresting the pathological consequences of physical and psychological strains arising out of the work situation. Specifically, such research must be aimed at:

1. Identify more vulnerable occupations (or jobs at risk) and to study the nature and characteristics of such jobs.
2. Explore the stressors involved in repetitive work, blue-collar jobs, entrepreneurial and managerial functions and problems associated with being in jobs which are located at role boundaries. Strains arising from social relationships at work, careers and the expectations arising out of a job, the influence of organizational structure and climate and their role in causing or alleviating strain also deserve scientific scrutiny.

3. Examine the contemporary aspects of work life that create occupational stresses like the stressful consequences of job transfer on employees and their families, or the impact of different methods of evaluation on the individual and the organization, the effects of extra-organizational stressors such as the relationship between work life and home life, especially in the case of working women.

4. Investigate the personality and situational moderators of the organizational stress-well-being relation in different occupational groups. For example, a study can be directed at understanding the differences in personality characteristics and available social support (operationalized as an outcome of organizational support and constraints) of those persons who maintain high psychological wellbeing under high stress and those who have low psychological wellbeing under high stress.

5. Determine the relative efficacy of different stress interventions for reducing organizational stress in the context of Indian workers/supervisors/managers so as to develop effective and indigenous stress management programs.

In laboratory studies, physical and psychological stressors have been used. Natarajan (1976) used four intensities of shock to create four different levels of fear in
high and low anxious subjects and concluded that the amount of fear arousal for the same intensity of threat stimulus is determined by the anxiety state. Further, using the GSR and RT as measures of fear arousal Natarajan (1977) showed that the state of effort stress is similar to the state of anxiety or fear with respect to the arousal component. In another study, Natarajan (1978) concluded that the resultant anxiety at four levels of induced fear, if not relieved effectively by reassurance or threat avoiding behavior, might evoke defense mechanisms and this might cause a reduction in persuability. Generating three stress conditions with different combinations of a flashing light, electric shock and noise, Naidu and Thapa (1978) found that the stressed subjects made more errors in distance judgment and the errors caused by stress increased with the corresponding increase in the distance judge.

Psychological stressors in the form of ego-involving pre-experimental instructions or failure stress have also been considered along with anxiety levels for studying their single or joint effect on learning tasks like maze learning, serial learning and paired associate learning (Nijhawan, 1972; Nijhawan and Cheema, 1971; Ravinder, 1977; S. Sharma and R. Wangu, 1976). The effects of failure stress on performance have been shown to be dependent on the nature of learning task by R.G. Chatterjee, R. Bhattacharya, and A.K. Bhattacharya (1978). Recently, A. Srivastava and Naidu (1982) revealed that perceptual accuracy (based on a vigilance task) is greater under moderate ego stress condition and lower under high stress condition. In another group of studies, S. Sharma (1972) showed increasing elevations in state anxiety with the approaching examination, and that females scored significantly higher on stressors represented by physical danger, pain and academic
failure than males (S. Sharma and Dang, 1977). In an earlier study, S. Sharma (1976) demonstrated that as a sequel to failure feedback, there is an increase in state anxiety reactions in persons with high trait anxiety and not in persons with low trait anxiety supporting the theoretical position that high trait anxiety persons experience greater elevations in state anxiety in situations involving threat to self-esteem.

Obviously, research in this area has been scant and unsystematic. Comparative studies of the relative effects of physical and psychological stressors on state anxiety and performance on different perceptual and cognitive tasks are needed in the case of persons differing on anxiety, intelligence and impulse control. There is also a need for an intensive psychophysiological analysis of individual differences in response to stress.

Hunter, John (1986) studied the relationship of general cognitive ability to job performance. The results of the study showed that the general cognitive ability predicted job performance and also showed it is general cognitive ability and not specific cognitive attitude that predicted job performance. Jorden, James (1990) conducted a study among 120-quality assurance engineer indicated how frequently job stressors (causing distress related to role ambiguity, role conflict, role overload and career development) affect them at work. Rahim, M. Afzalur (1990) investigated relationship of conflict stress, hardiness and social support to job burnout and performance. Garden, Anna Maria (1991) studied the relationship between burnout and perceived and actual performance. The subjects were administered a questionnaire assessing burnout and perceived performance. Examination score were obtained from students. There were significant positive correlation between burnout and items
assessing perceived performance. There was no significant association between burnout and actual performance.

Gowda, Natarajan (1997) study examined the extent to which case manager were affected by burnout and turnover intention. It also explored how client provider and organizational practice were associated with three aspects of burnout and turnover intension. Multiple regression analyses indicated that role stress, opportunity for promotion and job satisfaction variables emerged as significant predictor for emotional exhaustion. Flaherty, Theresa (1999) examined whether organizational value and role stress influenced customer - oriented selling performance. Results indicated orientation of the firm increased customer oriented selling performance. This also showed that role conflict and role ambiguity were constraints on customer - oriented selling performance.

2.3 OVERVIEW

The extensive review of related literature pertaining to the five variables, stress levels, teaching competence, academic achievement, adjustment and home environment, and their inter-relationship is presented in the preceding pages. The researchers after a thorough study of the reported part studies, smelt some gaps and deficiencies.

Even though there is a lot of research on stress levels, still there is much scope for further research. It is found from the extensive review of related research, that many studies are conducted on student adjustment, academic achievement, teaching competency, but little effort is made on student teachers stress levels, adjustment and teaching competence. However, there are no studies related to the stress management
intervention to the student teachers of primary level. It is a major research gap. In order to contribute to this gap, the present study was undertaken.

The Indian Education Commission (1964-66) also stated that of all the different factors which influence the quality of education and its contribution to national development, the quality, competence, character and adjustment of teachers are undoubtedly the most significant, is the real inspiration behind the present study.

The findings of study conducted by Kaiser and Polezynski (1982) indicates that high teacher stress may result in frustration, aggression, anxiety, avoidance behaviour and increased absenteeism or decrease in teacher and student performance. Hence, the present study is an attempt to know the stress management intervention effect on the some of above aspects.

Hence, the present study is intended to explore the influence of stress levels, adjustment, home environment of student teachers on their teaching competence and academic achievement. The design of the study is dealt with, in detail, in the next chapter.