CHAPTER I

The Problem

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CHAPTER I

The Problem

1.1 Introduction:

The Industrial revolution, technological sophistications, scientific excellence and political democratisation as a way of life have brought about a significant change in the modern world. The communicative advancement has brought the people of the world closer and made the world smaller. Consequently the life on earth has become competitive and complex. The confronting situations and the complexities of life have presented many challenging problems before the people.

The individual is continually faced with adjustive demands of varying degrees of difficulty which place him under stress. "As a universal human and animal phenomenon, stress results in intense and distressing experience and appears to be of tremendous influence in behaviour. (Lazarus, 1966, p. 2). Since the individual strives to maintain his psychological integrity, he automatically and persistently attempts to cope up with stress. The promotive and preventive concept of mental health of the present world recognizes the satisfactory adjustment of the individual with his total environment."
In the process of meeting these emerging complex problems of life as a necessary condition of survival, most of the people fail to adjust with the environmental problems and the confronting situations of life. This causes considerable growth in maladjustment in general leading to the creation of stress and strain among the people. The greater the goal discrepancy between the aspiration and multiplex demands on the part of the individuals, the greater the frustration and conflict that the individuals experience. And if they encounter and experience continuous failure in their undertaking, they are confronted and disgusted with life. Consequently, the fear of failure generates frustration, depression, anxiety, tension and such other negative toned affects as well as aggressive tendencies. If such stressful conditions of life, continue for some lasting period, then they become a permanent feature of life and are internalised as value systems.

The circumstances and conditions in which such negative traits of personality are generated and developed, do not in any way help the progress and prosperity of the country. The alarming mental health problems and their hazards obviously obstruct the individual development, the social advancement and the national prosperity. Healthy competition is, no doubt, a necessary condition of life, but the race of competition, challenging ones
own ability and aptitudes, capacities and potentialities, is certainly undesirable for a happy and healthy life. The existing conditions of life in the present societies create unnecessary competitions which affect upon the mental health of the nation as a whole. The problems and perspectives which grow and develop out of maladjustment of determine the nature and kind of challenging issues of the nation. However, every individual is not equally susceptible to the stress generating conditions of life. People of different abilities and capacities behave differently in matter of adjustments with different problems of life and work. For instance, people having higher intelligence would adjust with the environmental situation in a different way from those having lower intelligence. Highly motivated persons or success-oriented persons would reveal greater adjustment and better plasticity than those who are less motivated and failure-oriented. As a consequence, a differential pattern of frustration, depression, anxiety or tension as indicators of stress would be observed in the people possessing low or high adjustibility and adaptability corresponding to their ability, capacity, aptitude, value and trait of personality. Similarly, a student having higher achievement motivation may display greater stress than those with lower ones because of their competitive base success-orientedness; and hence his
coping process with the stressful situations of life would also differ accordingly. Numerous studies on slum dwellers reveal a non-competitive easy-going life conditions and limited needs. Consequently, they display hardly any degree of stress. Further, their coping process and adjustment mechanism with the stressful situations of life also appear to be different from those living in an achieving society (McClelland, 19). On a higher perspective, meeting greater demands and translating higher aspiration into realities necessitate more competition, the consequence of which may presents a greater stress because of more complex adjustment situations. Obviously, the coping mechanism of such persons differs from those whose wants are fewer and aspirations, lower.

It appears, therefore, that the degree of stress and strain that the individual develops at work as a consequence of encountering and experiencing different conflicting and confronting situations of life depends to a large extent upon the inherent abilities and capacities, aptitudes and potentialities, value systems and traits of personality of the individual. Thus, stress though appears to be a common feature of the modern world, has a greater relevance to the type of an individual. The amount of stress that an individual generates depends not only upon the intensity and nature of stress stimuli
configuration, but also upon his personality traits and motivational attributes.

A sensitive person who has the tendency and temperament of being easily excited and emotionally toned would reveal greater amount of stress under conditions of even minimum degree of dissonance and maladjustment than those who are relatively more stable and mature. Obviously, the coping process with the stressful situations of the former type of persons would be significantly different from those of the latter. Numerous such propositions could be stated that deal with the different degrees of stress and the varied patterns of coping process during stressful situations of life.

Wants and goals are governed around the self (Krech, Crutchfield and Ballachy, 1962). In pursuit of want satisfaction, drive-reduction or goal-orientation, an individual has to adjust to his own adjustment mechanism and develop his own coping process in accordance with his potentialities. The problems of life that the students of the present day encounter and the perspectives of the world of to-day that they have develop are in no way different from the general trends as specified above. The hopes of success or the fear of failure that the students experience through the process of interaction with the social environment make a deeper impact upon
their perceptual system, motivational component and learning process. The level of aspiration that the individual student develops and the motivational pattern that he actualizes as a consequence of home, society and educational institutions directly or indirectly, consciously or unconsciously, direct his adjustment mechanism and determine the degree of stress and nature of his coping process with the stressful situations. The more the maladjustment, the greater the amount of stress that the student would display. This might have a direct pearing upon his academic goal and vocational aspiration.

Mechanic (1962) conducted a very significant study on the examination threat as the anticipation of harm in terms of fear of failure among students, triggered by stimulus cues that herald its coming. He made a comparative study of fear of failure and uncertainty among students during the period of threat as cues of imminent harm with confrontation with harm that refers to the occurrence of the anticipated event. He observed that:

"The week end prior to examinations, severe psychosomatic symptoms seemed to appear. A few students actually become sick, probably attributable in part to the increased vulnerability resulting from the physical and mental exhaustion that had accompanied study and from keeping late hours. Many students reported having stomachaches, anxiety attacks, increased problems with asthma, and some rashes and allergies. Appetite and eating
patterns also seemed affected and a number of students reported difficulty in sleeping. On the morning of examinations most students reported stomach pains; a number reported diarrhea; and a few reported that they had been unable to hold their breakfast. One student said, "I was really scared; I never was so scared in my life. Like, what am I going to do? I just won't be able to do it ..... I felt that I was going to fall apart". Most students reported considerable relief of anxiety once they got started on the examination. The stomach difficulties subsided, and they were able to direct their attention and energies to the task at hand. One student explained: "Taking it is not as bad as anticipating. It is not nearly so bad ..... you don't have time to worry while you are doing it". (Mechanic, 1962, pp. 162-163).

Mechanic (1962) further remarks that the second threat as well as confrontation appeared among students during the period before the results were announced. His observations indicated that the great evidence of disturbance occurred prior to the examination itself. After the examination had been graded and the results announced, relief of anxiety prevailed. The differential nature and kind of emotional disturbance which was noticed before and after the onset of the examination or announcement of results, as indicator of psychological stress among students points out the difference between threat and confrontation. And it is apparent that threat is, rather, more serious than confrontation.

Further, the concepts of stimulus-, response-, situation- and individual specificity (Lazarus, 1966; Lacey, Rateman and Van Lehn, 1953; Lacey and Lacey, 1958;
Engel and Bickfold, 1961; Moos and Engel, 1962) lead us to believe that the pattern of threat as a stimulus to the psychological stress found among different categories of students must be different because of the group response specificity. Thus, the nature and the kind of psychological stress observed among students of high achievement motivation or of high educational and vocational aspiration may be different from those who are characterized by low achievement motivation or of low educational and vocational aspiration.

Perhaps, the described meaningfulness as well as ego-involvement that the former category of pupils attach to objects of examinations or any other work in life, make them behave differently from the latter. The former group of students work with the spirit of competition and a rare sense of unique accomplishment while the latter do not display such unique personal affiliation. Consequently, the former might encounter greater amount and varied kind of psychological stress.

The present day, therefore, conceptualizes the differential nature and kind of psychological stress in accordance with the group-specificity. This line of thinking is further supported by the view that the high and low achievement motivation or aspiration group differ significantly in their motives. In this context, Lazarus (1966, p.56) remarks, "If some future anticipated state or condition is irrelevant to the individual's goals or values, it will
not lead to threat appraisal, since the future condition will not harm the individual. If the future condition involves the realization of goals without the thwarting of others, the cue indicating it will result in a positively toned emotion. If the cue stimulus portends the thwarting of a motive, it is likely to be appraised as threatening. The stronger the motive that is endangered, the greater is the potential threat. Harm viewed psychologically is, therefore, identical to motive thwarting, and the anticipation of motive thwarting constitutes threat appraisal.

Lazarus' (1966, p. 56) remarks suggest that the high achievement motivation/aspiration group not only possess stronger motives, but also perceive the thwarting of their motives more seriously, meaningfully and challenging which generate greater potential threat in that group in comparison to the low achievement motivation/aspiration group. The views expressed by Lazarus (1966, p. 56) have also been supported by Mechanic (1962), Cofer and Appley (1964). Lazarus (1966) points out that "Failure to obtain high grades in school leads to little or no threat in the individual whose goals are not thwarted by such failure, and the prospect of an examination on which such failure might occur therefore does not come as a cue signifying harm since failure is not motivationally important".

Psychological harm, therefore, is the thwarting of a motive,
where the degree of harm depends upon the strength of the motive.

Further, individual differences largely affect the psychological structure and function of an individual. Consequently we should expect the reflection of individual differences on the mechanism of production of psychological stress and process of coping behaviour. "A child under stress is in a situation somewhat different both psychologically and socially from that of an adult under stress. The same sort of stressful event may have more drastic psychological and physiological consequences for a child: he is in a dependent position, he has fewer social roles and differentiated behaviour patterns to help him meet a problem, and his life is not so sharply divided into as many areas as that of an adult. Some of these differences also characterize the situation of the old person under stress" (Caudill, 1958). Further, on the same token, persons do not simply differ on a longitudinal plane but also on a cross-sectional one; may be because of significant differences in the traits of personality. Individuals belonging to two extreme groups on a psychological continuum therefore, may differ significantly in the degree of psychological stress, and the coping process. This rationale sounds us to put to test such probing questions as:
1) Whether pupils displaying high and low degree of achievement motivation differ significantly in the degree of their psychological stress?

2) Whether pupils displaying high and low level of aspiration; educational and occupational, differ significantly in the magnitude of their psychological stress?

3) What would be the amount of psychological stress that a student having extremely high achievement motivation and extremely high aspiration, educational as well as occupational, \((H_{nAch} - E_{EA} - H_{CA})\) may display?

4) What would be the amount of psychological stress that a student having extremely low achievement motivation and extremely low aspiration, educational as well as occupational \((L_{nAch} - L_{EA} - L_{CA})\) reveals?

5) Does there exist any relationship between level of aspiration, achievement motivation and amount of psychological stress that a student possesses?

1.2 Statement of Problem:

Psychological stress first appeared in the index of the psychological abstract in 1944 by Jrace Kieder, though it has been studied much earlier within the overlapping subjects of conflict, frustration, anxiety,
defense, emotion etc. A rich literature on the biological and sociological dimensions of stress is available, though researches on the psychological stress have been found very scanty. Since stress has a strong connotation with emotion, the psycho-physiological correlates of stress have been primarily studied by clinical psychologists, medical practitioners, physiologists, sociologists and anthropologists. Lazarus (1966, p. ) has specifically pointed out that "In spite of importance of stress, there is little coherence in the theory and research that annually emanate from technical books and journals dealing with it". Though it has been primarily studied with the extremes of disturbances of biological and psychological functions brought about by unusually threatening, damaging or demanding life conditions, no attempt has been made by educational psychologists to study the causes, coping processes and essential correlates of psychological stress in the vocational and academic life of students, particularly in India as a developing country. In this context, it is, therefore, useful, if the nature and kind of psychological stress of these students who are about to enter in their practical life, are studied in relation to certain psychological variables.

McClelland's concept of 'Achieving Society' (1961) highlights that high achievement motivation is the single
driving force which promotes ego strength and accelerates vertical mobility among the under-achievers with a view to become the members of a developing society. Success in competition with some standard of excellence, unique accomplishment and long-term ego-involvement in the work are the three primary key criteria of persons possessing high achievement motivation.

Since individuals with high achievement motivation are success-oriented persons of greater ego-strength and sustained ego-involvement in the work which they initiate with a rare sense of competition, and are constantly and continuously in pursuit of some novel and unique accomplishment, they might display greater amount of stress under the conditions of threat or harm. It is just possible, they may be moved wildly and disturbed immensely, being emotionally toned if their products or accomplishments which they pursue with a rare sense of devotion are slightly threatened or if they anticipate some threats or danger real or imaginary, producing hostility or aggression. "Each person's world is a complex of friendly, hostile, protective, threatening, challenging, stimulating, frightening, love-expressing or love-denying situations and events, and his reaction to each of these is commonly habitual founded on his inherited equipment, his early life-experiences and conditioning, and further modified by his particular
bio-chemistry and his physical and social environment" (George B. Chisholm, 1963 p. 3). An individual brought up, nourished and educated in an achieving society, or one who aspires to become the member of achieving society, would possess inherently as a consequence of his inherited psychological make up a high degree of stress than those who grow and develop in a non-competitive environment. Thus, it appears that there may be some close relationship between achievement motivation and amount of stress that an individual possesses under the conditions of threat.

Aspiration is another psychological construct which also determines to a large extent the nature and kind of educational and vocational achievement of an individual. Social prestige and status that a person gets by dint of his power, position and self attained through educational excellence and vocational placement actualize him to aspire for the same. Under the conditions of vertical mobility, he aspires for the membership of a reference group of considerable high standard. The reference group becomes a model for him which he tries to identify and imitate. While undergoing such a process of identification and imitation by following the norms and values of the reference group, he tries to attain the goal. He actualizes himself in accordance with his abilities and capacities with a view to achieve the goal. However, in the process of
attaining the goal set forth by the reference group, two distinct probabilities exist. Either he achieves the goal or does not achieve. Under the conditions of the latter, he develops the fear of failure; and if, because of a wide goal discrepancy, he witnesses continuous failure, then the frustration, becomes an inherent trait of his personality. Such a failure-oriented person displays greater frustration which indicates the amount of psychological stress that he possesses. While in case of the former who has an experience of getting success all the while in his life, hopes of success develops; and thus he becomes a success-oriented person. He realizes hopes of success all the while; consequently, he experiences satisfaction. The amount of stress that a satisfied person would display is bound to be unaccountable.

In essence, it is apparent that both the psychological constructs i.e. achievement motivation and aspiration appear to have a close relationship with psychological stress. In getting success or witnessing failure, or pursuing some unique accomplishment with a rare competitive sense of devotion and dedication with a view to attain the goals of a reference group, a high motivated or ambitious student has to face certain amount of stress. It is, therefore, in the fitness of things to study the relationship that exists between achievement
motivation, aspiration and psychological stress. The problems to be studied have been pinpointedly presented below:

(1) To study the relationship between Achievement Motivation and psychological stress.

(2) To study the relationship between the level of aspiration (Educational and Occupational) and psychological stress.

(3) To study the relationship among the level of aspiration (Educational and Occupational), achievement motivation and psychological stress.

These problems of the study reveal the diagnostic significance and preventive application of the findings arrived at in the process of designing and utilizing human resources so that wastage and stagnation in education and profession could be checked.

1.3 Formulation of Hypotheses:

With a view to probe into the problems of this study scientifically, suitable hypotheses have been formulated.

In this study, Achievement motivation and level of Aspiration (both educational and occupation) function
as independent variables whereas psychological stress as dependent variable.

Psychological stress has been operationally defined in terms of the scores on its primary parameters. Frustration, anxiety, motor behavioural reactions and three psychological measures (i.e. EEG, EKG and EMG) as indicators of psychological stress have been included in this study. More specifically, the different independent and dependent variables have been presented below:

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<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
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<tr>
<td>2. Aspiration:</td>
<td>Primary parameters of Psychological stress included in this study are:</td>
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<tr>
<td>(a) Educational</td>
<td>Negative Toned Affect:</td>
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<td>(b) Occupational</td>
<td>(a) Frustration</td>
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<tr>
<td></td>
<td>(i) Fixation</td>
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<td>(ii) Aggression</td>
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<td>(iv) Resignation</td>
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<td>(b) Anxiety</td>
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<td>Motor Behaviour reactions:</td>
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<td>Electro-Physiological Indicators:</td>
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<td>(i) EEG</td>
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<td>(iii) EMG</td>
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Psychological stress as a dependent variable has been measured in terms of the total scores obtained on various primary parameters, as well as in terms of nature of psychographs, and their quantitative data obtained on analysis.

It is primarily a correlation study. With a view to study the problems stated earlier and their interactions among the variables, the following hypotheses have been formulated so that the nature and kind of relationships between independent and dependent variables could be scientifically studied.

\( H_1 \)  
"There exists a significant positive relationship between the scores on the test of achievement motivation and psychological stress". More specifically, "The higher the scores on the test of achievement motivation, the greater the amount of psychological stress, measured in terms of the total scores on its various parameters".

\( H_2 \)  
"There exists a significant positive relationship between the scores on the test of educational aspiration and psychological stress".

More meaningfully:
"The higher the level of educational aspiration, the greater the amount of psychological stress, measured in terms of the total scores on its various parameters".
There exists a significant positive relationship between the scores on the test of occupational aspiration and psychological stress.

More specifically:

"The higher the level of occupational aspiration, the greater the amount of psychological stress, measured in terms of the total scores on its various parameters".

(The kind and degree of psychological stress, measured in terms of the total scores on its various parameters of $H_{Ach} - H_{Ea} - H_{Oa}$ (pupils of high $n_{Ach}$ and high educational and occupational aspiration) would be different from those of $L_{Ach} - H_{Ea} - H_{Oa}$ (pupils of low $n_{Ach}$ and high educational and occupational aspiration) as well as from those of $H_{Ach} - L_{Ea} - L_{Oa}$ (pupils of high $n_{Ach}$ and low educational and occupational aspiration) and $L_{Ach} - L_{Ea} - L_{Oa}$ (pupils of low $n_{Ach}$ and low educational and occupational aspiration)."

In addition, the following by$\phi$-hypotheses have also been formulated with a view to study the nature and kind of psychological stress as measured in terms of the total scores of its various parameters displayed by pupils belonging to different strata of the student population under study.
(BH₁)  "There exists a significant difference between the means of boys and girls of the same age and grade on psychological stress as measured by the total scores on its various parameters. Further, they would also show significant difference between their means on various independent measures".

(BH₂)  "There exists a significant difference between the means on various parameters of psychological stress of the students studying at the secondary school level and post-graduate classes".

(BH₃)  "There exists a significant difference between the means on various parameters of psychological stress of pupils offering different educational stresses".

(BH₄)  "There will be a significant difference between the means on various parameters of psychological stress of pupils of different socio-economic status".

(BH₅)  "Pupils belonging to different castes would display a differential degree of psychological stress as measured in terms of total scores on its various parameters; however, the degree of psychological stress found among the pupils of different castes would observe caste-hierarchy".

More specifically:

"The higher the caste of the pupils in the society, the greater the amount of psychological stress as measured
in terms of total scores on its various parameters".

(BH\textsuperscript{6}) "Pupils hailing from rural areas to cities for education would show greater amount of psychological stress measured in terms of total scores on its various parameters than those of urban residents; however, the amount of psychological stress would be found lowest among the tribal students".

1.4 The Scope:

Such a study would not only be diagnostic and correctional, but also promotive and preventive in nature. The remedial measures employed to reduce maladjustment and to measure the amount of stress would have a direct relevance upon the selection and admission, grouping and grading, guidance and counselling of the pupils possessing a specific level of educational and vocational aspirations and motivational strength. Thus, the findings of this study may serve as useful diagnostic measures for improving the level of education, for classifying and directing pupils for a specific vocation, and in minimizing wastage and stagnation in educational institutions and professional fields by allowing pupils to select proper courses/vocations in accordance with their ability and potentiality thereby promoting better mental health and adjustment. Thus, by establishing a relationship between level of aspiration,
achievement motivation and various parameters of stress, the study aims at diagnosing, classifying, grouping, grading, guiding and directing the pupils for various courses and vocations on the strength of the amount of stress that a student could generate if he possesses a certain level of educational and vocational aspiration, and a certain degree of achievement motivation.

The diagnostic approach and correctional measures would improve the adjustment patterns and promote mental health in educational institutions and professional placements.

1.5 Significance of the Problem:

Researches on Psychological stress have been mostly conducted by clinical, experimental and neuro-physiological psychologists, may be because of the term 'stress' having a greater relevance to and a deeper affinity with abnormal psychology. Numerous researches on induced stress under different experimental conditions as an independent variable have been conducted; and its effect on behavioural change as a dependent variable has been observed; however, the studies on psychological stress as a dependent variable in educational psychology have hardly caught the attention of the researchers. May be
because of the fact that 'stress' is more frequent word having greater applicability in clinical than in educational psychology.

The neurobiologist is discovering the chemical and structural and functional changes in the brain associated with learning and memory, while the psychologist and educator are similarly learning how to direct and enhance these appropriate experiences. The trail is now clearly open between RNA molecules in nerve cells and computer-controlled learning modules or cells in schools and homes. It is tempting, even now, to go into such neuro-physiological and behavioural evidence as bears, on the optimal level of stress, the size of the physiological neurone reserve, input overload and underload on the quantitative axis and input displacement on the qualitative one; the attendant problems of breakdown of mental health and performance in the neuroses on one malfunction axis and in the psychoses on another. All that is possible is happening, with improved devices for chemical and electrical and other manipulation of the brain itself, with more skillful use of techniques of conditioning and educating; interviewing and persuading the learner to learn efficiently; and without any loss of human resources. Knowledge of degree of stress that could be generated in an individual who possesses a
specific level of achievement motivation and aspiration would certainly enhance the educational and vocational planning; and would help in designing jobs appropriate for a person of a certain stress limit. The degree of incongruity and dissonance between the nature of job or courses and tolerance limit of stress of a student would promote fear of failure leading to frustration to that extent. Stress, thus, can both make and break individuals; some will be unable to function as their limit of homeostatic tolerance is exceeded.

The study, thus, has a significance from the points of view of educational and vocational planning. Educational courses and vocational placements can be designed keeping in view the nature and kind of relationship that exists between psychological stress and achievement motivation and level of educational and vocational aspiration. Further, it will also be possible to develop such courses which require a lower level of achievement motivation and aspiration capable of generating a minimum level of stress. The nature and kind of jobs and courses that pupils having probability of generating greater stress because of their higher achievement motivation and greater aspiration would be different from those who are in possession of weaker achievement motivation and lower educational and occupational aspiration.
1.6 **Delimitation of the Study:**

This study would be delimited by the following considerations:

1) The male and female students studying at the final grade of secondary schools as well as at the postgraduate level of Raipur city were employed for this purpose. Students were drawn from the following educational streams:
   1) Humanities
   1i) Social Sciences, and
   1ii) Natural Sciences

2) This study has been conducted upon those students who were studying at the terminal year of their academic courses and showed their need for vocational placement after the completion of their academic career.

3) Only the psychological stress has been studied. No attempt has been made to extend the study to include the biological and sociological stresses.

4) In the psychological stress, frustration, anxiety, motor behavioural reactions and three electro-physiological measures i.e. EEG, EKG and EOG have been included as the primary parameters of psychological stress. No other parameter of psychological stress has been taken
into consideration in this study. All these parameters of psychological stress functioned as dependent variables.

5) The study is concerned only with the educational and occupational aspirations as independent variables. No other aspiration has been included.

6) Achievement motivation has been included as another independent variable.

7) It is primarily a correctional study. No attempt has been made to extend the study either to casual factors or to coping processes of psychological stress.

8) It is beyond the scope of this study to induce psychological stress among the Ss by introducing some external forces of threat.

9) This study is restricted only to psychological stress reactions as a dependent variable. No other aspects of psychological stress (e.g. stress-stimulus variables, threat, threat-appraisal or coping process) have been included in this study.
1.7 Conceptual Frame Work and Operational Definitions:

The present study is centered around the psychological stress reactions as dependent variables and Achievement Motivation and Aspiration (Educational and Occupational) as independent variables. The former has been estimated in terms of its parameters given as under:

i) Negative Toned Affect: This dimension of psychological stress reactions takes into consideration:
(a) Frustrations which includes (i) Fixation,
(ii) Aggression, (iii) Regression and (iv) Resignation as primary components, and (b) Anxiety.

ii) Motor Behaviour Reactions.

iii) Electro-Physiological Indicators which include:
(a) EEG
(b) EKG, and
(c) EMG

This study pertains to the inherent psychological stress as 'Reactions', and not as 'Psychological Stimuli'.

A conceptual frame work and operational definitions of the concepts mentioned above are presented as under:
(A) Dependent Variable:

(i) Psychological Stress Reactions:

(a) Concept:

The terminology of 'stress' is not only inconsistent and confused but the very definition of the subject matter of stress are contradictory (Lazares, 1966, p.2). Absence of an agreed upon unifying system of concepts dealing with the mechanism of stress (Lazares, 1966, p.3, Mirsky, 1964, p. 534) may be the probable causes that stress has been synonymously employed for 'anxiety', 'conflict', 'frustration', or 'defence' (Lazares, 1966, p.2), and carries multiple meanings, characteristics and uses. Grinker and Spiegel (1945) used 'stress' connoting the mental disorder produced by brain damage during aerial combat as a consequence of 'shell shock' or of 'battle fatigue' (concepts prevalent during World War I, 1917; and II, 1945) whereas Bettelheim (1960) rarely used the term stress in the same connotation but refers instead to 'extreme situations' in his study on imprisonment in a concentration camp. Basowitz, Persky, Korchin, and Grinker (1955) defined parachute training as stress situation, while Epstein (1962) employed conflict to refer to the identical situation. Janis (1958) reported the psychological threat as surgery under the rubric of 'stress' while Selye (1956) employed the term to express the direct
physical assaults by noxious stimuli on tissue systems. Lindemann (1944) used stress to express extreme grief while Visotsky, Hamburg, Goss and Lebovits (1961) employed it on the psychological adaptations of people stuck down suddenly with paralytic polio; and Hamburg, Hamburg and deGoza (1953) on adaptations to severe incapacitating burns. Smelser (1963) has introduced the stress theory of collective behaviour according to which 'stress' has been considered as social outbursts causing social disequilibria.

Stress is a relatively new word that appeared in Psychological Abstracts in 1944 by Grace Heider (Lazaras, 1966, p. 9); however, the issues encompassing are very old ones and are often abstracted under the rubric of emotion.

Stress, as an external force directed at some physical object, originated in the field of engineering. Lazarus (1966, p. 12) remarks that Selye (1956) has been instrumental in stimulating a reversal of the engineering convention. Selye (1956) employed the term 'stress' to refer to: (i) the initial impact of the stressor on the tissues (the alarm stage), (ii) sometimes to the adaptive mechanism whose function it is to restore homeostasis, and (iii) sometimes to the wear and tear, damage and disease, consequences of prolonged homeostastic process.
Lazarus (1966, p. 12) points out that "From the homeostatic point of view, a stress is some stimulus condition that results in disequilibrium in the system and produces a dynamic kind of strain, that is, changes in the system against which mechanism of equilibrium are activated". And Selye's (1956) adaptation syndrome as an elaborate series of neural-hormonal reactions against the effects of noxious agents on the tissue system, is one of the examples.

Grinker and Spiegel (1945) have used the term 'stress' under engineering convention with homeostatic principles added. They considered stress as 'some unusual condition or demand of life, (in this case i.e. battle fatigue), the dangers and rigours of aerial combat and the conflicting demands produced by the social ties and obligations among the airmen' (Grinker and Spiegel, 1945). Arnold (1960) also uses the same concept which is implicit in his definition of stress as "any condition that disturbs normal functioning".

The sociological interpretation of the definition of stress as conceptualized by Smelser (1963) is in no way different from Selye (1956). On a frame work of collective behaviour which is regulated largely by group-mind, Smelser (1963) visualised the social outbursts such as panics and riots, as the major antecedent condition in
social strain which results into social disequilibrium of the social system. Such social imbalances can be considered as the social counterparts of stress and of physiological concept of homeostasis (Lazarus, 1966, p. 2).

Horvath (1959) defined psychological stress "as a state which occurs when an individual is subjected to conditions which disturb or threaten to disturb crucial psychological variables from within their limits". These variables are of two general types: (i) those variables whose displacement from normal constitute a threat to the continued existence of the individual thereby arousing high levels of biological drives or fear, and (ii) those variables whose displacement from normal constitute a threat to some aspects of his personality structure or ego, thereby arousing anxiety, failure, frustration. Thus, stress has many meanings, however, regardless of terminology, its critical, theoretical and empirical issues are always the same (Lazarus, 1966, p. 29).

(b) **Mechanism:**

Lazarus (1966, p. 24) views the following three as central issues in psychological stress:

(i) *Stress-stimulus variables*: stress reactions generating conditions and processes.

(ii) *Coping Process:*
(iii) Stress- Reaction variables:

ince there are variations in reaction patterns in different individuals and in different instances of stress, the last issue guides us back to the consideration of intervening processes and conditions. It is, therefore, significant to postulate the processes intervening between the stress stimulus and response, and identify the factors that influence these processes.

Threat, the key intervening variable in psychological stress has been inferred from antecedent conditions and responses. It is future-oriented or anticipation involving expectation of a future harm and is brought about by cognitive processes of the individual. The occurrence of threat or its expectation to the self anticipating some harm activates the individual to resort to some coping process. The threat appraisal process as an intervening variable is regulated by the cognitive functioning of the individual. The differential nature of cognitive process of an individual attaches differential meaning to the same stress stimulus bringing about a variation in coping processes and their stress reactions.

Lazarus (1966, p. 28) points out that threat as the intervening variable of psychological stress is meaningful only with the threat stimulus, and not with noxious stimulus at the physiological level. Withey (1962, p. 94)
has also stated with great clarity that, "The notion of threat specifically implies that the noxious stimuli are not actually present. Only the cues heralding their coming are involved". In some cases these cues themselves may have physiologically stressful characteristics but we are not interested here in purely physiological adaptations to an extreme stressful condition but rather in reactions mediated by psychological processes, such as conditioning, perception, thinking, defence mechanism, etc. that are triggered off by various available cues signifying impending stress. The nature of threat as made meaningful by the individual brings a variation in the degree and kind of stress.

In consequence of specifying the nature of threat as the anticipation of harm triggered by stimulus cues that herald its coming, the threat stimulus should be differentiated from the actual harmful occurrences which could be termed as confrontation with harm. "While threat concerns cues of imminent harm, confrontation refers to the actual occurrence of the anticipated event" (Lazarus, 1966, p. 38). "The studies conducted by Sharnon and Isbell (1963), Birnbaum (1964), Barber and Coules (1959), Mechanic (1962) indicated that anticipation of harmful events as threat to the self is subjectively worse" (Lazarus, 1966, p. 38) and more challenging and confronting than the actual occurrence
of the anticipated events; and this is so because of the conflict, fear and anxiety generating period of uncertainty or indecision about the anticipated event before the confrontation. Mechanic (1962, pp. 162-163) has remarked, "Most students reported considerable relief of anxiety once they got started on the examinations".

The primary appraisal of threat is another important issue in estimating psychological stress. Pointing out the essentiality of cognitive process involved in the appraisal of threat, Lazarus (1966, p. 44) remarks that, "For threat to occur, an evaluation must be made of the situation, to the effect that a harm is signified. The individual's knowledge and beliefs contribute to this. The appraisal of threat is not a simple perception of the elements of the situation but a judgement, an inference in which the data are assimilated to a constellation of ideas and expectations. The mechanism by which the interplay between the properties of the individual and those of the situation can be understood is the cognitive process of appraisal; a judgement about the meaning or future significance of a situation based not merely on the stimulus, but on the psychological make-up".

Janis (1951), Wallace (1956 a), Fritz and Mathewson (1957), Withey (1962), Shannon and Isbell (1963), Barber and Coules (1959) and Jrinker and Spiegel (1945) have
have indicated that the appraisal of the threat situation actualizes the higher mental processes based largely upon past experiences. The meaningfulness that the individual derives out of the threat-situation on the strength of the cognitive evaluation based on past experience and motives present, largely determines the nature, kind and degree of stress reactions and coping behaviour. The concept of appraisal has been persuasively presented by Magda Arnold (1960) as the cognitive determinant of psychological stress. In fact, appraisal is the cognitive process that intervenes between the stimulus and the stress reaction signifying the stress-stimulus-strength. Specifying the significance of cognitive determinants of threat-appraisal, Magda Arnold (1960, pp. 177-178) states: "Without this link we are at a loss to explain why the same perception results sometimes in one and sometimes in another emotion and action. The link left out is the intuitive appraisal of the object, its 'determinant character', as Lewin would say. The emotion as well as the action, follow the intuitive estimate that establishes this demand character. --- As soon as we intuitively judge that something is threatening, we feel repelled from it, we feel urged to avoid it. The intuitive appraisal of the situation initiates an action tendency that is felt as emotion, expressed in various bodily changes, and that eventually may lead to overt action". This nature of appraisal points out that 'Threat
is the product of appraisal, and the action tendencies aroused by threat may be regarded as coping processes" (Lazarus, 1966, p. 53). It appears that intuitive judgement is a necessary condition that enhances specificity of the stress-stimulus, and attaches subjective meaningfulness to it for the individual. While the objective nature of the stimulus configuration contributes importantly to the appraisal process, it is always in interplay with the psychological structure of the individual" (Lazarus, 1966, p. 55).

Another issue that determines the nature of psychological stress is the subjective intuitive judgement of the objective stress-stimulus configuration which attaches personal meaning to the latter because of the specific psychological structure of the individual, and thereby, interpreting subjectively the product of threat appraisal in terms of psychological harm as motive thwarting. (Grinker and Spiegel, 1945, p. 353; Ferrg and Bloch, 1956, p. 23; Cofer and Appley, 1964; and Pascal, 1951). Lazarus (1966, p. 56) has clearly highlighted the significance of motives in the appraisal of threat. He remarked:

"If some future anticipated stage or condition is irrelevant to the individual's goals or values, it will not lead to threat appraisal, since the future condition will not harm the individual. If the future condition involves the realization of goals without the thwarting of other, the cue indicating it will result in
a positively toned emotion. If the cue stimulus portends the thwarting of a motive, it is likely to be appraised as threatening. The stronger the motive that is endangered, the greater is the potential threat. Harm viewed psychologically is, therefore, identical to motive thwarting and the anticipation of motive thwarting constitutes threat appraisal.

It is, therefore, logical to conclude that psychological harm is the thwarting of a motive, and the magnitude of psychological stress produced by the individual largely depends upon the degree of harm anticipated by the individual in accordance with the strength of the motive which is thwarted as made meaningful by the individual on the strength of his personal intuitive judgement.

(c) Operational Definitions:

Horvath (1959, pp. 203-230) remarks that "the behavioural manifestations of stress are disorganized, disrupted, emotionally distressed responses. The operational definition, therefore, of these stress responses is an impairment of psychological emotion or a decrement in performance on a goal-oriented task. Measures of this decrement in performance should be supplemented by other measures of the disrupting efforts of stress, such as increased errors, burst of responses, or emotional reactions". Hans Selye (1976) pointed out that psychological stress could be better perceived in terms of its
manifestations, or as a syndrome, a set of signs and behavioural symptoms and emotional reactions. In view of these remarks, Psychological stress reaction as a dependent variable has been operationally defined in terms of scores obtained by a subject either on all the measures or on individual indicator of stress under study. Thus, a subject's global psychological stress reactions in reality would be the total score obtained on (i) Frustration Scale, (ii) Anxiety Scale, (iii) Motor Behaviour Reaction Scale, and (iv) The three indicators, i.e. EEG, EKG and EMG.

Electro-physiological records of EEG, EKG and EMG have been represented in terms of psychographs. These data have been made meaningful by their graphical interpretation. Consequently, amount of psychological stress reactions have been operationally defined as the global score on frustration, anxiety and motor behaviour reactions. A conceptual framework of these parameters of psychological stress reactions have been presented in Chapter III, under the caption 'Materials used'; however, their operational definitions have been given below:

(i) Frustration: Frustration has been analyzed in terms of its various components, e.g. fixation, Aggression, regression and Resignation. It has been operationally defined as the total score, on the Frustration Scale (Chauhan and Tiwari, 1976) obtained by a subject on all its four components expressing the amount of negative toned
stress reactions. While the total score obtained by a subject on the Frustration Scale used in this study represents the global frustration, the individual scores on its various components reflect varied aspects of frustration as indicators of psychological stress reactions.

(ii) **Anxiety:** Anxiety has been operationally defined as the total score on the Comprehensive Anxiety Scale (A.K.P. Sinha and L.N.K. Sinha, 1969) obtained by a subject as an indicator of negative toned stress reactions.

(iii) **Motor Behaviour Reaction:** Motor Behaviour Reaction as one of the parameters of psychological stress reaction has been operationally defined as the total score obtained by a subject on Motor Behaviour Reaction Scale standardized by the investigator. The total score on MBRS is the global reflection of the subject's expressive and instrumental acts.

(iv) **Electro-Physiological Indicators:** The electro-physiological records of (i) EEG, (ii) EKG and (iii) ENG as indicators of psychological stress reactions have been operationally defined in terms of their respective psychographs on Polyrite. The pattern of psychographs is the reflection of psychological stress reactions found in the individual subject. The meaningfulness of the electro-physiological records of EEG, EKG and ENG rests with the specificity that each one of these three psychographs, as
one of the indicators of psychological stress reactions, represents.

(B) **Independent Variables:**

The present study includes three independent variables:

1) Achievement Motivation
2) Educational Aspiration
3) Occupational Aspiration.

The conceptual framework of these independent variables has been presented in Chapter III under the caption, 'Material used'; however, this operational definitions have been given below:

(i) **Achievement Motivation:** Achievement motivation has been operationally defined as the total score, on Achievement motive Inventory (Prayag Mehta, 1969) obtained by a subject. Though AMI gives a set of four scores; (e.g. AR, TM, HR and AMI), it is the AMI score which makes the entire data more meaningful, and estimates the level of achievement motivation of an individual.

(ii) **Educational Aspiration:** Educational aspiration has been operationally defined as the total score obtained by a subject on 'Educational Aspiration scale' (Sharma and Jupta, 1978) as the expression of his educational aspiration measured in terms of percentile norms. A subject's level of educational aspiration is indicated by his
percentile rank on EAS.

(iii) **Occupational Aspiration**: Occupational aspiration has been operationally defined as the total score obtained by a subject on "Occupational Aspiration Scale (Grewal, 1975), as the expression of his occupational aspiration measured in terms of percentile norms. A subject's level of occupational aspiration is represented by his percentile rank on OAS."