Chapter-III

METHODOLOGY

Stress is basically defined as an applied force or system of forces that tends to strain or deform a body. It is usually caused by something that is out of the ordinary from everyday life, things like tests, family problems and loss of job. The academic stress faced by college students these days is perhaps higher than ever before. Today students have a lot of stress because of a lot of different reasons. There are many things that cause stress for college students; one of the main causes of stress is adapting to the new life. The uncertainty and lack of identity is a common cause of stress for student. Stress also creates the way people deal with things like smoking and drinking, which are worse ways of dealing with stress. Another cause of college stress is relationships. Relationship stress can be caused by not living up to their partner's expectation or just plainly by breaking up with someone that they really did care for. Also, it can be caused by an individual liking someone a lot and the finding that feeling is not mutual. Another cause of the stress is peer pressure. All of these aspects can cause students to feel like they are in way over their heads. After all, college students have a lot of stress. There's no denying it, but college is what one make of it. If an individual stay focused and balance their life, it will feel much more relaxed and healthier when it's time to wear our cap and gown. Now, that's an achievement that student should have earned for life!

Resilient person are those who lead an adjustable life style inspite of having high life event stress. Resilience is defined as a dynamic process that individuals exhibit while they facing adversity or trauma. In our day to day life it has been experienced that some of us are leading happier and peaceful life in a stressful situation, while there are many who are not. So, it is very important to know why some persons are able to deal effectively with their stressful life than the others as well as what factors are responsible behind it.

Current research study is to be arranged to find out resilient freshmen in order to see what psychological factors are correlated or help to build resiliency in them.
In the present research study some factors were taken which assumed to be contributing factors in resiliency. The factors:

- **Coping strategy:** In the present study only the problem solving coping (problem focused coping) strategy was considered to identify the person having effective coping skill. All other coping strategies mentioned in this scale, though essential and effective for some situations or other, are less effective having a relatively short term effect in comparison to problem solving coping strategy (Sandra & Stephen, 2007).

- **Personality factor:** Neuroticism, extraversion, agreeableness, openness, conscientiousness are included in this dimension.

- **Adjustment pattern:** Home, health, social, emotional, educational adjustment pattern are to be included in this dimension.

- **Impulsivity:** The present research study is to assess the academic stressors that adversely affect “freshmen” life and bring out the factors that play an important contributory role to become a resilient. In this study, the group of subject who faces high stress in their life and applied effective coping strategies to deal with that particular stressful life events, will be considered as resilient group. Within a domain of any research report, methodology, including plan of research, the tools intended to used in the research and steps followed are the important to clarify the research work. To probe into the present research the existing knowledge and information already available have been studied in depth.

There are many questionnaires available for measuring stress of an individual’s life. But the fact, that some important statement regarding the stress of academic field necessary for this research were missing in all of these questionnaire, and some of these statements are invalid in today’s world, was compelled the researcher to construct a new scale for measuring stressful life events for the student population including the stress related to academics if any.
The study was divided in two parts:-

First part is scale construction and

Second part is the research study itself.

**SAMPLE**

A total of 1600 Freshmen college students constituted the sample.

**Study-1**: Sample for study 1 was 1000 (500 male & 500 female) freshmen college students.

**Study-2**: Sample for study 2 was 600 freshmen college students (300 male & 300 female) are selected by the following inclusion and exclusion criteria:

**Inclusion criteria for both study 1 & 2**

- Age- 18-19 years
- Sex- both male and female.
- Students of 1st year class of B A, B.Sc, and B. Com courses.
- Students of recognized educational institutions.
- Urban college population.

**Exclusion criteria are-**

- Students with past psychiatric illness.
- Student with any type of present disability.
- Students not willing to answer all the question of the questionnaires.
- Above 4 score of GHQ.
Sample of this research was considered an adolescent group (age 18-19 years) of first year under graduate college students. The purpose of this selection is that this group of individuals were belong to a peak of the life stages i.e., they had already passed out from the stressful situation of the last year examination and were confronted to a new college environment. Inspite of that by their age they were passing to a way of very sensitive, vulnerable, confusing, conflicting, heightened emotionality, role conflict periods. The present research study wants to find out those groups of subjects who can easily cope with the situation inspite of facing high stressors from their life, and find out what are the personality correlates help them to give a better adjustment to their environment.

**VARIABLES**

*Resilience*: Resilience is defined as a dynamic process that individuals exhibit positive behavioural adaptation when they encounter significant adversity or trauma (Luthar *et al.*, 2000). It is the positive capacity of people to cope with stress and catastrophe. It is also used to indicate a characteristic of resistance to future negative events. In this sense "resilience" corresponds to cumulative "protective factors" and is used in opposition to cumulative "risk factor.

**Some Psychological correlates**: Here the term ‘correlates’ denotes the ‘Factors’ affecting resilience, i.e., to find out what are the psychological strength (correlates/factors) that leads a person become resilient. So, the objective is to find out the factors that contribute a person to be resilient.

1. **Frequency of perceived life stress:**

Stress can be defined as "a physical or psychological stimulus that can produce mental tension or physiological reactions that may lead to illness. The most commonly accepted definition of stress (mainly attributed to Lazarus) is that stress is a condition or feeling experienced when a person perceives that “demands exceed the personal and social resources the individual is able to mobilize.” In short, it's what we feel when we think we've lost control of events. According to Lazarus (1993) “stress is the
anxious or threatening feeling that comes when we interpret or appraise a situation as being more than our psychological resources can adequately handle."

The Your Dictionary Web site defines stress as “a condition typically characterized by symptoms of mental and physical tension or strain, as depression or hypertension, which can result from a reaction to a situation in which a person feels threatened, pressured, etc.” Synonyms for stress include anxiety, nervousness, fearfulness, apprehensiveness, impatience, fear, restlessness. Some of the early research on stress (e.g., Cannon, 1932) established the existence of the well-known “fight-or-flight” response. His work showed that when an organism experiences a shock or perceives a threat, it quickly releases hormones that help it to survive.

Not only life-threatening events trigger stress reaction: We experience it almost any time we come across something unexpected or something that frustrates our goals. When the threat is small, our response is small and we often do not notice it among the many other distractions of a stressful situation.

2. Coping strategies:

Coping can be defined as the cognitive and behavioural efforts made to master tolerate or reduce external and internal demands and conflict among them. (Folkman & Lazarus, 1980) Coping is the process of managing demands (external and internal) that are appraised as exceeding the resources of the person. With these resources the individuals can cope or deal stressful situation (Lazarus & Folkman, 1984). The term coping encompasses at least two fairly distinct concepts, which are coping resources and coping strategy. Coping resources: which refers to personal material and social assets that people have in a varying quantities. Another is Coping strategies which refers to habitual behavior and cognitive styles in approaching problems. Coping efforts fall into three major functional categories

- **Problem focused coping strategy**: The goal of the problem focused coping is to reduced the demands of the situation or enhance one’s resources to deal with it. It has three dimension —— Seek information or advice: responses in this category involve seeking more information about the situation and obtaining
direction and guidance from an authority. **Take problem solving action:** this strategy include making planes, taking specific action to deal directly with the situation.

**Develop alternative demands:** this strategy involve attempt to deal with the problematic situation by changing ones activities and creating new sources of satisfaction.

- **Emotion focused coping strategy:** Emotion focused coping involves attempts to regulate or reduce the emotional consequences of the stressful event. It has three dimensions----- **Affective regulation:** this strategy involve direct control the emotion aroused by the problem. **Acceptance the situation as it is** : this category include such responses as waiting for time to remedy the problem, expecting the worst, accepting the situation as it is. **Emotional discharge:** this strategy include crying, over eating, engaging in impulsive acting out.

- **Social support coping strategy:** Social support is support or help from other individuals such as friends, family, neighbors, co-workers, professionals. Social support is believed to help reduce stress.

Another type of coping strategy is **Appraisal focused coping strategy.** It involves attempt to define the meaning of a situation and include such strategies as logical analysis and cognitive redefinition. Basically it is also referred to as problem focused coping.

3. **Personality :**

Personality is a dynamic organization with in the individual of those psychophysical systems that determine his unique adjustment to his environment *(Gordon Allport, 1937).* Personality is the sum total of ways in which an individual reacts and interacts with others. The total personality or 'psyche' as it is called by Jung, consists of a number of differentiated but interacting systems. The principal ones are the:
In addition to these interdependent systems, there are attitudes of introversion and extraversion, as well as the functions of thinking, feeling, sensing and intuition.

Finally, there is the "self" which is the center of the whole personality.

No two people are exactly the same - not even identical twins. Some people are anxious, some are risk-taking; some are phlegmatic, some highly-strung; some are confident, some shy; and some are quiet and some are loquacious. This issue of differences is fundamental to the study of personality.

There are five domains of personality such as:

a. **Neuroticism**: It refers to the general tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt, and disgust. Neurotic persons are also prone to have irrational ideas, to be less able to control their impulses, and to cope more poorly than others with stress.

b. **Extraversion**: Extravert people are sociable, preferring large group and gatherings. They are assertive, active and talkative. They are upbeat, energetic, and optimistic.

c. **Openness**: Open individuals are curious about both inner and outer worlds. They are willing to entertain novel ideas and unconventional values, and they experience both positive and negative emotions more keenly.

d. **Agreeableness**: The agreeable person is fundamentally altruistic. He or she is sympathetic to others and eager to help them, and believe that others are equally helpful in return.

e. **Conscientiousness**: The conscious individual is purposeful, strong willed and determined.
4. Adjustment:

Adjustment means reaction to the demands and pressures of social environment imposed up on the individual. The demand may be external or internal to whom the individual has to react. Adjustment means the behavioral process of balancing conflicting needs, or needs against obstacles in the environment. The concept of adjustment is applicable as long the response serves to reduce the demands made on a person. When such responses are insufficient, detrimental to personal wellbeing or pathological, they are designated as mal adjusted. Adjustment was at first linked to adaptation, a process by which simpler organism confront to the demands of the environment. **Erick Framm (1941)** distinguish static from dynamic adaptation. The term static adaptation refers to relatively simple change in habit and dynamic adaptation refers to a situation where a person accepts things even when they are painful. Good adjustment seems to imply some degree of mastery, which suggests the ability to plan and to organize personal responses in such a way that conflicts, difficulties and frustration tend to disappear. It also means mastery of the environment— the ability to cope with reality in an adequate healthy manner and to manipulate the environment of people and events in a way that leads to adjustment. From the psychological point of view adjustment means many things such as need gratification, skill in dealing with frustration and conflicts, peace of mind etc. The well adjusted person is one whose responses are mature, efficient, satisfying and healthy. These persons can within the limitation of his own personality, react effectively to different situations and resolve conflict and frustration and problems without the use of symptomatic behavior. He creates world of interpersonal relation and satisfaction that contribute to the continue growth of personality. In psychology the degree to which a person can control the desire for immediate gratification or other. Adjustment has five domains such as:-

- Home.
- Health.
- Social.
- Emotional.
- Educational.
Adjustment has many different qualities, each of which can be developed into a criterion by which adjustment can be more clearly evaluated. Since good adjustment is primarily refers to conformity to a psychological norm, this psychological norm may be regarded as a general criterion of adjustment. Thus adjustive responses can be evaluated by comparing them with one should do in term of his natural make up and his relation to other. Specific criterion may organized into the following three categories: criteria affecting self, criteria affecting others, criteria for personal growth.

5. Impulsivity:

The concept of impulse control often refer to as self control and sometime self regulation, which has long history specially in personality and clinical psychology. Since psychologist have been concerned with the notion of control as it affects human behavior in different ways. This concern is reflected in concepts like will power, ego strength.

A striking feature of human behavior is that people impose restriction on them selves, interrupting their own activities and delaying the available gratification. When the delay of gratification is imposed on the individual by external forces, frustration occurs and when, the delay is self impose it is said to be self control (Mischel, 1971).

Rothbart (1998) said that temperament is particularly helpful as an organizing framework for considering connection between individuals’ differences. Effortful control includes enjoyment of low intensity stimulation, greater perceptual sensitivity, and more control over impulses and attention. Children who are higher in effortful control show less negative affectivity, which indicating an important connection between cognitive and attentional control and the regulation of negative emotion (Rothbard, 2000).

TOOLS USED

(1) A detailed Information Schedule was used to collect personal and familial related information about the subjects.
(2) General Health Questionnaire (GHQ), (Goldberg & Hiller, 1979)

Description of the tool: This scale was developed by Goldberg and Hiller (1979). GHQ was designed to be self administered at detecting psychic disease among respondents. The questionnaire was designed to be easy to administer, acceptable to respondents, fairly short and objective in the sense that it did not require the person administering it to make subjective assessment about respondents. There are different versions of GHQ available depending on the nature of items. GHQ-28 containing 28 items is divided from factor analysis of GHQ-60 and consists of subscales for somatic symptoms, anxiety and insomnia social dysfunction and severe depression. It is as good as any other version of GHQ as a case detector, at the same time, it gives scaled subscores. Each item has 4 responses altogether.

Administration to the scale: The GHQ questionnaire may be administered individually or in a group. The testing environment should be comfortable and free of distractions. Each respondent is to be provided with a GHQ booklet and pencil. The booklet consists of “4” response category against each question. Such as Better than usual, Same as usual, Worse than usual, Much worse than usual. Respondents are asked to draw a circle against any one of the response category, which they would think is applicable for that particular statement. There is no time limit for this test.

Scoring: Scoring was done by GHQ method (0-0-1-1). Threshold for the identification as 4/5 i.e. score 4 signifies a non psychic case and score 5 signifies a psychic case. Total score range from 0 to 28.

Reliability and Validity of the test: In an Indian adaptation of GHQ-28 each item significantly contributes to total score as correlation coefficient of each item with total score is significant at .01 level. Its split-half reliability is 0.97. Its sensitivity and specificity are 1 and 0.88 respectively.

(3) Stressful-Life-Event-Scale for College Students (SLESCS), (This scale was constructed.)
(4) Annalakshmi Resilience Scale (Form-A)

**Description of the tool:** Annalakshmi Resilience Scale (Form-A) by Annalakshmi (2008) is a self-administered scale with two forms—Form-A and Form-B. Form A consists of 30 items. It taps seven domains of resilience: duration taken to get back normalcy, reaction to negative event, response to risk factor in life, perception of effects of past negative events, defining problems, hope/confident in coping with future and openness to experience and flexibility.

**Administration to the scale:** Respondents use a 5 point scale to rate each statement with regards to applicability in his or her life. It consists of 20 positive and 10 negative items.

**Scoring:** In this scale positive items are scored in positive direction (i.e., response 1 will get score 1, response 5 will get score of 5) while negative items are scored following reverse direction (i.e., response of 5 will get a score of 1, response of 1 will get a score of 5).

**Reliability and Validity of the test:** The scale was validated against resilience scale for Adults (Friborg, 1995) and Bell’s Adjustment Inventory (Bell, 1935). The higher score on resilience scale for adults indicated higher level resilience, while the lower score of Bell’s Adjustment Inventory indicated better adjustment. The correlation between scores of subjects on Annalakshmi Resilience Scale and other scales suggest the validity of the scale. The scale was found to have adequate concurrent validity.

(5) Coping Check List (CCL-1) (Rao et al., 1989)

**Description of the tool:** This scale was developed by Kiron Rao, D.K. Subbakrishna & G.C. Prabhu (1989). Behaviour pertinent to the three domains of coping, problem focused, appraisal-focused and emotion focused were covered in this checklist and defensive process as it was felt that defence, is often inappropriately equated with pathology. The check list was constructed by keeping in mind the Indian socio-cultural set up. It is a comprehensive and easy to use check list. An item pool was collected from existing coping literatures.
The final version of the coping check list (CCL) comprised of 70 items describing to broad range of behavioural, emotional, and stress. In its present from the CCL is meant for use with an urban population. It is applicable to both sexes with a formal schooling of 10 years and a working knowledge of English.

Administration to the scale: The Coping Check List (CCL-1) may be administered individually or in a group. The testing environment should be comfortable and free of distractions. Each respondent is to be provided with a CCL booklet and pencil. The booklet consist of two cell (Yes and No) against each statement. Respondents are asked to make a tick mark of any one cell which they would think is applicable. There is no time limit for this test.

Scoring: This test has seven subscales. One problem focused scale (problem solving), 5 Emotion focused scale (Distraction, positive methods, Distraction, Negative methods, Acceptance/Blame) and the last one is social support which is a combination of both problem and emotion focused coping. The score for each subscale is therefore, the sum total of the yes responses (score as 1) on that subscale. Responses for different dimensions are scored following the key. Then the total is obtained.

Reliability and Validity of the test: The test-retest reliability for a period of one month is 0.74 and the internal consistency (Cronbach’s alpha) is 0.76.

Rao et al. (1989) showed mean size of coping repertoire for normal is 23.35 with standard deviation of 5.21.

(6) NEO-Five-Factor Inventory, Form S. (Paul & Robert, 1978)

Description of the tool: This scale was developed to operationalize the five factor model of personality as presentation of the structure of traits which was developed and elaborate over the past four decades.

The five factor represent the most basic dimension underlying the traits identified the most natural languages and psychological questionnaires. Factors are defined by groups of intercorrelated traits. The traits are grouped as facets and each cluster of facets as a domain. By describing the individual’s standing on each of the five factors a
comprehensive sketch of one’s emotional, interpersonal, experiential, attitudinal and motivational stages was reflected. The five domain of personality are –

- **Neuroticism:** People high on neuroticism are emotionally unstable and prove to insecurity, anxiety, guilt, worry and moodiness. People at the other end are emotionally stable, calm, even tempered, easy going and relaxed.

- **Extraversion:** This factor contrast people who are sociable, outgoing, talkative, fun-loving and affectionate with introverted individual who tend to be withdrawn, quite, passive and reserved.

- **Openness:** People who rate high in this factor are imaginative, curious, open to new ideas.

- **Agreeableness:** Individual who score this factor are good natured, warm, gentle, co – operative, trusting, and helpful while scored individuals are irritable, argumentative, ruthless, suspicious, uncooperative, and vindictive.

- **Conscientiousness:** This factor range from responsible self disciplined, organized and achieving, at the high end of irresponsible careless, impulsive, lazy, and independent to others.

**Administration to the scale:** The NEO-Five Factor Inventory (NEO FFI) may be administered individually or in a group. The testing environment should be comfortable and free of distractions. Each respondent is to be provided with a NEO-FFI test booklet and pencil. Respondents are asked to read the instruction on the first page, are asked to write their name, age etc. If any subject wants to use identification number, he or she is asked to put the number in the space labeled name. There is no time limit for this test.

**Scoring:** In the NEO-FFI test booklet in the second and third pages the domain score are given. The first column of items (i.e., items 1,6,11,16,21,26,31,36,41,51 and 56) in the answer grid needs to be located the values of the marked response to these 12 items are summed. This summed in the column is entered. This number is the row score for the N domain. An analogous procedure to calculate the remaining domain row score is also to be used.
Reliability and Validity of the test: The NEO-FFI was developed as a short form of NEO-PI. Although a new form has been provided, the instrument is unchanged. The NEO-FFI scale was found to have a correlation coefficient ranging from .75 to .89 for neuroticism. When NEO-FFI is correlated with domain scales of the NEO-PI-R, correlations were 92, 90, 91, 77 and 87 for N, E, O, A and C respectively.

Although an observer rating form of the NEO-FFI has not been published, it is possible to calculate part total correlations and internal consistency for form R NEO-FFI scales and self-reports on the full domain scale ranged from .24 to .67, N=68, p<.05, suggesting cross observer validity for this observer rating scales.

(7) Adjustment Inventory for College Students (AICS) H/E (Sinha & Singh, 2002)

Description of the tool: The Adjustment Inventory has been designed for use with English/Hindi knowing college students of India. The test seeks to segregate normal form poorly adjusted college students of all grades in respect of five areas of adjustment (Home, Health, Social, Emotional, and Educational). The test is helpful in screening the poorly adjusted students who may need further psychodiagnostic study and counseling.

The inventory consists of 102 items (Home 16, Health 15, Social 19, Emotional 31, and Educational 21). In the beginning a list of 201 items was prepared. The list was presented to a group of 5 judges and only those items were retained about which the judges were unanimous for their retention. This led to the elimination of 35 items out of 201. The remaining 166 items were subjected to item analysis. Item analyses were done by calculating bi-serial correlation of each item with the total score on inventory and with the area total scores. The significance of a bi-serial correlation at 0.001 level was fixed as the criterion for retaining an item. This led to the further elimination of 64 items out of 166, retaining only 102 items for the final test.

Administration to the scale: The Adjustment Inventory for College students may be administered individually or in a group. The testing environment should be comfortable and free of distractions. Each respondent is to be provided with an AICS booklet, answer sheet, and pencil. The answer sheet consists of two cells (Yes and No) against
each question. Respondents are asked to draw a circle around any one cell which they would think is applicable. There is no time limit for this test.

**Scoring:** The inventory is reusable with answer sheet for responses given by the student. Transparent scoring keys are provided separately for each area and the responses marked under circle are considered and each response has to be assigned a weightage of one (1) score.

**Reliability and Validity of the test:** Coefficient of reliability of this test was determined by split-half method, test retest method, Hoyt’s analysis of variance method and K-R Formula-20. The reliability of this test was found to be 0.94, 0.93, 0.94 and 0.92 respectively.

In item analysis, validity coefficients were determined for each item by bi-serial correlation method and only those items were retained which yielded bi-serial correlation with both the criteria (i) total score, and (ii) area score, significant at .001 level.

**(8) Impulse Control scale (IC) (Sriwastava & Naydoo 1982)**

**Description of the tool:** Impulse control was conceptualize as including those process which are involved in the control of negative and positive affect states, voluntary delay of the gratification of physiological and psychological needs, persistence and pain endurance (Srivastava and Naidu 1983).

Before writing the items, the existing ego strength and impulsivity scales were scrutinized. Several items were taken from these sources and also from the scale develop by Srivastava and Naidu (1982). Some items were written specifically for the study. This initial pool consisted of 100 items covering 12 categories of behavior relevant to I-C. Details of these categories are given further. The items were edited by the test constructor. 20 items were rejected because they were judged to be lacking in face validity.

A pilot study using the 80 items was conducted on a sample of 10 psychology and 10 non-psychology under graduate students. 10 items out of the 80 items were rejected.
because they were reported to be ambiguous by the students. Now, there were 70 items in the first draft of the impulse control (I-C) scale.

The first draft of I-C scale was administered in groups of 30 to 50 subjects on a total sample of 400 undergraduates students of Allahabad university. The sample consisted of 145 females and 255 males ranging in age from 16 to 22 years.

The responses of 30 subjects were found to be incomplete hence, their forms were rejected. Therefore all further analysis is based on the responses of 370 subjects.

Item analysis was performed by identifying those items which successfully discriminated those subjects who had the top 27% I-C scores from those who had the bottom 27% of I-C scores using 27% as the cutting point for constituting criterion group. The mean scores of both the criterion groups on each item of the scale were computed and t-test was applied to test the significance of the difference between the means of the criterion groups on the same items. Only 5 items yielded insignificant ‘t’. The remaining 65 items were retained in the I-C scale.

Study of the I-C literature suggested that the set of 12 categories of behavior was relevant to I-C. The definition of these categories and the serial number of the items of I-C scale included within each category are given. In the end the correlation coefficient (‘r’ Significant at or beyond 0.01) between that category of I-C and total I-C scores is given within parenthesis. The assignment of the items to the categories was done on the basis of the judgment of 20 teachers and students of psychology.

Definition of categories

1. Impulse to Immediate Gratification of Psychological Needs:

This category dealt with items revealing the persons tendency either indulge in immediate gratification of psychological needs or delay the gratification of the same. Item Serial Number- 3, 45, 50, 53. (r=.5680)
2. Control of Fear:

It included items indicating control or absence of control over fear under hazardous or frightening situations. Item Serial Numbers 4, 23, 32 (r=.6258)

3. Ability to Concentrate and Control Thought:

Items revealing a person’s ability or inability to focus attention on the task at hand by subjugating irrelevant intruding thoughts were kept under this category. Item Serial Number- 14, 16, 42, 57 (r=.6050).

4. Control of Anxiety:

Items indicating control over restlessness, apprehensions about future, tensions of an unknown origin, fear of loss of happiness in future etc were included in this category. Item Serial Numbers- 15, 48, 54, 58, 60 (r=.7130)

5. Control of Grief:

This category included items indicating control of absence of control over emotion in situations evoking grief, sadness and tears. Item Serial Numbers- 1, 10, 20, 28, 34, 65 (r=.7007)

6. Control of Anger and Irritation:

Items indicating control or lack of control over anger of irritation were kept under this category. Item Serial Numbers- 2, 9, 11, 17, 25, 26, 27, 35, 36, 47 (r=.7821)

7. Control of Reaction to Ego Threat and Experience of Humiliation:

These dealt with items indicating control or absence of control over reaction to humiliating or ego threatening situations.

Item Serial Numbers- 7, 8, 18, 19, 33, 38, 43, 62, 64 (r=.7021).
8. Enduring Physical Distress:

This category included items indicating presence of the capacity to endure physical distress arising from pain or any unsatisfied biological need.

Item Serial Numbers- 24, 39, 52, 56, 63 (r = .4542)

9. Persistence:

Items indicating presence or absence of patience and persistence in the face of failures, delays and obstacles were kept under this category. Item Serial Numbers- 6, 22, 29 (r = .4378).

10. Control of Positive Emotions:

Items indicating control or lack of control of happiness and other such positive emotions were included in this category. Item Serial Numbers- 13, 31, 40, 49 (r = .5360).

11. Control of Undifferentiated Emotions:

This category included items indicating control or inability to control globally described states of emotion. Item Serial Numbers- 5, 12, 21, 30, 37, 44, 46 (r = .6606).

12. Control of Unclassified Emotions:

Items which do not fit in any of the categories given, but are related to ability or inability to control behaviour were kept under this category.

Item Serial Numbers- 41, 51, 55, 59, 61 (r = .6837).

Administration to the scale: The Impulse control scale may be administered individually or in a groups. The testing environment should be comfortable and free of distractions. Each respondent is to be provided with a I-C booklet and pencil. The booklet consists of 5 response category against each question. Such as Never, Rarely, Sometimes, Frequently, Always. Respondents are asked to make a tick mark of any one
of the response category, which they would think is applicable for that particular statement. There is no time limit for this test.

**Scoring:** The instrument employed a 5-point scale. Therefore the summated score on the 65 items could range from 65 to 325. The score for each category of I-C was determined by adding the scores of the items of that category. Some items in this scale have reversed score. In this case, if a subject tick 5 of one of these items he should be given a score of 1 on that item, if he/she tick 1 he should be given a score of 5. Middle ratings of 3 remain unchanged on these items.

Item Serial Numbers- 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 15, 17, 18, 20, 21, 24, 26, 27, 28, 31, 32, 34, 35, 36, 38, 39, 40, 43, 45, 46, 47, 48, 50, 52, 53, 54, 57, 58, 60, 61, 62, 64, 65.

The remaining items whose serial numbers are not mentioned above should be scored directly, i.e., a subject’s score on one of these items is the same as the number checked by him/her.

**Reliability and Validity of the test and Norm:** The I-C scale was readministered on a sample of 50 subjects to determine the test retest reliability after 4 weeks of the first administration. The coefficient of correlation obtained from the two set of scores was found to be .76, p<.01 level (N=50).

Using Spearman Brown prophecy formula (Garrett 1966) the split half reliability was predicted to be .73 p<.01 level (N=100).

To determine the construct validity of the I-C scale, the Hand tremor measure experiment and picture frustration study were done. These study revealed that I-C had a significant effect on hand tremor scores (Stress tolerance), the interaction between I-C and experimental stress was very highly significant F i.e., 10.336 p < 0.01. Picture frustration study revealed significant result at 0.01 levels. These two studies proved construct validity of I-C scale.

**Norm:** N=370 , Mean= 208.61 , S.D= 26.15
PROCEDURE

Study 1

Many questionnaires are available for measuring stress of an individual's life, but some important statements regarding the stress of academic field necessary for this research are missing in these questionnaires, and some academic stress-related questionnaires such as Life Stress Scale for University Students (Agrawal & Naidu, 1997), Youth Problem Inventory (Verma and Gupta, 1997), Student Alienation Scale (Sharma, 1997) are not modernized for the advanced society, and number of new problems which arises in recent decades are numerous.

Most of the above mentioned scales emphasized on academic stress and symptoms and/or academic stress only. The scale of Varma & Gupta (1997) dealt with the domains of academic stress, viz. examination system, homework, attitude of teacher and attitude of parents. Moreover this scale is constructed only for 10 to 16 year old students. Here other environmental factors which may have direct or indirect effect on academic performance and could be considered as academic stress as well are not taken into account the scale constructed by Sharma (1997) entitled Student Alienation Scale emphasized on different dimension of Alienation which are “Powerless”, “Self Estrangement”, “Isolation”, “Meaninglessness” and “Normlessness”. But the purpose of the scale is to see the effect of stressful life events on different psychological parameter. The scale of Sharma (1997) mainly dealt with some personality factors viz., Powerlessness, Isolation etc, but the stressful life events.

The purpose of the present study-1 to see the stressful life events as a whole which supposed to be affects the academic performance of the subject adversely for students' population. There is other perceived life event scale in general which also demonstrated but not the impact of those stresses on academic separately. The scale of Agrawal & Naidu (1997) entitled Life Stress Scale for University Students are more or less all inclusive with nine major categories namely financial, family, social, educational, ego threat, bereavement, separation, personal set back, health and others. But the main criticism of the scale is that it is constructed on 10 to 12 grade students but entitled as university students. It is well known that transition from school to college itself create a
stress with all its romances like independence, a new life achievement, new friend circle in one hand and fears for ragging, harsh criticism, getting less or zero attention of teachers in comparison to school to the life of freshmen and sophomore. So, the norm established in the scale of Agrawal & Naidu (1997) may have a false effect on the population chosen for the present research work. So, the need of a construction of a scale in keeping in mind the present day problem of college student, their perceived stress which affects their cognitive and affective resources was felt.

Stressful-Life-event-scale was constructed by following the steps-

- At first Items were collected from literature and past experiences and written following Edward's (1957) criteria.

- Relevance judgment for 58 items in '5' point scale where '1' denotes Least relevant, '2' - somewhat relevant, '3' denotes relevant, '4' denotes moderately relevant and '5' denotes most relevant, was collected from 40 judges where 20 psychologist (lecturers/reader/practitioner) & 20 was college lecturers, readers other than psychologist. A group of judges other than Psychologists was taken as the intentions identify the stresses of students irrespective of psychological background along with teachers with psychological background.

- The mean & S.D value of 40 judges were computed for each item separately.

- Out of 58 items, those items were eliminated which scored below 3 mean and above 1 S.D. in this way 8 items were eliminated.

- After that rest of 50 items were administered to 1000 population (500 male & 500 female) of Freshmen college students.

- Within 1000 freshmen, 10 data were scratched out due to for incomplete or vague response. Thus a group of 990 freshmen was considered.

- Then item total correlation was done for item validity. Those items which obtained significant levels (0.01) of correlations with the total score were retained and rests were eliminated.
• In this way finally 29 items were selected.

• In scoring procedure only the items which marked as ‘Yes’ were considered and the subsequent rating of that ‘yes’ item (e.g., 1/2/3/4) was taken as score. Thus scores of ‘Yes’ items out of 29 items were added as the individual score.

• Internal Consistency Reliability was measured by Chronbach alpha which (Alpha = 0.8489) proved high reliability.

• Finally the Norm of the test is established through its Descriptive statistic, viz., Mean and SD of the population and graphical analysis was made.

Variable 2 = the distribution of scores of perceived stress of college freshmen
(N = 990)
Prior to the second part of the study, the Principals of different educational institutes were approached for their approval and cooperation to collect data from their students. After obtaining permission and ensured cooperation, the researcher visited the institutions and made all the necessary arrangements for the administration of the test on the subjects to be selected for the study.

Then GHQ questionnaire was administered to the subjects for screening out psychiatric morbidity and physical illness. On the basis of the GHQ score 600 students from the general population, 300 male & 300 female were taken as subjects. Rapport was established with the students. Then all the questionnaires (viz., Stressful Life Event Scale for College Student (SLECS), Coping Check List Form-1, NEO FFI personality inventory, Adjustment Inventory, Impulse Control Scale) were administered to the subjects one by one in sufficient gap in between. Clear instructions were given before administration of questionnaire and its response categories. The researcher clarified ambiguities arising during and after administration of questionnaire. Confidentiality of result was assured to every student.

Lastly, the resilient questionnaire was administered on a group of 276 (those who were identified as Resilient by SLECS and PB cope scores) college freshmen among which 128 are male and 148 are female, in order to established the criterion validity of identification of the present resilient group who are identified by newly constructed scale i.e., SLECS in the present study. All the questionnaires were administered to the subjects in three sessions and the duration of per session was two hours. These three sessions was continued for two days and the presentation of all the questionnaire was followed by the order as described above, i.e., SLECS, CCL-1, NEO FFI, AICS, IC and lastly Resilient questionnaire.
SCORING AND STATISTICAL ANALYSIS

Scoring-

After collecting the data, the subjects were divided into three groups considering the quartile value of the scale. Among female group, 126 subjects identified as ‘High Stressed (HS) Group’ (scored above the Q3 value of SLECS.) and 85 as ‘Low Stressed (LS) Group’ (scored on and below Q1 value of the SLECS). The rest of 89 subjects were belong in between this two groups was treated as ‘Medium Stressed (MS) Group’. For male 59 subjects was identified as ‘High Stressed (HS) Group’ (scored above the Q3 value of SLECS.) and 79 as ‘Low Stressed (LS) Group’ (scored on and below Q1 value of the SLECS). The rest of 126 subjects were belong in between this two groups was treated as ‘Medium Stressed (MS) Group’. Thus totally 185 (126 female and 59 male) were identified as HS group and 164 (85 female and 79 male) subjects were identified as LS group. Rest 215 subjects were identified as MS group.

In the present study only the problem solving coping strategy was considered to identify the person having effective coping skill. All other coping strategies mentioned in this scale, though essential and effective for some situations or other, are less effective having minimum long term effect in comparison to problem solving coping strategy (Sandra & Stephen, 2007). But challenge appraisals in both academic and personal situations were related to the use of problem solving methods of coping and positive thinking. The coping strategies used by the poorly adjusted group were escape avoidance, external attributions of blame, and wish-fulfilling strategies. Persons facing the realities of stress consciously, and taking some action to solve the problem themselves. These are active approaches and are termed as functional styles of dealing with stressful situations are more approved by social scientist as these are more effective and healthy when compared to the dysfunctional styles (Pareek, 1983).

Subjects were divided with the help of quartile value obtained from the score of the coping strategy of CCL-1. The subjects’ score on and above Q3 was considered as having high effective coping strategy (HE) and the subject score on and below Q1 was considered as having less effective group (LE). And the subjects who belong in between were considered as medium effective (ME).
Thus, totally 233 (75 male and 158 female) subjects were identified as HE and 193 subjects (78 male and 115 female) were identified as LE group. Rest 174 subjects were identified as ME group.

To get resilient group, the subjects were then divided pairing the two scores, viz., SLESCS and Problem Focused Coping. Thus 4 pairs were obtained-

1) High Stress High Effective coping (HSHE)
2) High Stress Low Effective coping (HSLE)
3) Low Stress High Effective coping (LSHE)
4) Low Stress Low Effective coping (LSLE)

The two extreme groups, i.e., HSHE and LSLE were identified as Resilient and Non Resilient group and others are in between.

Thus for the present study 98 (14 male and 84 female) were identified as resilient and 85 (32 male and 53 female) were identified as non resilient group. The rest 93 (82 male and 11 female) were designate as medium resilient group.

Now the standard resilient scale (Annalakshmi Resilience Scale, Form-A) was administered to this finally extracted 276 sample to establish the criteria validity of the identification of the present study.

Result of ‘F’ test and Post hoc Tukey tests shows that three groups as a whole and with all possible pairs differ significantly from each other having high score of presently designated ‘resilient’ group and low score for ‘non resilient’ group and medium group in between. Thus, the criteria validity of the SLESCS and the assumptions about resilience are confirmed.

**STATISTICAL ANALYSIS**

1. Means and S.D.s of the full group (N=600) were computed for each variable. Thus 15 means and S.D.s are computed.
2. 'F' test & Post Hoc (Tukey) tests were computed considering following 3 Quasi IV for full group.

   a) Sex
   b) Stress
   c) Problem focused coping.

   Thus 105 'F' & Post Hoc test are computed.

3. Means & S.D.s of Male group (N=300) for each variables are computed. Thus 15 means & S.D.s are computed.

4. Means & S.D.s of Female group (N=300) for each variable are computed. Thus 15 means & S.D.s are computed.

5. Means & S.D.s of 3 groups i.e., HS, MS, LS (divided according to stress) both male and female for each variable are computed. Thus 45 means & S.D.s are computed.

6. Means & S.D.s of 3 groups (HS, MS, LS) of male for each variable are computed.

7. 'F' test and Post Hoc (Tukey) test of 3 groups (HS, MS, LS) of male for each variable are computed.

8. Means & S.D.s of 3 groups (HS, MS, LS) of female for each variable are computed.

9. 'F' test and Post Hoc (Tukey) test of 3 groups (HS, MS, LS) of female for each variable are computed.

10. Means & S.D.s of 3 groups according to problem focused coping (HE, ME, LE) both male and female for each variable are computed. Thus 45 means and S.D.s are computed.
11. Means & S.D.s of 3 group (HE, ME, LE) of male for each variables are computed. Thus 45 means & S.D.s are computed.

12. 'F' test and post hoc (Tukey) test of 3 group i.e., HE, ME, LE (divided according to the problem focused coping) of male for each variables are computed.

13. Means & S.D.s of 3 groups (HE, ME, LE) of female for each variables are computed. Thus 45 means & S.D.s are computed.

14. 'F' test and Post hoc (Tukey) test of 3 groups (HE, ME, LE) of female are computed.

15. Means & S.D.s of resilient group (HS + HE), both male and female for each variable are computed. Thus 15 means and S.D.s are computed.

16. Means & S.D.s of non resilient group (LS + LE), both male and female are computed.

17. 't' test between resilient and non resilient groups are computed.

18. Significance of all values are judged by 0.05 levels.