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**Akriti Goel**  
Counsellor, Post Graduate,  
Dept. of Psychology, D.A.V.  
College Sector, Chandigarh

**Sunayna Bardhan**  
Counsellor, Post Graduate,  
Dept. Of Psychology, D.A.V.  
College Sector, Chandigarh

## Effect of stress on self-efficacy and emotional intelligence among college students of humanities and sciences: A study on gender differences

**Akriti Goel and Sunayna Bardhan**

### Abstract

The present study examined the effect of Stress on Self-efficacy and Emotional Intelligence among College Students of humanities and sciences. Stress is how individual's body response to pressure caused by a particular situation, such as a test, that requires you to adjust or respond. Stress can refer to the stimulus that causes person to react- such as the test. For example, if you feel yourself getting anxious and nervous about a test, the test is a stressor. Your reaction to the test can be thought of as stress. You are worried about the test, and you are exhibiting stress by feeling anxious and nervous (Miller, 2010). Self-efficacy is the individuals' assessment of their capabilities to organize and execute actions required to achieve successful levels of performance (Bandura, 1986). Emotional intelligence is defined as the composite set of capabilities that enable a person to manage himself/herself and others (Cited in, Singh, and Chauhan, 2013). The present study attempts to assess the effect of stress on self-efficacy and emotional intelligence among 200 college students for which the data was divided into two groups i.e. 100 humanity students consisting 50 males and 50 females and 100 science students consisting of 50 males and 50 females randomly selected from private and government colleges and hospitals in Tricity. The T-Test was applied for the purpose of statistical interpretation to the test. Results indicate that females being higher on stress are low on self-efficacy and males being lower on stress are higher on self-efficacy showing not much difference in their emotional intelligence level in case of humanities whereas in case of sciences results indicated that that females' being higher on stress does not affect their self-efficacy and emotional intelligence. Likewise a male being low on stress does not affect their emotional intelligence and self-efficacy. Further research however, is needed to comprehend the same.

**Keywords:** Emotional Intelligence, Stress, Self-efficacy, Humanities, Sciences

### 1. Introduction

#### Stress

Stress in simple words can be described as your inner experience over the outer situation. This can be explained in a simple language which is experienced by all of us on a daily basis. Each and every student has experienced this during their first board exam. This is the time out of concern the mother is asking the child about whether he is carrying his entrance card. This is the situation where most of the students panic, starts sweating and desperately starts searching for the hall ticket in their bag, compass box, wallet, pockets etc. This behaviour of the student is called stressful behavior. Here the inner experience is panic, sweating which is due to the external input or the stimuli created by the mother of the child by enquiring about the hall ticket.

Your reaction to the situation can be positive or negative. If it is positive it can be said to be positive stress or useful stress (u-stress), this stress helps in achieving your goals. By responding positively to the mother's question and reaching your hall ticket without sweating or pressing the panic button is said to be having an appropriate desired response. It helps in using your energy in the creative way. This energy helps to show case your talents which can lead to your happiness.

Your reaction to your mother's call if it is negative then it is said to be Distress. In such situation you eventually drain out your energy. You need to protect your energy by preparing yourself for the situation by being positive and confident. If you are not able to handle the ongoing stress then it will affect your health may be physical, emotional, spiritual and social.

#### Correspondence

**Akriti Goel**  
Counsellor, Post Graduate,  
Dept. of Psychology, D.A.V.  
College Sector, Chandigarh

Acting immediately is the key to your stress management. Our body communicates to our mind quite early and picking up such signals at an early stage is the effectiveness in handling the stress.

The following are signals that get communicated to your mind that you are experiencing stress.

- Impatience
- Increased heart rate
- High blood pressure
- Elevated anxiety-anxious feeling
- Shivering
- Disturbed sleep
- Stomach upset
- Neck Pain and back pain
- Eating disorder

#### Common Stressor

- High expectations in academics
- Changes in relationship status
- Money matters
- New opportunities and Risk
- Home sickness for hostilities
- Quick decision making under pressure
- Co-ed education and sexual orientation
- Career planning
- Mental orientation; pessimistic attitude leads to depression

#### Stress and Education

Education as a situation for stress has been well understood and studied however, intervention and causal research has not been so vigorous. By the very nature of the educational system stress becomes inevitable and in modern times they are considered as locales of stress.

Singhal (2004) <sup>[22]</sup> identifies certain characteristics of educational institutions that make them stress locales, these characteristics are discussed below:

1. Teaching and learning are the primary tasks of educational institutions concerned with the process of change, which is stressful either because it instigates change or results from it (Schein, 1992).
2. The desire to learn, the learning process and the outcomes of learning carry inherent risks and uncertainty. Learning can change the learners in unpredictable ways. The results of learning are often judged through set standards, like centralized examinations. Success or failure in learning may impact the self-esteem of both the teacher and learn Pr. A failure to learn may harm relations with parents and significant others.
3. The characteristics of teaching multidimensionality, simultaneity, immediacy, unpredictability, publicness and history are all potentially stressed inducing. The teacher acts as a container of anxiety associated with learner's learning (French, 1997), which exacerbates the teacher's feelings of stress.
4. In educational institutions, there is always a crisis in the domain of social relationships. One, there is hardly any scope to develop stable relationships because of large classes and high work overload. Two, there is a continuous turnover of relationships. There is a sense of loss as older students leave after so much investment,

and the new ones join requiring the forging of new relationships. The emotional turbulence causes stress.

5. The need of developing understanding of new subjects and syllabi, and arrangements and models of teaching and learning, provoking fears and apprehensions about their own capabilities and giving a stressful feeling that they will never be good enough.
6. Changes in governance and managements have increased institutional separation, responsibility and accountability, putting teachers/educators under constant pressure to perform.
7. Technological and societal changes have induced greater competition among students and teachers. The increased accountability, the eroding of the bases of professional authority, the undervaluing of profession, love of coaching/tutoring have led to increased stress.
8. Teaching and learning constitute the management of central life processes in educational institutions. These focus on maturation to adulthood and the preparation for adult life in its wider sense and through the acquisition of necessary qualifications, the passport to life-time success and security. Teaching and learning both are associated with deep ambitions, motivations and desires. Teachers and students both are accountable to each other, to parents and to the larger society. (Singhal, S. 2004, p. 3-4) <sup>[22]</sup>.

The factors underlying the dynamics of stress vary. A person can feel relatively more stressed than similar others in the same situation, thereby proving that the experience of stress is a relative phenomenon. Access to resources and the use of support systems tend to vary bringing in similar variations in the level of stress experienced by people. The literature on mental health as well as the sociology of emotions suggest that social differentiation in roles and status of persons can produce differences in their exposure to and experience of emotional distress (Pearlin, 1999). As research has shown, children entering into adolescence, their family relationships and particularly the interactions with parents undergo significant changes (Paikoff and Brooks-Gunn, 1991).

Shimda (1998) noted specific stressors and stress responses among elementary and junior high school students like the family, school and other sources like daily life hassles, poor performance in a specific examination, loss of a living object, the lack of personal capabilities, argument, quarrel with somebody and scolding. The experience of emotional distress can have negative consequences for children's development, such as low competence estimation (Pomerantz and Rudolph, 2003) <sup>[34]</sup>.

Educational settings are one of the most stress inducing places in the society, as discussed earlier there are individual differences in the experienced stress of individuals. Examinations are the time and event in the school calendar when stress rises to its maximum, because of emotional strain and pressures working on the student at that time.

Another reason for high stress is that these examinations and their results become the indicators of success in life. So much importance is attached to them by the parents and society at large that the student under these pressures and expectations experiences high stress. In numerous academic situation test anxiety is known to have negative effect on students' cognitive functioning, psychological well-being, and performance (Becker, 1982; Schwarzer, 1986) <sup>[31, 23]</sup>.

### **Biological Aspects of Stress**

Walter Cannon (1929) describes the fight or flight response of the body after perceiving danger or stress. This response mobilises the organism to respond quickly to danger but the state of higher arousal can be harmful to health if it is prolonged.

Selye (1956) observed in laboratory animals and in human patients the body's reaction to stress. He found that the fight or flight response was only the first in a series of reactions, which he called the general adaptation syndrome (GAS).

The GAS consists of three stages:

1. Alarm reaction
2. Stage of resistance
3. Stage of exhaustion.

**Alarm reaction:** The alarm reaction is like the fight or flight response to an emergency. The body is mobilised. At the beginning of the arousal blood pressure drops below normal for a moment, but then quickly rises to above normal. This arousal is produced by the release of hormones by the endocrine system: the pituitary glands secrete ACTH, which causes a heightened release of adrenaline, noradrenalin, and cortisol by the adrenal glands into the bloodstream. The body cannot stay in this state for long without serious consequences. Some organisms in a continuous state of alarm have died within hours or days

**Stage of resistance:** If the reaction continues and is not strong enough to cause death the physiological reaction enters the stage of resistance. The body tries to adapt to the stressor. Physiological arousal declines but remains higher than normal and the body replenishes the hormones released by the adrenal glands. The organism may show few outward signs of stress. However, the body may not be able to resist new stresses. The body becomes increasingly vulnerable to health problems. These health problems include ulcers, high blood pressure, asthma, and illnesses that result from impaired immune function.

**Stage of exhaustion:** Severe long-term or repeated stress will cause the organism to enter the third stage, the stage of exhaustion. The immune system and the body's energy reserves are weakened until resistance is very limited. If the stress continues, disease and physiological damage become increasingly likely and death may result.

### **Evaluation of GAS**

A problem for GAS is that some stressors elicit a stronger emotional response than others do. The theory does not take account of psychosocial processes. A sudden increase in temperature, for example, would produce more emotion than a gradual increase.

Another problem for GAS is that cognitive appraisal is not taken account of.

A study by Katherine Tennes and Maria Kreye (1985) found that intelligent school children experienced more stress on the day of an exam than unintelligent school children. Cortisol levels were measured in urine samples taken on regular school days and on days when tests were given. Intelligence test scores were obtained from school records. The results suggest that brighter children are more concerned about academic achievement.

To summarise, the GAS incorrectly assumes that all stressors produce the same physiological reactions and fails

to take account of psychosocial factors in stress. Even so the GAS is basically a valid model of stress.

### **Psychosocial Aspects of Stress**

#### **Cognition and Stress**

A high level of stress impairs people's memory and attention during cognitive activities such as when taking examination. Noise can be a stressor, for example when people live next to a busy railway or motorway. People cope by tuning out the noise. Cohen (1980) [32] has proposed that children who tried to tune out chronic noise may develop generalised cognitive deficits because they have difficulty knowing which sounds to attend to and which to tune out. One study tested primary school children who lived in a block of flats that was built on bridges spanning a busy highway. The children in the noisy flats had more difficulty discriminating between pairs of words (for example, house and mouse) (Cohen *et al.*, 1973).

People living near the Three Mile Island nuclear power plant in Pennsylvania who had difficulty in coping with the stress that was produced by the fear that the nuclear emissions would affect their health, found it difficult to keep their minds from thinking about the accident. Thoughts can perpetuate stress and make it chronic.

#### **Emotions and Stress**

Cognitive appraisal processes can influence both the stress and the emotional experience for example; one person coming across a poisonous snake might be frightened whereas another person, who studied poisonous snakes, would be excited.

Fear is a common emotional reaction that can be classified into two categories:

1. Phobias
2. Anxiety.

**Phobias:** Phobias are intense and irrational fears that are associated with specific events and situations. An example of this would be claustrophobia, a fear of being enclosed in small rooms.

**Anxiety:** Anxiety is a vague feeling of uneasiness or apprehension. A gloomy anticipation of impending doom caused by a relatively uncertain or unspecific threat. People may not be aware of the situations that seem to arouse anxiety or to know how the "doom" will manifested itself. Patients awaiting surgery or the outcome of diagnostic tests generally experience high levels of anxiety. Anxiety may result from appraisals of low self-worth and the anticipation of a loss of self-esteem.

The things children fear tend to become less concrete and more abstract and social as they get older. A study of children's fears of dental treatment found that the most frightened children were those who had not experienced invasive procedures, such as having a tooth extracted during the prior few years (Murray *et al.*, 1989). Children who see themselves as less able than their peers are likely to appraise their own resources as insufficient to meet the demands of stressors.

#### **Depression**

Stress can lead to feelings of depression. Depression is quite normal, but severe and prolonged depression is a serious disorder. Symptoms of clinical depression are:

- A generally unhappy mood
- Feelings of helplessness about the future
- they appear listless and passive
- Disrupted eating and sleeping habits
- Low self-esteem

A long-term disabling health problem, such as being paralysed, often leads to depressive disorders. Assessing depression in children is difficult because they are unable to express their feelings very well.

### Anger

Another emotional reaction to stress is anger. This often occurs when the person perceives the situation as harmful or frustrating. Anger can produce aggressive behaviour. When stress is accompanied by anger, negative social behaviours tend to increase. Stress-produced anger increases aggressive behaviour, and these negative effects continue after the stressful event is over. Child abuse is often related to parental stress. Prior to a parent battering their child the parent usually has experienced a stressful crisis, such as the loss of a job. At high levels of stress the parent is at risk of losing control. If a child is running around making a lot of noise in the house the parent could become very angry and lose control.

### Some healthy ways of handling Academic Stress include the following

1. Change the source of the stress. Do something else for a while, put down that study guide and jog for an hour.
2. Confront the source of the stress. Ask the instructor for an extension on an assignment that is driving you crazy.
3. Talk about the source of stress get. Rid of frustration. Find a good listener talk about possible solutions.
4. Shift your perspective. Tell yourself that each new course or assignment is a new challenge and that there is something to learn from every experience.
5. Learn skills and attitude that make task easier and more successful. Practice effective organization and time management skills. For example, large projects are easier and less overwhelming when broken down into manageable steps.
6. Learn about yourself and decide your priorities and use the information to make decisions. Learn how to say "No" gracefully when someone offers you another attractive (or 20 unpleasant) task about which you have a choice. Tell yourself that this unpleasant feeling will be gone soon and that is the whole process which will bring you closer to your goals.
7. Mark the days that are left on the calendar, and enjoy crossing out each one as you are near to finish the assignment/project.
8. Take time for enjoyable activities.
9. Everyone needs a support system. Find friends or relatives with whom you can have fun. Spend time with these peoples where you can be yourself and set aside the presence of school, work, or family relationships.
10. As a reward for your efforts, give yourself stress break. Listen to your favourite music, shoot baskets, or participate in some other brief activity that provide mind rest, peace and fun.
11. Ignore the source of the stress. Practice a little healthy procrastination and put a pleasant activity ahead of the stressful one. This is of course only a short-term solution.

12. Get regular physical exercise and practice sound nutrition physical activity that not only provides time out, but also changes your body chemistry as you burn off your muscle with tension from accommodating stress.

13. Laugh often; try to see the humorous side of the situation.

Laughter is a great way to put people at ease and reduce stress.

### Some Unhealthy ways students cope with Academic Stress

1. Escaping through alcohol, drugs, frequent illness, sleep, overeating, or starving yourself. These strategies suggest a permanent withdrawal or avoidance rather than a time out.

2. Selecting strategies to avoid failure. Some students closely link their identities to excellence and achievement. Failure, seriously threatens their self-esteem. By not trying or by selecting impossible goals, students can escape having their abilities questioned, only their lack of effort, will be questioned.

3. Aiming too low. This reduces stress by eliminating intense pressure or possible feeling of failure. Dogged procrastination in starting projects, selecting less rigorous courses, or dropping out of university rather than bringing home poor grades allows students to avoid feelings of failure in the short run.

4. Over scheduling daily life with school work and extracurricular activities, selecting impossibly demanding course loads, or fussing endlessly over assignments in vain attempts to make them perfect. With this strategy, it is possible to succeed only through superhuman effort; thus the student can save face by setting goals too high for anyone to achieve.

If you feel that stress is affecting your studies, a first option is to seek help through the educational counselling centre.

### Review of Literature Stress

A study conducted by *Sri. Ali Khanesh Keshi* (2013) on the topic "Effectiveness of Cognitive behaviour therapy on academic stress among high school students" suggested that Depression, low self-efficacy and poor academic performance are related to academic stress. The study included 60 girls and boys of high school students. The experimental group subjects received 13 sessions CBT interventions and the control group received no intervention. Repeated measure analysis of variance showed that there was a significant decrease in academic stress and depression and an increase in self-efficacy and academic performance in post-test in the experimental group.

Conclusion: Findings indicate that CBT is a useful technique to alleviate of academic stress and depression and to improve of self-efficacy and academic performance among high school students.

*Naresh Shrikant Shah* (2015) focused on finding out how the stress affected the student's and what was the end result. Flexible Attitude, Assertive Behavior, Being Proactive and Functional Strategies were found to be very effectively used by the students and these students were found to be capable of coping with stress. The other strategies were found to be not that effective. Overall it was observed that students do face a lot of stress in every aspect of their being and stress coping methods and strategies should be a part of the academic curriculum. He concluded that creating awareness in handling stress should be done on priority among all the

students community. The entire research directly or indirectly is useful to all the stake holders of the society at large and education community in specific.

Another study done by Ruchi Shukla (2009) on "DYNAMICS OF SELF-DETERMINATION: EXPERIENCED STRESS AND INTRINSIC MOTIVATION AMONG SECONDARY AND HIGHER SECONDARY STUDENTS". The total sample size was 240, comprising of 30 students (15 boys and 15 girls) each from grades IX to XII who volunteered to participate in the study. The students were drawn from two school types (private and government schools). The government schools students were from lower SES while the private schools students were from the middle and upper SES families.

The study showed that the level of experienced Stress amongst students was moderate and there was a negative correlation between Stress and esteem with lower levels of self-esteem and low competence belief are more likely to experience stress. The data showed that Self determination; Esteem and Autonomy are positively correlated.

Reda (1994) investigated the sources and levels of stress in relation to locus of control and self-esteem in university students. The sample consist of 675 (202 males and 473 females) second year undergraduate students. The result shows that the examination results were the highest causes of stress in students and they found out that the 77.6% and 10.4% of the students fall into the moderate and serious stress categories, respectively and there was significant difference between females and males students in both academic and life stress and female students experienced more stressed than males. Results also indicated a significant positive correlation between locus of control and academic stress. A significant negative correlation between self-esteem and both academic and life stress emerged indicating that students with high self-esteem are less stressed than are those with low.

Misra, McKean, West and Russo (2000) <sup>[36]</sup> reported that academic stress among college students varies across gender in every year in school. Specifically freshmen and sophomores had higher academic stress levels than juniors and seniors. Females reported higher academic stress than male counterparts. Interestingly, this study reported the difference in the levels of academic stress perceived by students and their faculty. Faculty member's perceptions of student academic stress and reaction to stressors were higher than student's self-perception. Because faculty members most often observe students during class time, the result of this observation could imply the students experience their largest amount of stress during class hours.

Misra and Castillo (2004) <sup>[37]</sup> compared the academic stressors and reactions to stressors between American and International students using Gadzella's Life Stress Inventor (B. M. Gadzella, 1991). The sample consisted of 392 international and American students from 2 Midwestern universities. American students reported higher self-imposed stressors and greater behavioral reactions to stressors than International students and respondent's status (American or International) and interaction of status and stressors emerged as the 2 strongest predictors of their behavioral, emotional, physiological, and cognitive reaction to stressors. Five stressors attained statistical significance in the regression model. The findings emphasize the need to recognize cultural differences in stress management.

## Self-Efficacy

According to Bandura (1994) self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation. Bandura described these beliefs as determinants of how people think, behave, and feel.

Since Bandura published his seminal paper on "Self-Efficacy: Toward a Unifying Theory of Behavioral Change," in 1977, the subject has become one of the most studied topics in psychology. As Bandura and other researchers have demonstrated, self-efficacy can have an impact on everything from psychological states to behavior to motivation.

## The Role of Self-Efficacy

Virtually all people can identify goals they want to accomplish, things they would like to change, and things they would like to achieve. However, most people also realize that putting these plans into action is not quite so simple. Bandura and others have found that an individual's self-efficacy plays a major role in how goals, tasks, and challenges are approached.

Self-efficacy is the individuals' assessment of their capabilities to organize and execute actions required to achieve successful levels of performance (Bandura, 1986) <sup>[41]</sup>. Self-efficacy makes a difference in how people feel, think and act. In terms of feeling a low sense of self efficacy is associated with depression, anxiety and helplessness. In terms of thinking, a strong sense of competence facilitates cognitive processes and performance in a variety of settings, including quality of decision-making and academic achievement. In terms of act, self-related cognition is a major ingredient of motivation process in comparison to low self-efficacy people. Self-efficacy levels can enhance or impede motivation. People with high self-efficacy choose to perform more challenging tasks; they set for themselves higher goals and stick to them. Actions are reshaped in thoughts, and people anticipate either optimistic or pessimistic scenarios in line with their level of self-efficacy. Bandura (1977) <sup>[42]</sup> proposes the key sources of self-efficacy as performance accomplishments, vicarious experiences, and emotional arousal. Self-efficacy pertains to optimistic beliefs about being able to cope with a variety of stressors. Litt (1988) <sup>[43]</sup> finds that self-efficacy expectations affect performance beyond what would have been expected from past performance alone. Changes in self-efficacy expectations predict changes in cold pressure tolerance. Self-efficacy affects behavior of the individual in different ways: First, self-efficacy influences choice of behavior. People are likely to engage in tasks in which they feel competent and confident and avoid those in which they do not. Second, self-efficacy may help to determine how much effort people will expand on an anxiety and how long will they persevere. Third, self-efficacy beliefs influence individuals' thought patterns and emotional reactions. People with low self-efficacy may believe that things are tougher than they really are a belief that may foster stress and narrow vision of how best to go about a problem. Efficacy beliefs are the foundation of human agency. Unless people believe that they can produce desired results by their actions, they have little incentive to act or to persevere in the face of difficulties.

Bandura distinguishes between the two components of self-efficacy: an efficacy expectation and an outcome expectation. An outcome expectation refers to a person's belief that a given behavior will lead to a particular outcome. An efficacy expectation is the conviction that the person himself/herself can successfully produce the behavior required to generate the outcome.

#### People with a strong sense of self-efficacy:

- View challenging problems as tasks to be mastered
- Develop deeper interest in the activities in which they participate
- Form a stronger sense of commitment to their interests and activities
- Recover quickly from setbacks and disappointments

#### People with a weak sense of self-efficacy:

- Avoid challenging tasks
- Believe that difficult tasks and situations are beyond their capabilities
- Focus on personal failings and negative outcomes
- Quickly lose confidence in personal abilities. (Bandura, A, 1982) <sup>[3]</sup>

#### Sources of Self-Efficacy

Beliefs begin to form in early childhood as children deal with a wide variety of experiences, tasks, and situations. However, the growth of self-efficacy does not end during youth, but continues to evolve throughout life as people acquire new skills, experiences, and understanding.

According to Bandura, there are four major sources of self-efficacy.

##### 1. Mastery Experiences

"The most effective way of developing a strong sense of efficacy is through mastery experiences," Bandura explained. Performing a task successfully strengthens our sense of self-efficacy. However, failing to adequately deal with a task or challenge can undermine and weaken self-efficacy.

##### 2. Social Modeling

Witnessing other people successfully completing a task is another important source of self-efficacy. According to Bandura, "Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities master comparable activities to succeed."

##### 3. Social Persuasion

Bandura also asserted that people could be persuaded to believe that they have the skills and capabilities to succeed. Consider a time when someone said something positive and encouraging that helped you achieve a goal. Getting verbal encouragement from others helps people overcome self-doubt and instead focus on giving their best effort to the task at hand.

##### 4. Psychological Responses

Our own responses and emotional reactions to situations also play an important role in self-efficacy. Moods, emotional states, physical reactions, and stress levels can all impact how a person feels about their personal abilities in a particular situation. A person who becomes extremely

nervous before speaking in public may develop a weak sense of self-efficacy in these situations (Bandura, A, 1997 and Zimmerman, B.J. 2000) <sup>[2, 20]</sup>

#### Self-Efficacy- Review of Literature

A study conducted by Kumar and Lal (2006) among 200 students (100 boys and 100 girls) regarding gender differences in self efficacy and related variables revealed that the high self-efficacy (HSE) group scored better on intelligence test than the low self-efficacy (LSE) group. High self-efficacy (HSE) subjects are more confident about their potentialities.

Reports on meta-analyses of the relations of self-efficacy beliefs to academic performance and persistence. Results revealed positive and statistically significant relationships between self-efficacy beliefs and academic performance and persistence outcomes across a wide variety of subjects, experimental designs, and assessment methods. The relationships were found to be heterogeneous across studies, and the variance in reported effect sizes was partially explained by certain study characteristics. (Multon, *et al*, 1991)

#### Emotional Intelligence

Emotional intelligence is somewhat unusual in psychology, as the majority of writers and researchers are in agreement as to its definition, at least at the broadest level. Daniel Goleman (1996, 1998) <sup>[9]</sup> has probably influenced the definition of emotional intelligence more than any other writer, due to the popularity of his books on the subject, though he draws heavily on the landmark work of *Salovey and Mayer* who previously defined emotional intelligence as: "*the ability to monitor one's own and other's emotions, to discriminate among them, and to use the information to guide one's thinking and actions*" (1990).

Three distinct aspects of emotional intelligence follow from *Salovey and Mayer's* definition:

- The ability to accurately appraise emotions in the self and others, through both verbal and nonverbal channels.
- The ability to regulate or control emotion in the self and others.
- The ability to use emotion to regulate and direct thought.

Emotional intelligence is a phrase that incorporates the intricate aspects of both emotion and intelligence. Emotions rule the heart while intelligence reigns supreme in the brain. Buck (1985) has defined emotion as the process by which motivational potential is realized or 'read out', when activated by challenging stimuli. In other words, emotion is seen as a 'read out' mechanism carrying information about motivational systems.

Emotions have long been considered to be of such depth and power that in Latin, for example, they were described as 'motus anima', meaning literally the spirit that moves us. Contrary to most conventional thinking, emotions are inherently neither positive nor negative; rather, they serve as the single most powerful source of human energy. In fact our feeling provides us with vital and potentially profitable information every minute of the day. This feedback ignites creative genius, improves and shapes trusting relationships, provides an inner compass for one's life and career, guides to unexpected possibilities and even saves organization from disaster. To exhibit emotions is very easy but doing it at the right time, right place, with the right person and to the right

degree is difficult. The management of emotions has given rise to the most talked about term “Emotional Intelligence”. *Bar-On* was the first who use the abbreviation for emotional quotient (EQ) in the 1980’s. In 1990 Mayer and Salovey followed and published their so-called landmark conceptualization of emotional intelligence. The concept was popularized by Goleman’s (1995) <sup>[8]</sup> with his widely published and popularized book ‘Emotional Intelligence’. The cover article in the *Time* (*Gibbs, 1995*) and some other books (*Cooper & Sawaf, 1997; Gottman, 1997; Salerno, 1996; Segal, 1997*). Although some may argue that the concept of emotional intelligence is new, its origin is indeed well-imbedded in psychological thought over the past centuries. Its origins can be traced to the discourse on emotional intelligence during the late seventeenth century. Spinoza (1677) believed that emotion and intellect together contributed to the ultimate cognitive tool.

According to him, there were three layers of cognition: emotional cognition, intellectual cognition and a kind of intuition. Aristotle (1984) emphasized understanding what reason dictated when one became angry with the right person to the proper extent at the right time. *Ellis (1962)* talked of an overlap between human emotion and thinking. *Mowrer (1960)* considered emotions themselves as higher order intelligence. *Tomkins (1962)* believed that “reason without affect would be important, affect without reason would be blind.” *Mahoney (1991)* described that the cognitive constructivists view feeling, knowing and acting as inseparable experiences of one’s adaptation and development. *Gardner’s (1983)* theory of multiple intelligences includes intrapersonal and interpersonal intelligences. He conceptualized intrapersonal intelligence as the ability to understand one’s own emotion and interpersonal intelligence as the ability to understand other’s emotions and intentions.

*Sternberg’s (1985)* concept of contextual intelligence overlaps with emotional intelligence because it is concerned with the management of one’s ability to handle everyday life affairs in an efficient and practical way. Emotional Intelligence has its roots in the concept of ‘social intelligence’, first coined by *Thorndike* in 1920. Psychologists have grouped other intelligences in three clusters namely: abstract intelligence, concrete intelligence and social intelligence. *Thorndike (1920)* defined social intelligence as “the ability to understand and manage men and women, boys and girls to act wisely in human relations” and in 1938 he included inter and intra personal intelligences in his theory of multiple intelligences.

*Bar-On* conceptualized emotional intelligence in combination with other important determinants as a basis for success in life.

These include an individual’s biomedical predisposition and conditions, cognitive intellectual capacity and the limitations and realities of the changing context in which he/she lives.

*Mayer and Salovey (1990)* <sup>[39]</sup> defined emotional intelligence in terms of being able to monitor and regulate one’s own and others’ feelings and to use feelings to guide thought and action.

### Components of Emotional Intelligence

Emotional intelligence has five components which are: self-awareness, self-regulation, motivation, empathy and social skills.

- The first component of emotional intelligence is self-awareness which means, “having a deep understanding to one’s emotions, strengths, weaknesses, needs and drives” (*Goleman, 1995*) <sup>[8]</sup>. People who possess this quality avoid the extremes of being overly crucial and unrealistically hopeful. Furthermore, these people know how their feelings affect them, others and their job performance (*Goleman, 1995*) <sup>[8]</sup>.
- The second component of emotional intelligence is self-regulation. This is an ongoing conversation people have with themselves, which frees them being prisoners of their feelings (*Goleman, 1995*) <sup>[8]</sup>. People who have high degree of self-regulation have much capability of facing the ambiguities of an advancing industry than those who has low degree of self-regulation.
- The third component of emotional intelligence is motivation, which extends to the deep inner desire to achieve for the sake of achievement. Motivated individuals want to achieve beyond their and everyone else’s expectations. Motivation makes people restless; therefore they continuously explore new horizons to find better ways of doing their jobs.
- The fourth component of emotional intelligence is empathy which means to be considerate and aware of other’s feelings. Empathic individuals are also effective in retaining talent because they are able to develop personal rapport with others.
- The last component of emotional intelligence is social skills. Individuals use their friendliness in order to have people do what they want. Social individual is an effective persuader. (Cited in, *Singh, and Chauhan, 2013*).

### Evidence on Its Existence and Effects

Researchers have put the concept of emotional intelligence to the test, trying to determine whether the distinct skills described by *Goleman* Cluster together as a single (if multifaceted) factor, and whether this factor influences important life outcomes.

With respect of these issues, evidences is mixed. While some researchers (*Mayer, Caruso, & Salovey, 1998; Salovey & Mayer, 1994*) have reported findings consistent with *Goleman’s* suggestion and with their own, similar emotions on emotional intelligence, other have obtained less encouraging results. For example, in a recent and carefully conducted study, *Davis, Stankov, and Roberts (1998)* focused on two important questions

1. Are the methods currently used to measure emotional intelligence is adequate- i.e. are they valid and reliable?
2. Is emotional intelligence really different from other seeming related concepts- for instance, social intelligence and several aspects of personality (e.g., empathy)?

To answer these basic questions several studies were conducted in which hundreds of participants varying in age, education, gender, and nationality completed measures designed to asses each aspect of emotional intelligence and several other variables as well. Results indicated that only one of the components emphasized by *Goleman* and other advocates of emotional intelligence emerged as clear and independent: emotional perception- the ability to read accurately others emotions. (*Baron, 2013*) <sup>[40]</sup>

### Emotional intelligence: A Review of Literature

Studies indicate that women, on an average, are more aware of their emotions i.e show more empathy and are more adept interpersonally. Men, on the other hand, are more self-confident, optimistic, and adaptable. It was found that men are also able to handle stress better than women. In general, however, far more similarities exist than differences. Some men are empathetic as the most interpersonally sensible women are, while some women are just as able to withstand stress as the most emotionally resilient men. One plausible explanation for gender being an essential determinant for emotional intelligence could be due to the differential treatment given to boys and girls since infancy by parents and elders. Furthermore, culturally, girls are expected to be more expressive of feelings than their male counterparts.

Tapia (1999) and Dunn (2002) observed higher emotional intelligence among girls can also be explained in terms of some of their personality characteristics. As per their research girls score higher with regard to empathy, social responsibilities and interpersonal relationships than boys. More sensitivity was found towards their relationships with parents, friends and siblings. All these traits help them to acquire more emotional intelligence as compared to boys. This study is only a stepping stone in the field of emotional intelligence. Kaneez (2006) <sup>[11]</sup>, studied about the gender differences on emotional intelligence and findings showed that there is a significant difference between men and women on some subscales of emotional intelligence i.e. assertiveness, Independence, Stress Tolerance and Impulse Control.

Studies conducted by King & Sutarso (1999) <sup>[12, 18]</sup>; Wing & Love (2001); & Singh (2002) <sup>[17]</sup> concluded that females are higher on emotional intelligence than their male counterparts. Duckelt and Raffalli (1989) and Sandhu and Mehrotra (1999) found that females tend to be more emotional and intimate in relationships as compared to males, so their emotional intelligence ought to be higher than that of males. One plausible explanation cited for this difference was that society imposes different demands of socialization on the two genders.

### Self-Efficacy and Emotional Intelligence: A Review of Literature

Bandura (1977) <sup>[42]</sup> proposes the key sources of self-efficacy as performance accomplishments, vicarious experiences, and emotional arousal. Self-efficacy pertains to optimistic beliefs about being able to cope with a variety of stressors. Litt (1988) <sup>[43]</sup> finds that self-efficacy expectations affect performance beyond what would have been expected from past performance alone.

Emotional intelligence is a dynamic construct influenced by diverse biological, psychological, and social factors. A good deal of research has been conducted on emotional intelligence and it was found to be appearing as an important factor in the prediction of personal, academic and career success. Studies on emotional intelligence with respect to various psychosocial correlates have been found in a variety of fields.

According to one study by Pelagia Research Library (2012) among 100 physical education teachers consisting 124 males and 74 females whose aim was to study the relationship between emotional intelligence and self-efficacy in practical courses among physical education teachers. The results indicated that emotional awareness,

empathy, and problem solving components has a positive and significant relationship with self-efficacy in teaching practical course and the level of job self-efficacy, while there is no significant relation in other components. Due to relationship between some of components of emotional intelligence with self-efficacy of physical education teachers lead to direct relationship overall level of emotional intelligence with self-efficacy.

According to one study by Singh. N and Goel. A (2014) among 100 artists for which the data was divided into two groups i.e. 50 males and 50 female artists whose aim was to examine the role of Self-efficacy and Emotional Intelligence among creative professionals (example: musicians, dancers and painters). The results indicated that males were found to be higher than female artists on self-efficacy and lower in emotional intelligence.

Though, the above review of literature has indicated that gender has contributed to self-efficacy and emotional intelligence independently, but there is dearth of related literature on how gender has impacted both self-efficacy and emotional intelligence cumulatively, especially on a sample of creative professionals which is a major gap in research. Taking this into consideration, the present investigation is almost a first of its attempt to quantify the same especially in the Indian set-up.

### 2. Objectives of the Study

To study the effect of stress on self-efficacy and emotional intelligence on post graduate male students and female students of humanities and sciences.

### Hypotheses

1. Female students of humanities will be high on stress and low on self-efficacy and emotional intelligence in comparison to male students.
2. Female students of science will be high on stress and low on self-efficacy and emotional intelligence in comparison to male students.
3. Sciences students will be high on stress and low on emotional intelligence and self-efficacy in comparison to humanities students.

### 3. Methodology

**Sample:** The sample for the present investigation comprised of 200 post graduation students i.e. 100 humanity students consisting 50 males and 50 females and 100 science students consisting of 50 males and 50 females randomly selected from private and government colleges and hospitals in Tricity.

### Tools

#### 1. Emotional Intelligence Scale (from Schutte, *et al.*, 1998) <sup>[19]</sup>

The Schutte Self Report Emotional Intelligence Test (SSEIT) is a 33 item Self-report measure of emotional intelligence developed by Schutte, *et al.* (1998) <sup>[19]</sup>. The SREIS has been designed to map onto the Salovey and Mayer (1990) <sup>[39]</sup> model of EI. Items to the test relates to three aspects of EI i.e. appraisal and expression of emotion, regulation of emotion and utilisation of emotion. The test has been found to yield positive significant relationship with Self-esteem, positive mood, persistence of effort, openness to new experiences, optimism, impulse control, grade point average, empathy and social skills on varied population.

**2. General Self-efficacy Scale Scale (GSE; Schwarzer & Jerusalem, 1995) [7]**

The General Self Efficacy (GSE) scale is a self - report inventory used to assess one’s level of self- efficacy. It consists of ten statements to which the respondents are to respond on a 4 point scale. The total score ranges from 10-40. It typically yielded internal consistencies between alpha .75 and .91 (Schwarzer & Jerusalem, 1995) [7].

**3. Perceived Stress Scale (PSS; Cohen et al., 1983) [33]**

The *Perceived Stress Scale* (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one’s life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple

to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items.

**4. Result and Discussion**

The present study attempted to assess the effect of stress on self-efficacy and emotional intelligence on post graduate students of humanities and science among 200 students i.e. 100 of humanities (50 males and 50 females) and 100 of sciences (50 males and 50 females) randomly selected from different colleges in tricity. The t-test was applied for the purpose of statistical interpretation to the significance of difference between the means. Results and discussion for the present study are as follows:

**Table 1:** Showing the Difference between Male and Female Students of Sciences on the Parameter of Stress, Self-Efficacy and Emotional Intelligence (Group1= Males Group 2= Females)

Dimension	Group S	N	Mean	Std. Deviation	Std. Error Mean	t
Stress	1	50	15.32	4.71403	0.66666	4.185
	2	50	19.84	6.00802	0.84966	
Self-efficacy	1	50	30.96	5.06271	0.71598	2.301
	2	50	28.48	5.69726	0.80571	
Emotional Intelligence	1	50	118.92	19.49656	2.75723	0.056
	2	50	119.14	20.01123	2.83002	

\*groups: 1- males; 2-females

Results summarized in table 1 indicate the effect of stress on self-efficacy and emotional intelligence among science male and female students. The mean value for the stress in males i.e. 15.32 is less than females i.e. 19.84 and in self efficacy the mean of males is higher than females i.e. 30.96 and 28.48. However, in emotional intelligence mean of females are higher than males i.e. 19.14 for females and 18.92 for males.

However the t-value on the dimension of stress was 4.185 which are found to be significant at 0.01 level and 0.05 level which indicates that gender play a significant role on stress level on male and female students of sciences. The t-value on the dimension of self-efficacy was 2.301 which again shows that the gender plays a role in determining the self-

efficacy of male and female students. And the t-value on the dimension of emotional intelligence came out to be 0.056 which is not significant at 0.05 and 0.01 levels this shows gender does not play and role in emotional intelligence.

Thus, we have observed that females being higher on stress are low on self-efficacy and males being lower on stress are higher on self-efficacy showing not much difference in their emotional intelligence level. Thus, our first hypothesis i.e. female students of sciences will be higher on stress and low on self-efficacy and emotional intelligence in comparison to male students is rejected as females are higher on stress and low on self-efficacy but there is no gender difference on the dimension of emotional intelligence.

**Table 2:** Showing the Difference between Male and Female Students of Humanities on the Parameter of Stress, Self-Efficacy and Emotional Intelligence (Group3= Males Group 4= Females)

	Group S	N	Mean	Std. Deviation	Std. Error Mean	t
Stress	3	50	16.26	4.41616	0.62454	2.23
	4	50	18.48	5.48184	0.77525	
Self-Efficacy	3	50	29.98	5.66943	0.80178	0.771
	4	50	29.2	4.35656	0.61611	
Emotional Intelligence	3	50	120.98	16.86379	2.3849	0.171
	4	50	121.62	20.3529	2.87833	

\*groups: 3- males; 4-females

Results summarized in table 2 indicate the effect of stress on self-efficacy and emotional intelligence among humanities male and female students. The mean value for stress in males i.e. 16.26 is less than the females i.e. 18.48 and in self efficacy the mean of males i.e. 29.98 is somewhat higher than females i.e. 29.2. However, in emotional intelligence

females mean score i.e. 121.62 is higher than males i.e. 120.98.

However, the t-value on the dimension of stress was 2.23 which are significant on 0.05 level which shows gender plays a significant role on stress level among humanities students also. The t-value on the dimension of self-efficacy was found to be low i.e. 0.771 which is not significant at

0.01 and 0.05 level i.e. there is no gender effect on self-efficacy. And the t-value on the dimension of emotional intelligence came out to be 0.171 which is not significant at 0.01 and 0.05 level of significance, this shows that there is no gender difference on the dimension of self-efficacy and emotional intelligence.

Thus, we can say that females' being higher on stress does not affect their self-efficacy and emotional intelligence. Likewise a male being low on stress does not affect their emotional intelligence and self-efficacy. Thus, our second hypothesis i.e. female students of humanities will be higher on stress and low on self-efficacy and emotional intelligence in comparison to male students is rejected as no gender difference is seen in self-efficacy and emotional intelligence among humanities students with high stress levels.

However, it is worth mentioning that our study is a novel attempt to study the effect of stress on self-efficacy and emotional intelligence on males and females of humanities and science students. However, more researches need to be conducted on diverse populations to comprehend the same.

## 5. Conclusion

The above study was an attempt to access the effect of stress on self-efficacy and emotional intelligence among college students of humanities and science students among males and females. Our hypothesis based on the societal thoughts that females being higher on stress will be low on their self-efficacy and emotional intelligence than male counterparts was formulated. As per the results the hypothesis was rejected. Thus, we can observe that science female students being higher on stress are low on their self-efficacy but they know how to manage their emotions well than males. Therefore, we can say that partially our hypothesis was accepted. As females being higher on stress and effect their capabilities than males but on the other hand they can manage their feelings and emotions in a better way than male counterparts.

Also, we can observe that humanities female students even being high on stress are higher on their self-efficacy and emotional intelligence than male humanities students. This can be probably because of the increasing motivation and opportunities for women to work and explore more professionally, through which females have managed to learn how to deal with stress and put forth their capabilities and handle their emotions according to situations on male counterparts.

## 6. References

- Ahmad S, Bangash H, Khan SA. Emotional intelligence and gender differences. *Sarhad J Agric.* 2009; 25(1):127-130.
- Bandura A. *Self-Efficacy: The Exercise of control.* New York: W.H Freeman. 1997.
- Bandura A. Self-efficacy mechanism in human agency. *American Psychologist*, 1982; 37:122-147.
- Bar-On R. *The Emotional Quotient Inventory (EQ – i): Technical Manual.* Toronto: Multi – Health Systems. 1997.
- Bar-On R. Development of the Bar-On EQ-i: A measure of emotional and social intelligence. Paper presented at 105<sup>th</sup> Annual convention of APA Chicago. 1997.
- Bar-On RA. Negative effects of destructive criticism: impact on conflict, self-efficacy and task performances. *Applied Psychology.* 1988; 73:199-207.
- Schwarzer R, Jerusalem M. *General Self-Efficacy Scale.* Scale/Subscale Name: General Self-Efficacy Scale. Developers. 1995.
- Goleman D. *Emotional intelligence.* New York: Bantam books. 1995.
- Goleman D. *Working with emotional intelligence.* New York: Bantam Books. 1998.
- Hyde A, Pethe S, Dhar U. *Manual for Emotional Intelligence Scale.* Vedanta Publications, Lucknow, India. 2002.
- Kaneez U. *Emotional Intelligence among the Individual with Depression and without Depression. A Comparative Study.* Unpublished M.Sc. Dissertation. Nat. Instt. Psychol., Quaid-e-Azam Univ., Islamabad. 2006.
- King M. Measurement of differences in emotional intelligence of pre service educational leadership students and practicing administrators as measured by the multifactor emotional intelligence scale. *Dissert. Abst. Int.* 1999; 60(3):606.
- Mayer JD, Salovey P. *The Intelligence of Emotional Intelligence.* *Intelligence*, 1993; 17:433-442.
- Mayer JD, Salovey P. *What is Emotional Intelligence?*, In P. Salovey and D.J. 1997.
- Murray S, Holmes J, Griffin D. *The Benefits of Positive Illusions: Idealization and the Construction of Satisfaction in Close Relationships.* *Personality and Social Psychol.* 1996; 70:79-98.
- Petrides KV, Furnham A, Martin P. Estimates of emotional intelligence. Evidence for gender – based stereotypes. *Journal of Social Psychology.* 2004; 144:149-162.
- Singh D. *Emotional Intelligence at Work: A Professional Guide.* New Delhi: Sage Publications. 2002.
- Sutarso P. *Gender differences on the emotional intelligence inventory (EQI).* Dissertation. *Abst. Int.* 1999.
- Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ *et al.* Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 1998; 25:167-177.
- Zimmerman BJ. *Self-efficacy: An essential motive to learn.* *Contemporary Educational Psychology.* 2000; 25(1):83-89.
- Miller Allen R. *Living with stress,* New York: an imprint of InfoBase publishing Inc. 2010.
- Singhal S. *Stress in education: Indian Experience.* New Delhi: Rawat Publications. 2004.
- Schwarzer R. (Ed.) *Self-related cognitions in anxiety and motivation.* Hillsdale, NJ: Erlbaum. 1986.
- Selye H. *Selye's Guide to Stress Research.* New York, Van Nostrand Reinhold Co. 1980.
- Selye. *The Stress of life.* New York: McGraw-Hill. 1956.
- Selye H. (Ed.) *Selye's Guide to Stress Research. Volume 1.* New York: Van Nostrand Reinhold Company. 1980.
- Selye H. *A Syndrome Produced by Diverse Noxious Agents.* *Nature.* 1936, 138:32.

28. Selye H. Stress in health and disease. Reading, MA: Butterworth. 1976.
29. Selye H. Foreword. In Albrecht, K. Stress and the Manager: Making it Work for You. New York: Simon & Schuster. 1979, 5-7.
30. Selye H. History and Present Status of the Stress Concept. In Breznitz S., & Goldberger, L. (Eds). Handbook of Stress: Theoretical and Clinical Aspects. New York: The Free Press. A division of Macmillan, Inc. 1982, 7-20.
31. Becker P. Fear reactions and achievement behaviour of students approaching an examination. In Krohne, H. W., and Laux, L. (Eds.). Achievement, stress and anxiety. Washington: Hemisphere. 1982.
32. Cohen S. After effects of Stress on Human Performance and Social Behavior: A Review and Theory. Psychological Bulletin. 1980; 88:82-108.
33. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. Journal of health and Social behavior. 1983; 24(4):385-396.
34. Pomerantz EM, Altermatt ER, Saxon JL. Making the grade but feeling distressed: Gender differences in academic performance and internal distress. Journal of Educational Psychology, 2003; 94:396-404.
35. Reda A. Sources and levels of stress in relation to locus of control and self-esteem in university students. Journal of Educational Psychology, 1994; 14(3):323-330.
36. Misra R, McKean M. College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction, Am. J. Health Stud. 2000; 16(1):41-51.
37. Misra R, Linda G, Castillo LG. Academic stress among college students: Comparison of American and International students. International Journal of Stress Management. 2004; 11(2):132-148.
38. Goleman D. Emotional intelligence. New York: Bantam Books. Grey, A. (1998). The mission of art. Boston: Shambhala. 1995.
39. Salovey P, Mayer J. Emotional intelligence. Imagination, Cognition and personality, 1990; 9:185-211.
40. Baron, Robert A. Psychoogy, fifth edition. India, Pearson Education. 2013.
41. Bandura A. Social foundations of thoughts and action: A social cognitive theory, Englewood Cliffs, N.J.: Prentice Hall. 1986.
42. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 1977; 84:191-215.
43. Litt MD. Self-Efficacy and perceived control: Cognitive mediators of pain tolerance. Journal of Personality and Social Psychology. 1988; 54:149-160.
44. The PSS Scale is reprinted with permission of the American Sociological Association, from Cohen, S., Kamarck, T., and Mermelstein, R. A global measure of perceived stress. Journal of Health and Social Behavior. 1983; 24:386-396.
45. Cohen S, Williamson G. Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) the Social Psychology of Health. Newbury Park, CA: Sage, 1988.