CHAPTER 1
CHAPTER – 1

INTRODUCTION

1.1 WHAT IS STRESS?

A hectic work-week, followed by a rush-hour traffic jam; crowds of shoppers in the supermarket and reports of crime in your neighborhood. There is job stress, as well as stress of bereavement, divorce, poverty, social isolation, or major lifestyle changes. In our increasingly fast-paced world, stress is an all-too-familiar, “catch-all,” term and an unavoidable element of daily life.

Over 45 years ago, Hans Selye (1956) – the “father” of stress – wrote his first article on the subject. Since then, there have been over 110,000 scientific publications related to stress. Yet, the meaning of stress is still elusive, partly because of the confusion engendered by the incorrect adaptation of terms drawn from the discipline of physics. One definition of stress in physics is, “an applied force or system of forces that tends to strain or deform a body.” The resultant deformation of the body (or object) is called “strain.”

There is a problem with the usual definition of stress. Consider this version: “Stress is a mental or emotional disruptive or disquieting influence; distress.” This definition and most people’s
concept is that stress is a negative or disruptive outcome. Yet, as Selye has pointed out, there are positive as well as negative aspects to stress.

Tension

One physics definition of tension is, “a force tending to produce elongation or extension.” To give an example of twisted logic, when “tension” was incorporated as a biologic term, it reverted to the Selye “stress” meaning. Consider this definition of biologic tension: “a mental, emotional or nervous strain”. In other words, in physics tension is the external force, but in biology it is the reaction of the body. As if that’s not enough, there are three types of biologic tension.

Mental Tension

First of all, there is “mental,” “nervous” or “emotional tension”. A person in this state is “keyed – up” and has feelings of uneasiness and anxiety.

Muscle Tension

The second type of tension is “muscle tension”. The “tense” individual is also described as being “tensed – up” or “up – tight”. The body’s muscles are presumed to be in an extreme state of contraction and are “coiled or bracing for action,” but no action takes place to relive the stress.

This partial contraction is important for body stability and posture, under stressful conditions, the entire body’s
muscles are not over contracted, but certain muscle groups can show partial contraction. This often occurs along with strong emotions such as anger, frustration, hate, worry, fear and anxiety.

**Visceral Tension**

The third kind of tension is “visceral tension”. Although its meaning is not clear, this term apparently relates to the reaction of viscera (e.g. the heart, the lungs, the blood vessels, the kidneys) to stressful stimuli. The result of “visceral tension” tends to be marked increases in blood pressure, heart and breathing rates.

Let us now review some of these terms and their definitions and see if we can develop some semblance of order out of them.

**Stress**: for Selye (1956), it is the body’s reaction and can be positive as well as negative; for most others, it is the physical and mental factors that cause the body to react, and it is generally considered to be negative.

**Pressure**: the mental negative factors.

**Tension**: the body’s negative reactions; emotional for nervous tension, muscular for muscle tension and physiological for visceral tension.

In our opinion, pressure and tension are incorrectly used as biologic terms; therefore, we shall not consider them further. Although it would be more correct to use the terms stress and strain as they are used in physics, “strain” has other meanings, and its use here
would only complicate matters. Hence, we will use the term “stressor as Selye does – for the causative factors and “stress” or the “stress response” for the body’s reactions.

Now let us look at the stress concept as it is known in the following equations:

\[
\text{STRESSORS} + \text{INDIVIDUAL “MAKEUP”} = \text{STRESS}
\]

**Stressors, Individual “Makeup” and the Stress Response**

There are three kinds of stressors: physical, social and psychological. The “makeup” of the individual is determined by hereditary and environmental factors. Stress (or the “stress response”) results from the interaction between the stressor and the individual, modified by the person’s state at the time. Therefore, to expect that stress takes only one form is unreasonable. We consider that there are three types of stress.

**The Stress Response**

If the stress response is necessary for the day – to – day adaptability of man to his environment and results in the maintenance of an internal steady state (homeostasis), it is designated neustress (prefix neu = neutral). For example, one produces neustress in order to breathe, walk and perform the bodily functions.
If the stress response is unfavourable and potentially disease producing, it is labeled distress (prefix dis = bad or negative). For example, constant worry in a susceptible individual can lead to ulcers.

If the stress response is favourable and results in improvement in physical and/or mental functioning, it is called eustress (prefix eu= good or healthy, as in the word eugenics). For example, vigorous exercise can improve the functioning of the heart and lungs and could result in a decreased chance of getting a heart attack (Selye, 1974, 1976, coined the term “eustress”, but he only used it for positive mental responses).

The details of this discussion are illustrated in Figs. 1.1 and 1.2.

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**Fig. 1.1 The stress path**

![Stress Path Diagram](image-url)

**STRESSORS + INDIVIDUAL “MAKEUP” = STRESS**

- Physical - hereditary factors
- Social - environmental factors
- Psychological
  - EUSTRESS
  - NEUSTRESS
  - DISTRESS
  - HEALTH
  - HOMEOSTASIS
  - DISEASE
STRESSORS

As mentioned, there are three kinds of stressors: physical, social and psychological, to be considered here in that order.

Physical Stressors

Physical stressors are external factors, including chemicals, pollutants, drugs, foods, infectious microbes, shock therapy, radiation (e.g. light, X-rays, laser beams), noise, temperature (hot, cold), humidity, exercise and trauma. The resistances of the individual will modify the stress response, but if the agents are sufficiently intense and enduring, then distress will result in any person. For example, atomic radiation plays no favourites, and if dose is strong enough, then third degree burns, leukemia and finally death can result. Physical
stressors are often related to a person’s occupation, and with certain jobs the stressors are intense. Consider the high noise exposure of pneumatic drill operators, dentists, airline personnel, riflemen, artillerymen and rock musicians.

Social Stressors

Social stressors are externally induced and result from the interaction of the individual with his environment. Many social stressors are unavoidable and traumatic. They include occurrences such as the death of a loved one, forced relocation of one’s home, loss of a job, retirement, divorce and financial reversal. Apparently, pleasant events such as engagement announcements, marriage ceremonies and financial windfalls can also be social stressors. The unforeseen social stressors are the most difficult to cope with. Even the most stable individual will react with distress to an event such as the death of a spouse.

Psychological Stressors

Psychological stressors, because of their recurrent nature, are often the damaging kind. They may be brought on by physical or social stressors, or they may be self-induced. The psychological stressors are intense emotions and include frustration, guilt, worry, anger, resentment, hate, love, disgust, jealousy, happiness, sadness, grief, self-pity, fear, anxiety and inferiority feelings. The more one harbors these feelings or emotions, the greater
Fig. 1: Blood pressure detection as a physical stressor. P = pulse rate; R = respiratory rate; BS = skin resistance level; ! = skin resistance, nonspecific fluctuations (indicative of a stressful reaction); ↑ = direction of increased skin resistance (less stress); BP = blood pressure; and subject’s blood pressure was approximately 107/87. For this subject, the taking of blood pressure acted as physical stressor only in the alert state, as shown by the decreased skin resistance level and increased nonspecific fluctuations. During hypnosis, relaxation and meditation no significant changes occurred in pulse rate, respiratory rate or skin resistance.
and more cumulative is the resultant distress. Two particularly severe and repetitive psychological stressors are frustration and anxiety.

Stress is the process of adjusting to or dealing with circumstances that disrupt, or threaten to disrupt a person’s physical or psychological functioning (Burchfield, 1979; Lazarus & Folkman, 1984; Selye, 1976).

The term stress can be defined in various ways. Stress may be an internal state which can be caused by physical demands on the body such as disease, exercise, extremes of temperature, professional hazards and so on by environmental and social situations which are evaluated as potentially harmful, uncontrollable, or exceeding our resources for coping (Matthews et al., 1986)

According to Webster’s New World Dictionary (1973), “stress is the mental or physical tension caused by some urgency or pressure”.

According to Lazarus and Folkman (1984) stress is the feeling you have, you interpret or appraise a situation as being threatening or challenging and when your personal resources are strained or out stripped by your dealing with the situation. As defined by Webster’s Dictionary, stress is “a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation”.

A physical stress factor could be injury, surgery or even a simple cold. These factors place additional nutritional demands on the body. Chemical stresses can come in the form of environmental toxins, prescription drugs, alcohol, tobacco, and caffeine. These substances are known to deplete the body of vital nutrients.

Emotional factors are highly personal. Not all people experience stress in the same way. A type of events or situation may be stressful for one individual, while passing by another individual virtually unnoticed. Prolonged fear, anxiety, anger and tension may all stimulate hormonal responses which when released; alter the metabolic reaction of the body. This increases the nutritional needs of the body for vitamins and minerals.

Studies have indicated that during periods of moderate to extreme stress, more zinc, magnesium, and calcium are lost in the urine. Blood levels of vitamins A and C, as well as zinc and iron, are altered by stress. Under stress, the body also requires more water-soluble vitamins: thiamine (B1), riboflavin (B2), niacin, pyridoxine (B6), and pantothenic acid.

Stress has been defined as “the inability to cope with a perceived or real (or imagined) spiritual well-being which results in a series of physiological responses and adaptations (Seaward, 1997).

Stress the overused word has found a firm place in our new age vocabulary just as fast food, junk bonds or software
package have. So, debased by misuse, it generate only negatively in most people’s mind. But it is a positive force aiding our continued survival by providing a dynamics that distinguishes between the active business of living and passive existence. But to those on the fast track whose inability to cope is at crisis point, it is a four letter word “pain”.

Stressful circumstances are encountered every day, at every stage of human development. From the trauma of birth itself, right through adolescence, the young meets unavoidable sources of stress. From weaning and toilet training, as babies, to the process of formal education and learning social skills, stress is encountered in varying degrees.

Adolescence is period of transformation from childhood to adulthood. The youth, teenager or adolescent have been variously used and defined but broadly to mean a large chunk of humanity which is marching towards the rolls full of responsibility. This march of massage is full of dreams, ideas, ambitions, achievement and promise on one side and problems, disillusionments, frustrations, break-downs and stress on the others.

The school going students of today are an army of boys and girls having undergone a dramatically speeded up physical metamorphosis from childhood to adulthood. Students of tenth class are in early adolescents period.
They are often fatigued, anxious and under emotional stress, these factors may have an adverse effect on retention of nutrients. Emotional difficulty may stem from the feeling of social inadequacy or pressure of work when there is conflict within the home because of teenagers food choices, failure to accept responsibilities, the use of money etc.

A person's health, vigor, work capacity happiness, achievement, reasoning ability and whole personality contentment and whole personality reflect in as dependent on the degree of stress. A little stress in early life-acting as a time - bomb may induce physical breaks in later life.

Stress involves a relationship between people and their environment, more specifically between stressors and stress reactions. Stressors are events and situations to which people must react. Stress reactions are the physical, psychological and behavioural responses such as nausea, nervousness and fatigued people display in the face of nausea, nervousness and fatigued people display in the face of stressors. Mediating factors, such as the circumstances in which stressors occur and each person’s characteristics, make people more or less sensitive to stressors and to stress responses. Thus stress is not a specific event, a person’s reactions to those events and interactions between the person and the situation are all important components of stress. The interactions are stress mediators; they moderate or intensify
the impact of a stressful situation. Even very pleasant events can be stressors. For example, the increased salary and status associated with promotion may be desirable, but the upgrade also requires finding ways of handling new responsibilities and increased pressures. Still the events and situations most likely to be associated with stress are unpleasant ones those involving frustration, pressure boredom, trauma, conflict or change (Rowlison and Felner, 1988).

Frustrations is the feeling you have when your attempt to reach some goals are blocked. You may not be able to reach a goal because of personal limitations, such as making dumb mistakes on an examination or a goal might slip beyond your grasp because of social or environmental limitations, such as your boss changing your work schedule. No mater, what may be the cause, how you respond and when you respond, but frustration affects your stress level.

Situations leading to pressure on the mind of the individual require a person to do too much in too short a time. For example, if you are trying to fix thanksgiving dinner for twenty people on a day’s notice, or you are struggling to finish the last two questions on an essay test in ten minutes, you are under pressure. Many traffic controllers, physicians, nurses and police officers, administrators, teachers and students face constant or long lasting pressure when they have to make many difficult decisions under heavy time pressure.
Likewise, the adolescence is a period which is full of pressure, stress, strain, storm and strife because it is a diversifying stage.

Boredom, or under stimulation, is the opposite of pressure, but it, too can be a stressor, especially if it continues for a long time. The agony of solitary confinement in prison the tedium of a remote military post or learning a subject which is not interesting are probably the most extreme examples.

Conflict is almost always stressful. The most obvious examples are disputes in which friends, family members, or co-workers fight with, insult, or otherwise get nasty with each other. Internal conflicts can be equally, if not more, distressing than those with other people.

1.2 IDENTIFICATION OF STRESS

Most of those who are open to the so-called alternative or complementary therapies are familiar with the many studies showing how stress is related to disease and dysfunction. Stress could be defined as a force that strains or deforms, in our case it hampers our ability to stay balanced and healthy.

The cause of stress are often cited as pressure in the workplace, trouble in relationships and even rush hour traffic; all quite vague and widely ranging and, perhaps most importantly, never questioned sources of this drain on our health. Since stress is such a central theme in all illness, it is in our best interest to be exact and
thorough in our investigation. While many therapies are aimed at reducing or relieving stress already accumulated, the purpose of this article is to stop stress at the source, before we are affected by it.

During my recent month long visit in India, I was witness to lifestyles that are beyond western imagination. External events that are blamed for stress were rampant: constant loud noises, overcrowding, unbelievable traffic, vehicle exhaust, human waste in the streets, poverty, trash, pollution - the list is endless, yet the people there were not noticeably stressed out, in fact, the ones I met seemed quite relaxed. On returning to the states it was like a blissful paradise, no honking horns, clean toilets and lots of rooms, and I wondered how anyone could be stressed in this environment. Still, in couple of weeks I found myself getting stressed in traffic and was prompted to investigate this phenomenon.

Since the external environment had not changed since I had returned, it seemed logical to look inside for what had changed in me. The inner spaciousness and appreciation for the beauty of my surroundings had been replaced by worry, self-importance, impatience, fidgeting and non-stop chatter. I had discovered the source of my stress, anxiety, and tension imposed nightmare that would be my undoing. I could no longer be ignorant and point my finger saying, “I could relax if they would change” because it was clearly an inside
job. However there is no need to believe me, a few short days of observation and you will have your own proof.

Fortunately for us, there are practical steps we can take to remedy this situation and they have already been thought out and organized for us. Esoteric schools throughout the ages catalogued these “leaks” and developed effective measures to take against them. What follows is a list of six common leaks, how to recognize them and how to stop them. Once we quit losing all this force our biggest problem will be what to do with all our extra energy.

1. Uncontrolled Imagination:

The process of endless more or less morbid associations flowing unchecked through our head. Examples are worry or daydreaming. In some people this creates great anxiety, a form of stress, in others the stress is an indirect result. Either way it is a drain on resources. To counteract, notice the flow of associations or direction of thought. Find a substitute, think of some definite thing, a peon, song, sunset, etc. that is different than the flow you have observed. Then notice how things are different, that is, did worrying really help the situation or just drain your energy?

2. Internal Considering:

The process of taking external events personally, like when someone cuts you off in traffic, or of thinking the world owes you, like you somehow deserve to be treated better. This is
the result of self-love or self-importance and pride. One possible solution is to see yourself in the scale of all creation, to see your relative size and importance compared to the cosmos. Another is external considering, or putting yourself in another person’s place, which gives insight into meant. Internal considering often coincides with uncontrolled imagination.

3. **Unconscious Muscle Movement:**

   The tensing of muscles without purpose. This can range from the nervous tapping of a foot to full-blown muscular armoring of the whole body. Observe movements and tensions in daily activities. One method I find efficient is to exaggerate the tension/movement and then relax. This helps me to see how much ridiculous I must appear to my peers. Ongoing observation will uncover specific tensions for specific situations.

4. **Automatic Talking:**

   The mindless filling up of space with idle talk. If you don’t immediately think of someone who does this, you may be an automatic talker yourself. This leak distracts us from our task, whether it is your job or just being present to your feelings, and makes it impossible to centre ourselves to gather our energy. When you find yourself doing this (and we all do it), stop, stop, stop, stop and stop, be silent. Often we stop listening to people because we are planning our reply/reaction. Try counting internally to three before answering a
person; take time for a breath. You may be surprised how much can be said in a few well-chosen words.

5. Lying:

If you are one of the people who claim they never lie you have never seriously observed yourself. Ask a close friend for help if needed. Any basic automatic reply, like “I’m fine”, will be a lie and, worst of all, we believe it ourselves. Myriad energies are leaked in covering and inventing lies, not to mention the energy lost when we act based on our belief in our own lies. It’s not that we should always tell the truth but that we should know every time we do lie. There’s an old joke – how can you tell when someone’s lying? Their lips are moving.

6. Expression of Negative Emotions:

I saved the biggest leak for last. I could easily write a whole series of articles on the destructive force of this leak. Its worst characteristic is that it seems to feel good when it is being done and many people who unconsciously want to stay sick unknowingly thwart their own healing process. Try it for yourself: don’t say anything negative about that special person, place or thing that most annoys you. See how long you can go. You will quickly see how much energy you lose because you will not be able to stop for long without a lot of practice. And when you have mastered not saying things out loud you can try not thinking them.
There are many practical exercises for plugging up leaks. For those with chronic diseases this may be the only answer, because no external cure has a chance against these leaks. Even if you have a lesser problem like allergies or headaches, practical exercises are very effective. We already knew that stress causes disease, and now we know how to eradicate stress.

If this list of leaks is too longer to remember, there is a short form. We leak energy away whenever we lose our sense of self and/or lose our identity – that is, whenever we identify with something. All forms of leaks fit under the general heading of identification. In order to stop the stress from external events we need simply to separate from them by not identifying. This will keep all our healing energies within us, where they belong and will even give us an added sense of presence in the body mind, which makes everyday events flow smoothly.

**STRESS AND ITS EFFECTS**

Stress is anxiety or distress caused by any pressure or tension. It is an increasing modern symptom, associated with social pressures, which impose a variety of duties and obligations on the individuals.

It was the genius of Hans Selye who discovered the phenomenon of stress and its features. The onslaught of stress cannot be predicted with surety but its impact can be reduced by proper
training, self regulation, food and physical activity. Apart from the social, economic and psychological aspects, the main concern of the present study is with the nutritional aspects.

Excessive stress, over a long period of time, has been linked with such ailments as headaches, stiffness, pains, tiredness, lack of energy, emotional outbreaks and an increasing dependence upon smoking, alcohol and loss of appetite, bingeing in food in the attempt to seek refuge (as shown figure 1.4).

**FIGURE-1.4**

**COMMON WARNING SIGNS OF STRESS**

**EMOTIONAL REACTIONS**

Irritability

Anger and aggression

Anxiety

A feeling of hopelessness – depression

Mood swings from elation to despondency

 Withdrawal from people

**DISRUPTION OF THOUGHT PROCESS**

Receiving information

Problem solving and decision-making

Creativity

Retrieval of information
PHYSICAL ILLNESS

Mouth: ulcers
Cardiovascular system: angina, palpitation, hypertension
Digestive tract: diabetes, ulcers, colic
Reproductive organs: impotence, menstrual disorders
Lungs: asthma, fainting, breathing difficulties
Hair: alopecia
Skeletal – muscular system: backache
Tension, headaches, arthritis
Skin: eczema

BEHAVIOURAL SIGNS

Poor sleeping habits
Excessive drinking
Excessive eating/loss of appetite
Missed appointments/lateness
Avoiding contact with people/time off work
Changed driving behaviour

Eating is a sub-conscious way to deal with stress. Through the act of food intake, the biologic and cultural factors of the external world meet the biological and psychological factors of the individuals internal world. According to Feuerbach (1804-1872) “Man is what he eats”. Eating is just more than food intake; it can alter emotional states, and even influence brain function. Emotions may also
be expressed through eating, in very obvious ways. Feeling of pain, hurt, embarrassment or guilt may be suppressed by choosing sweets to assure ourselves.

Food could also be used as a tranquilizer. Studies revealed that obese adolescents used food to assuaging their anxiety. The more anxious they got, the more they ate. It appears as if they wanted to eat away their depression.

Stress can lead to physiological dependence on a drug present in food products. Caffeine is one such substance, known to act on adenosine receptors in brain. Caffeine is present in beverages as tea, coffee, cola beverages and products made from coca. Low doses (20mg-200mg) of which generally produce mild positive effects like feeling of well being and alertness whereas higher doses (200-800mg) can produce negative effects like nervousness and anxiety.

On the other hand stress may lead to skipping of meals. It is a saying that we speak our stomach. The stomach, like various other organs of the body, can be used my mind as means of symbolic expression. Appetite depends largely upon mental serenity. If one is tense the stomach stops secreting the gastric juices on which digestion depends and appetite and zest for food disappear. Skipping, especially the breakfast have detrimental consequences on behaviour and is associated with poorer memory.
Stress may result into consuming alcohol, drug abuse or smoking. The heaviest drinking among young men occurs at ages 18-20, among young women at 21-24. For some boys drinking may be sign of conflict about their sex roles, which take the misguided form of exaggerated masculinity and bravado. Stressful life events and emotional problems are powerful predictors of alcohol abuse. Since drinking provides sense of relief, decrease in tension. The idea that alcohol can decrease severe anxiety dates back to antiquity. Hippocrates prescription was, “wine drink with an equal quantity of water puts away anxiety and terrors” is not really correct. Sher (1984) have concluded that drinking in response to stress is a complex phenomenon, alcohol, does appear to have stress – response dampening properties.

Management of stress greatly depends on personality types. Type A personality people, according to Dr. Friedman, are hostile, competitive, impatient and short tempered, and hence suffer from stress related complications. Type B people on the other hand, are the one’s who put off work and decision, seem to be under no pressure and are free of troubles (Figure- 1.5).

FIGURE – 1.5

CHARACTERISTICS OF TYPE A BEHAVIOUR

TIME – URGENCY

Rapid movements
Impatience
Indulgence in polyphasic thought or performance (phases of activity followed by rest)
Tension
Restlessness
Preoccupation

HOSTILITY
A habit of explosively accentuating various key words while talking.
Playing any type of game (even with children) to win.
Forceful use of hands and fingers.
Challenging another type A person, rather than feeling compassion for his affliction.
Preoccupation and irritation with the trivial errors of others.
Being excessively critical of self and others.
Characteristic facial expression of aggression, hostility and struggle.
Irritation or rage when asked about some past events which previously caused anger, as there is a tendency to relieve them.
Tendency to swear or use obscene language.

COMPETITIVE

AGGRESSIVE
CHARACTERISTICS OF TYPE B BEHAVIOUR
Absence of all habits and traits listed above that harass the severely afflicted type A person. Absence of the sense of time – urgency with its accompanying impatience. Does not make unrealistic commitments. Absence of free-floating hostility, and lack of need to display or discuss achievement or accomplishments unless such exposure is demanded by the situation. Plays for fun and relaxation, not in order to display superiority at any cost. Able to relax without guilt, just as able to work without agitation. Cooperates with others. Gives the benefit of the doubt to others instead of imagining the worst. Flexible. Can be either a leader or a follower depending upon the situation. Generally respectful of other’s integrity. Not afraid to admit to mistakes. Gives other credit when due. Encourages trust and openness I team efforts. Delegates authority as much as possible. Takes a break when fatigued. Not devastated by criticism. ‘Tell me more’ attitude.

A balanced life is what makes a balanced person. For this it is imperative that stress management, entails not only on positive approach, but healthy behaviour and good nutrition.
STRESSORS AMONG ADOLESCENTS

Modern age is called the age of anxiety. Adults themselves feel lost, confused and lack of direction. So, adolescents who are also driven by the thrust of puberty are likely to repudiate adult values. They may show meaningless and destructive behaviour and are surrounded by various stresses.

Students are surrounded by various stressors. The stresses start pouring in as a result of the misunderstood physical growth, failure to understand their significance and specific motivational alterations. The interest in one’s own body and its beautification and interest in members of opposite sex with utter emotional instability due to high tended autonomic activity, some time tend to aggravate the situations. The deep involvement and sheer sentimentatism gets inter-twinned with romantic heroism and unbridled ambitions. And equally serious appear to be the stress posed by examination and a mis-informed vocational and educational choice resulting into a waste of resources and deep frustrating experiences.

Among students there is an increased awareness of self, wit special focus on weight and appearance. The research on the determinants of meal pattern and the meal selection examine health beliefs as the sole motivating force behind them, but researches have observed that the concern with appearance is also a motivating force
and females are much more concerned with their appearance than males.

Failure to maintain normal weight is a frequently recurring problem. Studies revealed that more females than males believed themselves to be fat. More females receive more messages to diet and to be slim than males. Indeed, male and female raters perceive females who eat small meal as significantly more feminine and more attractive than females who eat large meals, whereas the perceptions of males targets are unaffected by meal size.

Being physically attractive, having sociable, pleasant and agreeable nature and taking pride in one’s appearance is rated high by both sexes. Style of clothing, grooming and personal adornment is powerful factors in attracting members of opposite sex. Attributes as intelligence, academic excellence, popularity, excellence in dance or music and fashionable dress also enhance one’s status.

Emotional and sentimental females seem to handle broken affairs in more matured manner as compared to males. More males reported depression and helplessness in such a situation. On the other hand, primarily females, who become over involved romantically with the opposite sex and can experience a profound elation upon rejection, they are prove to acute sever depressions characterized by leaden feeling, hypersomnia and craving for sweets. (Liebowitz and Klein 979; Klein et al., 1980).
Academic stress is of great concern among students. As we live in a test conscious age in which lives of many people are influenced by their test performance. Examination stress in humans seemed to produce the same biochemical changes as observed in flight reaction of animals. The degree of success attained in the educational system is measured largely by examination and tests. It has been demonstrated by many studies that students are under stress during exams. A number of factors may be responsible for stress of students like negative consequences of failure, future life and self responsibility of failure.

Males are usually more seriously concerned about an occupation than college going females. Highly anxious students apparently respond to examination stress with intense emotional reactions and negative self centered thoughts that impair their performance, while low test anxiety students react with increased motivation and concentration. Lot of stress loaded somatic complaints like headache, insomnia, lack of concentration, blurred vision, poor memory have been observed in students during examination. A 19 year old Jordanian boy confessed to having shot 12 members of his family, due to heavy pressure to pass his final school exams (The Tribune, 1998). Males were more likely to seek sexual gratification and use marijuana whereas females ate constantly & become dysfunctional to cope up with the academic pressure.
Parents and children may share similar attitudes about important issues and decision, for example, what the long run value of education is but where they differ is on strength of these attitudes. But, they most of them disagree about matters affecting there current social life behaviour such as style of dress, food choices, choices of friends etc.

School going female also suffers stress due to menstruation. Premenstrual syndrome is a psychosomatic problem. It is characterized by alterations in personality during days proceeding the expected menstruation, change that terminates abruptly with onset of menstruation. The symptoms felt vary with the menstruation cycle. Few of the most common ones are listed in figure 1.6. Studies on college going women revealed that they show craving for chocolate in the premenstrual period. Chocolate is not craved due to the bioactive compounds it contains but due to its sensory properties and positive emotional outcomes. Chocolate is also known to release endorphins in blood which desensitizing pain receptors.

FIGURE – 1.6
COMMON SYMPTOMS OF PREMENSTRUAL SYNDROMES

<table>
<thead>
<tr>
<th>Affective</th>
<th>Autonomic</th>
</tr>
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<tbody>
<tr>
<td>Sadness</td>
<td>Nausea</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>Anger</td>
<td>Palpitations</td>
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<td>-------</td>
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<tr>
<td>Irritability</td>
<td>Sweating</td>
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<td>Labile mood</td>
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<tr>
<td><strong>Cognitive</strong></td>
<td><strong>CNS</strong></td>
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<tr>
<td>Decreased concentration</td>
<td>Clumsiness</td>
</tr>
<tr>
<td>Indecision</td>
<td>Seizures</td>
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<tr>
<td>Paranoia</td>
<td>Dizziness</td>
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<td>Rejection Sensitive</td>
<td>Vertigo</td>
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<tr>
<td>Suicidal ideation</td>
<td>Paresthesia</td>
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<tr>
<td>Neurovegetative</td>
<td><strong>Fluid/Electrolyte</strong></td>
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<tr>
<td>Insomnia</td>
<td>Bloating</td>
</tr>
<tr>
<td>Hypersomnia</td>
<td>Weight gain</td>
</tr>
<tr>
<td>Anorexia</td>
<td>Oliguria</td>
</tr>
<tr>
<td>Craving for certain foods</td>
<td>Odema</td>
</tr>
<tr>
<td>Fatigue</td>
<td><strong>Dermatological</strong></td>
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<tr>
<td>Lethargy</td>
<td>Acne</td>
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<tr>
<td>Agitation</td>
<td>Greasy hair</td>
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<tr>
<td>Libido change</td>
<td>Dry hair</td>
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<td>Behavioural</td>
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<tr>
<td>Decreased motivation</td>
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<tr>
<td>Poor impulse control</td>
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<tr>
<td>Decreased efficiency</td>
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</tbody>
</table>
Social Isolation

Some women may use carbohydrates or chocolates during premenstrual period. Countering this hypothesis are observation that women who crave sweets tend to have negative rather than positive mood reactions in satisfying their cravings. Women with premenstrual syndrome also report increased consumption of caffeine containing beverages. Alterations in taste perception during the menstrual cycle may also affect food preference.

Transitional stage of adolescents is like a Stream of crests and troughs, its ebb & flow. Those who ride the crest develop a positive way towards life and those who find themselves too sensitive to experience the effervescence of bubbling adolescence with its joys and sorrows, label this period as the most turbulent period of life. They just fail to cope with it and hence find it stressful.

"Two men look out of the same bars
One sees the mud, the other sees the star".

Yet, there is much that we can do – we can make stress work for us in a positive way. It is true that stress has a great potentially for destruction, but it can also be constructive. If stress is perceived and managed poorly, it can lead to grief, disease and premature death. On the other hand, the correct use and management of stress can actually lead to a longer, healthier and happier life. Now
question is how each of us – regardless of the age, sex, occupation, or position in life – can achieve that tripartite goal of health, happiness and longevity.

The two possible paths are now presented, and they serve as an introduction to all that follows. It is sincerely hoped that we will not find ourself confined to the negative stress path, shown in path 1. We certainly hope to guide ourself and others in following the positive stress path, shown in path 2. (See Figs 1.7 and 1.8)

In order to follow the positive path, it is necessary to change one’s orientation. One cannot sit back, wait for the arrival of distress symptoms and then run to his doctor for a cure. He must – himself – be actively concerned with prevention of distress and disease. Whether one is religious or not, the saying, “God helps those who help themselves” is completely applicable. With this in mind, let us begin by trying to understand what is meant by stress, distress and eustress.

<table>
<thead>
<tr>
<th>Physical Activity</th>
<th>Mental Activity</th>
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<tbody>
<tr>
<td>Purposeful encounter with stressful situations</td>
<td>Denial, rationalization, regression</td>
</tr>
<tr>
<td>Overwork</td>
<td>Guilt, worry</td>
</tr>
<tr>
<td>Repetitive work</td>
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<tr>
<td>Being overly competitive</td>
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</tbody>
</table>
Anxiety, frustration
Unrealistic goals
Rehashing the past

Physical Inactivity
Avoidance of exercise
Avoidance of work

Mental Inactivity
Too little or too much relaxation
Too little or too much sleep
Being mentally unprepared

Nutrition
Unbalanced diet
Underweight
Overweight

Drugs
Smoking
Drinking
“popping pills”

Solitude

Grief
Disease
Premature Death

Fig 1.7 Path 1: The stress path to grief, disease and premature death

Physical Activity
Purposeful avoidance or
evasion of stressful situation
Satisfying work
Exercise
Heat and massage
Diversions

Mental Activity
Planning
Insulation
"a kind word"
Positive Attitude
Reasonable goals

Physical Inactivity
Muscle relaxation

Mental Inactivity
Adequate sleep and relaxation
Meditation or self-hypnosis

Nutrition
Vitamin, mineral, protein
and fiber supplementation
Proper weight

Drugs
- A glass of wine a day
- An occasional tranquilizer
- Placebos

Consultations
- Family, friends or professionals

Fig. Path 2: the stress path to happiness, health and longevity.

In addition to enhanced nutritional support, there are other steps that individuals can take to minimize the negative effects of stress:
- Walk, or engage in other, regular, physical activity to stimulate your immune system.
- Make healthy food choices and eat at regular times of the day for improved health.
- Create a social support network and interact regularly with others.
- Use relaxation techniques like guided imagery, listening to music, aromatherapy, deep breathing or soaking in a soothing bath.
- Learn to nurture yourself and reinforce your well-being with positive affirmations.
- Laugh about it! Studies show that laughter stimulates endorphins, natural pain relievers, to be released in the brain.

**Frustration**

Frustration occurs when a person is blocked from achievement a goal and feels confused, annoyed or angry as a result. The closer a person is to reaching his goal when the blockage occurs; the greater is the ultimate frustration. Frustration often comes not only from failure to achieve a single goal, but from a conflict of two important goals or needs in which choosing either alternative means frustration with regard to the other.

**Fear and Its Close Relatives**

Fear, anxiety, panic and phobia are somewhat similar psychological stressors. Their important differences are now examined. Fear is derived from the old English word, ‘faer’, which means a sudden calamity or danger. Fear is a normal response that engenders feelings of alarm or disquiet brought on by the realistic expectation of pain, danger or disaster. For instance, many patients in
the office of a physician or dentist are frightened at the sight of a hypodermic needle.

Anxiety

According to Lader and Marks (1974) anxiety is derived from a Greek word that means, “To press tight” or “to strangle”. Anxiety is a response that brings forth feelings that are indistinguishable from fear. Anxiety may be brought on by some external happening, but it is more often based on an individual’s subjective, distorted view of the situation. The anxious individual has intense fear or dead, but there is usually no realistic object or situation that engenders the fear. As Mark Twain put it, “I’m an old man and have known a great many troubles, but most of them never happened.” (Adam, 1969).

There are two kinds of anxiety as quoted by Crosby (1976). The first type is “generalized trait anxiety,” in which the person experiences anxiety as a personality characteristic or as a stable aspect of his life. This individual would be anxious about every new situation. The second type of anxiety is “transitional situational anxiety”, in which a person who is usually not anxious could temporarily become anxious because of a specific event or stressful occurrence. Again referring to the dental situation, dental anxiety is the illogical fear of having dental treatment. It can occur with either of the
two types of anxiety. It is generally brought on by hearing “horror stories” or “tales of woe”.

Panic

Panic is derived from the Greek word “Pan”. Pan was a Greek God who was the originator of sudden and unexplainable terror. Panic means a sudden surge of intense terror that can be brought on by any condition that causes severe anxiety. Some people panic in the hospital “O.R” or dental waiting room. The panic in these situations is usually related to fear of the unknown.

Phobia

Phobia is another Greek-derived word, originating from the word “Phobos”. Phobos was also Greek God, who provoked panic and flight in his enemies. A phobia is a persistent, abnormal and usually illogical fear, which is out of all proportion to the object or situation that engenders it. The phobia results in avoidance of the feared situation or object. There are all sorts of phobias, including such common ones as claustrophobia (a pathological fear of being confined), acrophobia (an intense fear of heights) and hydrophobia (an exaggerated fear of water).

1-5 STRESS IN CHILDREN: WHAT IT IS, HOW PARENTS CAN HELP

When and why do children feel stress?

According to Hack (1999), children feel stress long before they grow up. Many children have to cope with family conflict,
divorce, constant changes in schools, neighborhoods and child care arrangements, peer pressure, and sometimes, even violence in their homes or communities.

The impact of a stressor depends on a child’s personality, maturity, and style of coping. It is not always obvious, however, when children are feeling overtaxed. Children often have difficulty describing exactly how they feel. Instead of saying “I feel overwhelmed” they might say “my stomach hurts”. When some children are stressed they cry, become aggressive talk back or become irritable. Others may behave well but become nervous, fearful, or panicky.

Stress can affect children’s physical health as well. Asthma, hay fever, migraine headaches and gastrointestinal illness like colitis, irritable bowel syndrome and peptic ulcer can be exacerbated by stressful situations.

**What can parents do?**

Parents can help their children learn to keep the harmful effects of stress at a minimum.

1. Parents should monitor their own stress levels. In studies on families who have experienced traumatic circumstances such as earthquakes or war, the best predictor of children’s coping is how well their parents cope. Parents need to be particularly aware of
when their own stress levels contribute to martial conflict. Frequent fighting between parents is unsettling for children.

2. Keep communication lines open. Kids feel better about themselves when they have a good relationship with their parents.

3. Children who do not have close friendship are at risk for developing stress related difficulties; parents should encourage friendship by scheduling play dates, sleepovers, and other fun activities.

4. Parents need to shape daily schedules with their child’s temperament in mind. Although children thrive in familiar, predictable environments with established routines and clear safe boundaries, their tolerance for stimulation varies.

5. No matter how busy their schedule, children of all ages need time to play and relax. Children use play to learn about their world, explore ideas and soothe themselves.

1.6 PROMOTING STRESS MANAGEMENT: THE ROLE OF COMPREHENSIVE SCHOOL HEALTH PROGRAMMES.

Stress has been defined as, “the inability to cope with a perceived or real (or imagined) threat to one’s mental, physical, emotional, and spiritual well-being which results in a series of physiological responses and adaptations” (Seaward, 1997, p.5). In addition to responding physiologically, people may respond cognitively
and emotionally to stress. Studies indicate that 70-80% of all disease and illness is stress-related (Seaward, 1997).

Stress affects each of five dimensions of health: physical, mental, emotional, social and spiritual. Examples of “distressors” (negative stressors) that children and adolescents may confront within these dimensions include: illness, injury, inadequate nutrition, and low levels of physical fitness (physical dimension); pressure to excel in academic and extra curricular activities, depression, and anxiety (mental/emotional dimension); relational issues, peer pressure, and dysfunctional family lives (social dimension); and inability to find purpose in life or to understand how individual lives contribute to a much longer and grander universe (spiritual dimension). (Massey, 1998).

Rather than how much stress individuals experience, the critical issue seems to be how they perceive stress and respond to it. Seaward (1997) points out that coping with stress is an ongoing process. Therefore, it is critical that children and adolescents are given opportunities to develop life skills that will help them effectively cope with daily stressors, major life events, and change. The purpose of this Digest is to examine how comprehensive school health programmes may promote stress management.
THE COMPREHENSIVE SCHOOL HEALTH PROGRAMME (CSHP)

A recently conceptualized model (Allensworth, Lawson, Nicholson, & Wyche, 1997) describes four key elements of CSHPs.

1. Community participation and focus
2. School environment
3. Education and Services

COMMUNITY PARTICIPATION AND FOCUS

School health efforts must be coordinated with the community at large. There are numerous ways in which stress management strategies can involve families and communities.

1. School health newsletters sent home and to community agencies may include health facts, tips, family activity ideas, and resources for further information on a particular health topic, such as time management.

2. The Family Involvement Calendar (Birch, 1994) includes ideas for family participation in health activities that reinforce a specific health topic or unit that is being studied at school.

3. Health fairs and community nights that include enjoyable educational activities can be held at the school (National PTA, 1997; Valentine, 1997); community groups can be involved in
program planning and delivery, such as posters and/or writing contests for different age groups focusing on the importance of stress management. Prizes may be donated by local businesses, and winning posters and/or writings can be displayed within the school or community (e.g., supermarkets).

4. Guest speakers from the community can address various stress management issues at student and staff health promotion programmes.

SCHOOL ENVIRONMENT

The school environment includes the physical settings as well as the policy and administrative environment, psychosocial environment, and health promotion for staff. Physical conditions that play a role in stress and the overall learning process include school size, lighting, temperature and ventilation, noise control, crowding, sanitation and cleanliness, and accessibility. The teacher's personality and behaviour, respect for diversity and individual differences, and effective classroom management play a role in helping to ensure that students feel a sense of belonging, security, and trust. A nurturing emotional environment is especially important for those children and youth whose families exhibit behaviour such as abuse and neglect, violence and alcohol and other drug abuse. School safety is directly associated with the stress experienced by students, teachers, and parents. Important areas that should be considered regarding safety
and injury prevention include playground safety, violence prevention, and conflict resolution, procedures for emergencies and disasters, and promotion of smoke and drug-free schools.

It is critical that teachers and other school staff possess emotional wellness in order to manage their own lives as well as the lives of the children within their circle of influence. According to Pransky (1991), teachers who have participated in school health promotion programmes report decreased absenteeism, enhanced morale, improvement in the quality of their teaching, enriched attitudes about their personal health, and a sense of well-being. Moreover, healthy teachers and staff serve as positive role models for children and their families. A staff wellness program might include instruction in relaxation techniques, diet planning, communication skills, smoking cessation, and incentives for lifestyle improvements, such as lower health insurance rates, bonus checks, and free or reduced – cost health club memberships.

EDUCATION

Various curricular areas offer practical opportunities to promote stress management (Gilbert & Orlick, 1996; DeWolfe & Saunders, 1995; Anderson & Haslam, 1994; Romano, 1992; Miller & McCormick, 1991). School-based life skills programmes that focus on such strategies as relaxation, problem solving, and positive perspectives are successful in teaching children
and adolescents how to control their stress (Gilbert & Orlick, 1996; De Wolfe & Saunders, 1995). Miller & McCormick (1991) offer excellent suggestions for teaching stress management and relaxation skills to preschool and elementary children. These strategies can be effectively implemented by physical educators, classroom teachers, and parents. Curricular areas that offer opportunities for curriculum infusion include:

HEALTH EDUCATION

Mental and emotional health is one of the 10 major contents areas of health education, and stress management techniques can be taught as a part of this unit. Also, stress management can be addressed in other health content areas such as family living; nutrition; personal health; physical fitness; and tobacco, alcohol and other drugs. Personal and social skills – decision making, problem solving, communication, conflict resolution, peer resistance, and goal setting – are essential in helping children to cope with the stress. There are numerous skill-building activities that can be used in the classroom (see Bender, Neutens, Skonié – Hardin, & Sorochan, 1997; Miller, Telljohann, & Symons, 1996; Fetro, 1992).

PHYSICAL EDUCATION

Many of the health benefits derived from regular physical activity are directly related to stress management, including the reduction of depression and anxiety and the promotion of
psychological well-being and improved vitality. Daily physical education provides students with multiple opportunities to engage in physical activity and to develop personal and social skills. Through quality physical education, students can learn various relaxation techniques (including the basics of deep breathing), acquire the knowledge and skills for participating in lifelong regular physical activity, develop self-discipline, learn how to cooperate with others, and have fun in the process.

CURRICULUM INFUSION

There are other areas of the curriculum where stress management may be infused: language arts (Children’s literature, creative writing, journal writing); social studies (Eastern tradition of meditation, yoga, Tai Chi; learning to appreciate and value diversity; and learning to work cooperatively to solve problems); science (physiology of the stress response and relaxation response) and art and music (creative ways to relax and express thoughts and feelings).

SERVICES

Children’s health problems can cause distress and, if undetected and untreated, hinder both health and learning. School services that can help reduce children’s stress include health services; counseling, psychological, and social services; nutrition and food services; and comprehensive family services. School services may provide needed medical treatments, teach effective management of
health, serve as the primary source of nutrition (if necessary), and offer services that deal with a variety of mental and emotional health issues that may cause stress.

Thus schools play a vital role in stress management by assuring a healthy learning environment, providing services for stress reduction, enhancing student and staff knowledge and skills for coping with stress, and coordinating activities with families and communities. The Comprehensive School Health Program is an effective model for implementing stress management in schools and communities to enhance the well-being of children.

1.7 GENERAL GUIDELINES FOR REDUCING STRESS

Perhaps the best general approach for treating stress can be found in the elegant passage by Reinhold Niebuhr, “Grant me the courage to change the things I can change, the serenity to accept the things I can’t change, and the wisdom to know the difference.” In choosing specific strategies for treating stress, several factors should be considered. First, no single method is uniformly successful: a combination of approaches is generally most effective. Second, what works for one person does not necessarily work for someone else. Third, stress can be positive as well as negative. Appropriate and controllable stress provides interest and excitement and motivates the individual to greater achievement, while a lack of stress may lead to boredom and depression. Finally, stress may play a part in making
people vulnerable to illness. A physician or psychologist should be consulted if there are any indications of accompanying medical or psychological conditions, such as cardiac symptoms, significant pain, anxiety, or depression.

It is very important to note that no evidence exists that treating stress can cure medical problems; although a recent study indicated that stress management programs may reduce the risk of cardiac events – like heart attack – by up to 75% in people with heart disease. One study found it was even more effective than exercise (although exercise also reduced the risk). Such programs should never be used alone to treat any medical condition.

One major obstacle to reducing stress is the fight response itself; the very idea of relaxation feels threatening, because it is perceived as letting down one’s guard. If stress is provoked by an over-demanding boss for instance, the subordinate may feel the need to remain in a psychologic state of fighting-readiness, even though there is no safe opportunity to express anger against the boss.

The victim has the illusion, even subconsciously, that it is providing safety or preparedness, and so does nothing to correct the condition. Often people succeed in relieving stress for the short-term but resort to previous ways of stressful thinking and behaving because of outside pressure or entrenched habits. It is essential to remember that reducing stress and keeping relaxed not only
helps maintain health but gives the mind more opportunities for clearer thinking in order to initiate appropriate actions to get rid of the conditions causing stress. The process of learning to control stress is life-long, and will not only contribute to better health, but a greater ability to succeed on one’s own agenda.

**COGNITIVE-BEHAVIOURAL TECHNIQUES**

Cognitive-behavioural methods are the most effective ways to reduce stress. They include identifying sources of stress, restructuring priorities, changing one’s response to stress, and finding methods for managing and reducing stress.

**Identifying sources of stress**

It is useful to start the process of stress reduction with an informal inventory of daily events and activities. The first step is keep a diary noting which activities put a strain on energy and time, trigger anger or anxiety, or precipitate a negative physical response (e.g. a sour stomach or headache). Positive experiences should also be noted – those that are mentally or physically refreshing or produce a sense of accomplishment. While this exercise might itself seem stress producing – yet one more chore- it need not be done in painstaking detail. A few words accompanying a time and date will usually be enough to serve as reminders of significant events or activities. After a week or two, the stressed individual should try to identify two or three events or activities that have been significantly upsetting or
overwhelming. Priorities and goals should then be carefully examined. Individuals should question whether the stressful activities meet their own goals or someone’s else’s, whether they taken on tasks that they can reasonably accomplish, and which tasks are in their control and which ones aren’t.

Restructuring Priorities

The next step is to attempt to shift the balance from stress-producing to stress-reducing activities. A recent study indicated that daily pleasant events have positive effects on the immune system. In fact, adding pleasurable events has more benefit than simply reducing stressful or negative ones. This is important to realize because many difficult stressful situations, such as unpleasant working conditions, an unhappy family situation, or a significant loss, can’t simply be rescheduled or wished away. When eliminating the stress is not practical, there may be ways to reduce its impact. If the problem is work-related and it is impossible to change jobs or cut back on hours, consider as many pleasant relief options as possible. Examples include taking long weekends or vacations, sending out resumes or working on transfers within the company, and planning pleasant diversions or physical exercise during lunch hours. If stress at home is the problem, plan times away, even if it is only an hour or two week. Learn to replace time-consuming chores that aren’t really necessary with activities that are pleasurable or interesting. Making time for recreation
is as essential as paying bills or shopping for groceries. Many people are afraid of being perceived as selfish if they make decisions that benefit only themselves. The truth is that self-sacrifice may be inappropriate and even damaging if the person making the sacrifice is unhappy, angry, or physically unwell. In most cases, small daily decisions for improvement can accumulate and work to reconstruct a stressed existence into a pleasant and productive one.

Adjusting Responses to Stress

Many people believe that certain emotional responses to stress, such as the negative and aggressive. Type A behaviour associated with heart disorders, are innate features of personality. Research has shown, however, that individuals can be taught to change their emotional reactions to stressful events. Given the fixed nature of many major stresses, such as the loss of a loved one, chronic illness, or pressures from work, cognitive behavioural therapy, which teaches new ways of responding to stress may be the most effective method of permanently reducing its effects.

Discuss Feelings

The concept of communication and “letting your feelings out” has been so excessively promoted and parodied that it has nearly lost its value as good psychologic advice. Nevertheless, feelings of anger or frustration that are not expressed in an acceptable way may lead to hostility, a sense of helplessness, and depression. Expressing
feelings does not mean venting frustration on waiters and subordinates, boring friends with emotional minutia, wallowing in self-pity. In fact, because certain chronically hostile individuals can experience harmful spikes in blood pressure when they are angry, some therapists strongly advise that just talking—not venting anger without any progress—is the best approach for these people. The primary goal is to explain and assert one’s needs to a trusted individual in as positive a way as possible. Direct communication with another person may not even be necessary; writing in a journal or composing a letter that is never mailed may be sufficient. Expressing one’s feelings is not enough, however, learning to listen, empathize, and respond to others with understanding is just as important for maintaining the strong relationships necessary for emotional fulfillment and reduced stress.

Keep Perspective and Look for the Positive

Reversing negative ideas and learning to focus on positive outcomes helps reduce tension and achieve goals. For example, an individual who is alarmed at the prospect of giving a speech should first identify the worst possible outcomes (forgetting the speech, stumbling over words, humiliation, audience contempt), and its likelihood (probably very low or the speech wouldn’t have been assigned in the first place). Then the stressed individual should envision a favourable result (a well-rounded, articulate presentation with
rewarding applause). Then a plan should be developed to achieve the positive outcome (preparing in front of a mirror, using a video camera or tape recorder, relaxation exercises). It is helpful to remember previous situations that initially seemed negative but ended well.

**Use Humor**

Keeping a sense of humor during difficult situations is a common way of combating tension. In this way, humor helps reducing the tension of pent-up feelings and helps keep perspective. Research has shown that humor is a very effective mechanism for coping with acute stress. It is not uncommon for people to recall laughing intensely even during tragic events, such as the death of a loved one, and to remember this laughter as helping them to endure the emotional pain.

**Relaxation Techniques**

Since stress is here to stay, everyone needs to develop methods for invoking the relaxation response – the natural unwinding of the stress response. Relaxation lowers blood pressure; respiration, pulse rates, releases muscle tension, and eases emotional strains. This response is highly individualized, but there are certain approaches that seem to work, including: exercise, deep breathing, muscle relaxation, and meditation. No one should expect a total resolution of stress from these approaches, but if done regularly, these programmes can be very effective.
Adapting Healthy Habits

Unfortunately people under stress frequently seek relief through drug or alcohol abuse, tobacco use, abnormal eating patterns, or passive activities—such as watching television. The damage these self-destructive habits cause under ordinary circumstances is compounded by the physiologic effects of stress itself. And the cycle is self-perpetuating; a sedentary routine, alcohol abuse and smoking promote heart diseases, interfere with sleep patterns, and lead to increased rather than reduced tension levels. General health and stress resistance can be enhanced by eating well and by avoiding stresses such as alcohol, caffeine, tobacco and junk food. Fats, simple sugars, and salt are known contributors to health problems, including diabetes and heart disease. No evidence exists that stress has any effect on vitamin needs or that vitamins have any benefits against the effects of stress. Everyone, however, should certainly have a diet rich in vegetables and fruits.

Exercise

Exercise in combination with the stress management techniques is extremely important and— for those with heart disease— can even reduce significantly the risk for a heart attack. As the body attains fitness its ability to withstand stress is enhanced. The heart and circulation are able to work harder for longer stretches. The muscles, the ligaments, bones and joints become stronger and
more flexible. And the mind is often better able to cope with stress and stay on an even, happier keel. Studies show that employees who follow an active lifestyle need fewer sick and disability days than sedentary workers. Usually, a varied exercise regime is more interesting – and thus easier to stick to. Start slowly. Strenuous exercise in people who are not used to it can be very dangerous and any exercise program should be discussed with a physician. In addition, half of all people who begin a vigorous training regime drop out within a year, so the key is to find activities that are exciting, challenging, and satisfying. Signing up for aerobics classes at a gym can help prompt regular exercise. Because it is a natural and convenient, brisk walking is an excellent aerobic exercise. Even short brisk walks can relieve bouts of stress. Swimming is another ideal exercise for many people including pregnant women, individuals with musculoskeletal problems, and those who suffer exercise-induced asthma. Yoga or Tai Chi can be very effective, combining many of the benefits of breathing, muscle relaxation and meditation. As in other areas of stress management, making a plan and executing it successfully develops feelings of mastery and control – which are very beneficial in and of themselves. Start small. Just 10 minutes of exercise three times a week can build a good base for novices. Gradually build up the length of these every-other-day aerobic sessions, to 30 minutes or more.
Strengthen or Establish a Support Network

Studies of people who remain happy and healthy despite many life stresses conclude that most have very good networks of social support. One study indicated that support even from strangers reduced blood pressure surges in people undergoing a stressful event. Many studies suggest that having a pet helps reduce medical problems aggravated by stress, including heart diseases and high blood pressure.

Professional Help and Medication

Stress can be a factor in a variety of physical and emotional illness which should be professionally treated. Many stress symptoms are mild and can be managed by over the counter medications, e.g. aspirin, acetaminophen or ibuprofen for tension headache and antacids, and anti-diarrhea medications or laxatives for mild stomach distress. A physician should be consulted, however, for physical symptoms that are out of the ordinary, particularly those which progress in severity or awaken one at night. A mental health professional should be consulted for unmanageable acute stress or for severe anxiety or depression. Often short term therapy can resolve stress-related emotional problems.

Reducing Stress at Work

Many institutions within the current culture, while playing lip service to stress reduction, put intense pressure on individuals to behave in ways that promote tension. Some experts
argue that employers should be held responsible for taking measures to prevent stress from work overload and should provide help to deal with work related stress. Treating stress has a number of benefits, not only for the individual but also for the patient’s employer. In one study, for example, in which a company set up a two year stress management educational programme. The saving to the company in workmen’s compensation costs were nearly $150,000, compared to the cost of the program which was only $150 per participant for a total of $6,000.

Here are some tips: seek out someone in the Human Resources department or a sympathetic manager, and communicate concerns about job stress. Work with them in a non-confrontational way to improve working conditions, letting them know that productivity can be improved if some one of the pressure is off. Establish or reinforce a network of friends at work and at home. Restructure priorities and eliminate unnecessary tasks. Learn to focus on positive outcomes. If the job is unendurable, plan and execute a career change. If this isn’t possible, be sure to schedule daily pleasant activities and physical exercise during free time. Use stress reduction techniques described in this report. It is also helpful to keep in mind that the employers are victimized by the same stressful conditions they are imposing.
Deep Breathing

During stress, breathing becomes shallow and rapid. Taking a deep breath is an automatic and effective technique for winding down. Deep breathing exercises consciously intensify this natural physiologic reaction and can be very useful during a stressful situation, or for maintaining a relaxed state during the day. Inhale through the nose slowly and deeply to the count of ten, making sure that the stomach and abdomen expand but the chest does not rise up. Exhale through the nose-slowly and completely-also to the count of ten. To help quiet the mind, concentrate fully on breathing and counting through each cycle. Repeat five to ten times and make a habit of doing the exercise several times each day, even when not feeling stressed.

Muscle Relaxation

Muscle relaxation techniques, often combined with deep breathing, are simple to learn and very useful for getting to sleep. After lying down in a comfortable position without crossing the limbs, concentrate on each part of the body, beginning with top of the head and progressing downward to focus on all the muscles in the body. Be sure to include the forehead, ears and eyes. Mouth, neck, shoulders, arms and hands, fingers, chest, belly, thighs, claves and feet. (Some individuals even imagine tensing and releasing internal muscles once the external review is complete). A slow, deep breathing pattern
should be maintained throughout this exercise. Tense each muscle as tightly as possible for a count of five to ten and then release it completely; experience the muscle as totally relaxed and lead-heavy. Continue until the feet are reached. In the beginning it is useful to have a friend or partner check for tension by lifting an arm and dropping it – the arm should fall freely. Practice makes the exercise much more effective and produces relaxation much more rapidly.

Meditation

Meditation, used for many years in Eastern cultures, is now widely accepted in this country as a relaxation technique. The goal of all meditative procedures, both religious and therapeutic, is to quite the mind - essential to relax thought. The practiced mediator can achieve a reduction in heart rate, blood pressure, adrenaline levels, and skin temperature while meditating. A number of organizations, both religious and nonreligious, teach meditation. The names of these organizations, along with instructional books, can be found at public libraries. As in all relaxation exercises, the first step is to be as physically comfortable as possible in a quite place, preferably a semi dark room isolated from noise or distraction. One should be sitting up with the eyes closed concentrating on a simple image or sound. Some methods suggest imaging a point of light behind the forehead and between the eyes. Other techniques, such as transcendental mediation, assign mantras – words that have particular
chanting sounds-which are repeated silently. Anyone can make up a word or a sound; the only condition is that the word or sound not be associated with a real thing that can divert the mediator from the internal process. When the mind begins to wander, the mediator gently brings concentration back to the central image or sound. Some recommend mediating for no longer than 20 minutes in the morning after awakening and then again in early evening before dinner. Even once a day is helpful. Successful meditation results in reducing the tension and stress. There are people who mediate before going to bed: some people who meditate before sleep wake up in the middle of the night, alert and unable to return to sleep. A recent study showed that transcendental meditation was more effective in reducing blood pressure than muscle relaxation in both men and women.

One technique requiring little adaptation in the daily schedule has been termed mini-meditation. The method involves heightening awareness of the immediate surrounding environment, thus redirecting the stress-provoking brain activity into focusing on existing sensory input. One should first choose a routine activity when alone. For example while washing dishes concentrate on the feel of the water and dishes, allow the mind to wander to any immediate sensory experience (Sounds outside the window, smells from the stove, colors in the room). If the mind begins to think about the past or future, abstractions or worries, redirect it gently back. This redirection of brain
activity from your thoughts and worries to your senses disrupts the stress response and prompts relaxation. It also helps promote an emotional and sensual appreciation of simple pleasures already present in a person’s life.

**Biofeedback**

During biofeedback, electric leads are taped to a subject’s head. The person is encouraged to relax using methods such as those described above. Brain waves are measured and an auditory signal is emitted when alpha waves are detected - a frequency which coincides with a state of deep relaxation. By repeating the process, subjects associate the sound with the relaxed state and learn to achieve relaxation by themselves.

**Massage Therapy**

Massage therapy appears to slow down the heart and relax the body. Rather than causing drowsiness, however, massage actually increases alertness. A number of massage therapies are available for relaxing muscles, including the following:

1. Shiatsu – applies intense pressure to parts of the body and can be painful, but people report deep relaxation afterward.
2. Reflexology – manipulates pressure points in the hands and feet.
3. Swedish Massage – has been available for years and uses muscle manipulation.
1.8 HOW TO STAY STRESSED

Although the De Anza Health Office long been an advocate of stress management, stress, tension and burnout are still common complaints of students, faculty and staff alike. On account of this, we have come to the following conclusions: YOU ALL WANT TO STAY STRESSED! The following provides you with a few reasons why.

| STRESS HELPS YOU SEEM IMPORTANT | Anyone as stressed as you must be working very hard and, therefore, is probably doing something very crucial. |
| IT HELPS YOU TO MAINTAIN PERSONAL DISTANCE AND AVOID INTIMACY. | Any one as busy as you are certainly can’t be expected to form emotional attachments to anyone. And let’s face it; you’re not much fun to be around anyway. |
| IT HELPS YOU AVOID RESPONSIBILITIES | Obviously you are too stressed to be given any more work. This gets you off the hook for all the mundane chores; let someone else |
IT GIVES YOU A CHEMICAL RUSH.
Stress might be considered a cheap thrill, and you can give yourself a “hit” anytime you choose. But be careful, you might get addicted to your own adrenaline.

IT HELPS YOU AVOID SUCCESS
Why risk being “successful” when by simply staying stressed you can avoid all of that? Stress can keep your performance level low enough that success won’t ever be a threat.

STRESS ALSO LETS YOU KEEP AUTHORITARIAN MANAGEMENT STYLE.
The authoritarian style of “Just do what I say!” is generally permissible under crisis conditions. If you maintain a permanently stressed crisis atmosphere, you can justify an authoritarian style all the time.
Are you worried now about how to stay stressed? You’ll have no trouble if you practice the following clinically proven methods:

<table>
<thead>
<tr>
<th>Method</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEVER EXERCISE</td>
<td>Exercise wastes a lot of time that could be spent worrying</td>
</tr>
<tr>
<td>EAT ANYTHING YOU WANT.</td>
<td>Hey, if cigarettes smoke can’t cleanse your system, a balanced diet isn’t likely to.</td>
</tr>
<tr>
<td>GAIN WEIGHT</td>
<td>Work hard at staying at least 25 pounds over your recommended weight.</td>
</tr>
<tr>
<td>TAKE PLENTY OF STIMULANTS.</td>
<td>The old standards of caffeine, nicotine, sugar, and cola will continue to do the job just fine.</td>
</tr>
<tr>
<td>AVOID “ Woo-Woo” PRACTICES.</td>
<td>Ignore the evidence suggesting that meditation, yoga, deep breathing, and/or mental imaging help to reduce stress. The Protestant work ethic is good for everyone, Protestant or not.</td>
</tr>
<tr>
<td>GET RID OF YOUR SOCIAL SUPPORT SYSTEM.</td>
<td>Let the few friends who are willing to tolerate you know that concern yourself with friendships</td>
</tr>
<tr>
<td>PERSONALIZE THE CRITICISM.</td>
<td>only if you have time, and you never have time. If a few people persist in trying to be your friend, avoid them.</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>THROW OUT YOUR SENSE OF HUMOR.</td>
<td>Anyone who criticizes any aspect of your work, family, dog, house, or car is mounting a personal attack. Don’t take time to listen, be offended, and then return the attack.</td>
</tr>
<tr>
<td>MALES AND FEMALES ALIKE – BE MACHO.</td>
<td>Staying stressed is no laughing matter, and it should not be treated as one.</td>
</tr>
<tr>
<td>BECOME A WORKAHOLIC</td>
<td>Never ever ask for help, and if you want it done right, do it yourself!</td>
</tr>
<tr>
<td>DISCARD GOOD TIME MANAGEMENT SKILLS.</td>
<td>Put work before everything else, and be sure to take work home evenings and weekends. Keep reminding yourself that vacations are for sissies.</td>
</tr>
<tr>
<td></td>
<td>Schedule in more activities every day than you can possibly get done</td>
</tr>
</tbody>
</table>
PROCRASTINATE.

and then worry about it all whenever you get a chance.

Putting things off to the last second always produces a marvelous amount of stress.

WORRY ABOUT THINGS YOU CAN’T CONTROL.

Worry about the stock market, earthquakes, the approaching Ice Age, you know, all the big issues.

........ and either beat yourself up, or feel guilty, depressed, discouraged, and/or inadequate when you don’t meet them.

BECOME NOT ONLY A PERFECTIONIST BUT SET IMPOSSIBLY HIGH STANDARDS.....
we have said, alcohol gives a false sense of security and power, and its long term effects are harmful to health and life.

There are many other ways to deal with stress. Just as personality differences determine how stressors affect various people, so do personality differences determine how different people manage stress. For example, meditation is not effective for everyone.

Stress management can be divided into two phases: the first is coping with stress and the second is counteracting the stress response. There are five major methods of coping with stress.

i. **AVOIDANCE**
   
The first way to cope with stress is not to cope with stress. In other words, the best way to manage stressors is to avoid or prevent stress.

ii. **EVASION**
   
   Rather than simply avoiding potential stressors, one may sidestep or evade them. For instance, one could abstain when asked to vote on a controversial issue. However, evasion may only postpone the stressful decision.

iii. **DIVERSION**
   
The third major way to manage stress is to distract one’s mind. In other words, diversion is a means of sidetracking stress. This method is somewhat similar to avoidance; but with avoidance the particular stressors are never met, while with diversion, one knows the
stressors must be met eventually, but perhaps at a later time when one is rested or fortified.

Diversions can take many forms, e.g. regularly going to shows, movies, restaurants or sporting events and having reading hobbies such as photography, painting, needlepoint, writing and reading.

Diversions also include going on trips and vacations. Sometimes they do not serve the intended purpose, particularly if they are combined with business. Conversely, some avocations may interfere with true vocations.

iv. PREPARATION

A fourth major way to manage stress is to be prepared for it. There are three basic means of preparing oneself: the mental, the nutritional and the physical.

Mental Preparation

It is surprising how easy many exams become when you study for them. Although Americans have a fetish for ad-libbing comics, many of the “spontaneous” ga-lines have been well rehearsed. When you mentally consider the various possibilities of a potentially stressful situation, this helps to reduce the stress.

Nutritional Preparation
The old adage “You are what you eat” makes good sense. Vitamins, minerals, proteins, carbohydrates, fats and fiber all play a role in stress management.

Physical Preparation

In order to manage physical encounters well, it is necessary to be “in shape”. And even though there are jogging and tennis fads in evidence now, being in shape is more than just dabbling in these two activities.

v. EUSTRESS RESPONSES

The fifth and last major way to manage stress is to change the stress response from distress to eustress. According to Selye (1974), there are two main ways to do this: the mental and the physical.

Mental Attitude

How do you address the stressful situations, and how do you react to it?

Physical Response

The second main way to change distress to eustress is physical, as there are physiological as well as psychological components to the stress response. Although exercise tends to cause a stress response, with a proper mental set the results can be extremely beneficial. Remember, forced exercise is no more than a physical stressor and as such tends to be distressful. Just as “Beauty is in the
eyes of the beholder,” so is the nature of the stress response in the attitude of the exercise.

COUNTERACTING THE STRESS RESPONSE

The second major division in stress management is counteracting the stress response. During the stress response, the adrenal cortex is activated with the production of corticosteroids. (Seyle 1976). Also activated is the sympathetic division of the autonomic nervous system with the release of catecholamines (adrenaline, noradrenaline). Kopin (1976), in addition, the opposite autonomic nervous system division, the parasympathetic branch, may be deactivated. Thus, to counteract the stress response one tries to elect means of damping down the activities of the adrenal cortex and the sympathetic branch and increasing the parasympathetic activity.

These objectives are achieved in part when we relax, take a nap or have a restful sleep. A better and more predicable method is by initiating the relaxation response. There are various techniques that may be employed to elicit the relaxation response, including self-hypnosis, meditation and biofeedback.

Table gives a summary of the various stress management methods just described. The relationship of stress management to the stress and relaxation responses is shown in Fig 1.2.
TABLE
Stress Management: Coping with Stress and Counteracting the stress Response

COPING WITH STRESS
1. Avoidance
2. Evasion
3. Diversion
   a. Going out to shows, movies etc.
   b. Having hobbies such as photography, etc.
   c. Taking vacations
4. Preparation
   a. Mental
   b. Nutritional
   c. Physical
5. Change Response from Distress to Eustress
   a. Mental attitude
   b. Physical (exercise)

COUNTERACTING THE STRESS RESPONSE
1. Sleeping, Napping, Relaxing
2. The Relaxation Response
   a. Self-hypnosis
   b. Meditation
   c. Biofeedback
d. Others: e.g., Yoga, Zen

![Stress management diagram](image)

Fig. 1.2 stress management in relationship to the stress and relaxation responses. ↑ And ↓ (lined) = overcomes by prevention or counteractions; ↑ and ↓ = reinforce by strengthening or changing.

People who suffer from chronic diseases and the elderly have special problems when it comes to coping with stressors.

**METHODS OF DIVERSION**

Selye (1976) has formulated a stress quotient that permits an individual to determine when a diversion or complete rest is indicated.
Selye’s stress quotient is as follows:

Local Stress in Any One Part
-----------------------------------------------
Total Stress in the Body

If it is found that a person has too much stress in any one part of the body, then diversion should be sought. For instance, if one has spent hours scrutinizing detailed material, then a different activity should follow (e.g. taking a swim). On the other hand, if the person is physically or mentally exhausted (i.e., total stress in the body), then rest and relaxation are called for.

There are many methods of diversion, and each individual should do what suits him best. How can one tell? One good way to “know thyself” is to try a variety of things. For instance, people whose daily work is largely sedentary and unexciting may elect activities such as water skiing, scuba diving, mountain climbing, sky diving, hang gliding or riding on rollercoasters. Others, who have active and exciting jobs, might choose to relax with a book. Some people like the classics; others escape into science fiction; still others prefer detective stories or romantic novels; and some are inclined toward self-help books.
If you like Mah Jong, bridge or poker, then play them, but don’t force yourself just because the other guys are doing it. You might prefer solitaire.

Various sports and athletics are fine for diversion, but if you’d rather watch than play, then do just that. “Eating out” is a wonderful diversion, especially for the harried housewife, but don’t eat yourself into a heart attack. And don’t go to restaurants every day because then that too becomes routine.

To many people, diversion means being entertained. It may be for such people it is the opposite of work; for when they work, they work hard. Diversion, then, may mean they want to do “nothing” or as little as possible. Perhaps the best thing for them is to play the role of the possible. Perhaps the best thing for them is to play the role of the spectator or simply to lie on the beach.

Movies, shows, theatre, opera, sporting events and television are great forms of entertainment. But even these can become addictive and less than beneficial. Continually viewing shocking and frightening programs and movies can raise a person’s stress level.

During vacations it is important to have rest as well as activity. A person should not programme his vacation in the way that he plans his business or home life. The vacation should be free-floating, and should be a combination of pure relaxation along
with invigorating exercise. And there shouldn’t be any “time pressures” about when to do what.

In the introductory story, the diversions were presented as a way to escape from the stressors of daily life. However, if one is really to manage life well, there should be only a few daily stressors. Thus, if work or home life produces repeated anxieties and frustrations, if it is dull and boring with few challenges, then it is time to change the daily routine.

For instance, one could go back to school, take new courses, read the literature in one’s chosen field and try to incorporate some of the latest advances. If it is reasonably possible, one could consider different hours, another position or even a new career. Nowadays it is accepted that a housewife might think of herself for a change and perhaps look into business opportunities.

Remember that vacations and hobbies are great, but if the working hours are not sufficiently rewarding, then one spends much of his day in thinking about escaping. And then if the escape doesn’t live up to expectations, the frustrations may be compounded.

A summary list of methods of diversion is given in Table. The reader should identify his preferred methods and add any that might have been missed. Given this base, he should expand both his daily and longer periods of diversion as required.
**TABLE: Methods of Diversion in Stress Management**

<table>
<thead>
<tr>
<th>I Solo – Active</th>
<th>II Group – Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Reading</td>
<td>a. Sports (e.g. tennis, bowling, golf etc.)</td>
</tr>
<tr>
<td>b. Writing</td>
<td>b. Games (e.g. Mah Jong, bridge, poker, etc.)</td>
</tr>
<tr>
<td>c. Photography</td>
<td>c. “Eating out”.</td>
</tr>
<tr>
<td>d. Art (e.g. painting, drawing, and sculpting)</td>
<td>d. Sex (i.e., with one’s own partner)</td>
</tr>
<tr>
<td>e. Playing a musical instrument</td>
<td>e. Affairs (Note: can do more harm than good)</td>
</tr>
<tr>
<td>f. Solitaire</td>
<td>f. Sex Orgies (Note: not to be recommended)</td>
</tr>
<tr>
<td>g. Collecting (e.g. stamps, coins, antiques, etc.)</td>
<td>g. vacations</td>
</tr>
<tr>
<td>h. Running</td>
<td></td>
</tr>
<tr>
<td>i. Hobbies (e.g. knitting, wood-carving etc.)</td>
<td></td>
</tr>
<tr>
<td>j. Sex (e.g., masturbation)</td>
<td></td>
</tr>
<tr>
<td>k. vacations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III Solo-Passive and IV. Group – Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Television</td>
</tr>
<tr>
<td>b. Movies</td>
</tr>
<tr>
<td>c. Shows and Theatre</td>
</tr>
<tr>
<td>d. Listening to music (e.g. radio, records, tapes etc.)</td>
</tr>
</tbody>
</table>
e. Concerts, opera
f. Sporting events (e.g. baseball, football, basketball, hockey, etc.)
g. Vacations.

1.10 RATIONALE OF THE PROBLEM

Field of stress management has been explored in the foreign countries but in India this filed has not been dealt adequately and that is why there are very few studies available in this field. That is why the researcher found it a potential area for research.

Though there are number of factors which may be considered extremely important and which influence the academic achievement, personality make up and reasoning ability of the students, yet on the basis of personal experience as a teacher and having knowledge of child development and abnormal psychology ands also on the basis of related studies, the researcher has considered stress, sex- and locality as the main variables to be focused on to find their individual and interactional effects on the three important dependent variables i.e. academic achievement, personality traits and reasoning ability of the students.
1.11 STATEMENT OF THE PROBLEM

“Effect of Stress, Locality, and Gender on Selected Cognitive and Non- Cognitive Variables.”

1.12 OBJECTIVES OF THE STUDY

The objectives of the study are given as below:

1. To identify the students having high and normal stress prone behaviour.

2. To study the influence of academic stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

3. To study the influence of self-concept stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

4. To find out the influence of physical stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

5. To find out the influence of social stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

6. To find out the influence of financial stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.
7. To find out the influence of family stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

8. To find out the influence of vocational stress, sex, locality and their various interactions separately on reasoning ability, personality traits and academic achievement.

1.13 NEED AND SIGNIFICANCE OF THE PROBLEM

One of the most challenging problems faced by psychologists, counselors, educational administrators and teachers of to-day seems to be that of accurate prediction of psychological traits of children. This problem ahs aroused the attention of many psychologists and is assuming greater importance day by day as our society has changed drastically. Industrially and technologically also the pattern of the education and the system of society is growing more and more complex. In view of these factors, it is of vital importance of an educator to understand the dynamics and potentialities of personality traits of present day’s students, specifically the students who are stress-prone, because this can harm the child physically, socially, intellectually and emotionally. It can hamper all types of progress of the child.

It is to be borne in mind that specifically in the existing era of complex society, no person is free from stress and strain and there is no age bar. Even the school going children from pre-
primary onwards are under the influence of stress and strain. There are multiple causes of stress viz. biological, psychological and demographic in nature. Once the stress is there, it can spoil and ruin the mental health of the individual. It has a negative impact on both cognitive and non-cognitive abilities of the child. It causes damage to the personality of the child and by virtue of this child cannot become the useful member of the society.

Healthy parents and healthy teachers are always boon to the society. In the class-room situation the task of the teacher is always challenging and baffling when even one faces the heterogeneous group with multiple diversity in the traits. It is very much true that some students are under active stress and some are normal, some are adjusted, and some are maladjusted. Some are feeling secure and some are insecure, some are emotionally stable others are unstable, some are intelligent, some are average or below average. Likewise there can be many variations in physical, sociological and psychological nature. In such situations it is very important to understand to each and every child and also find out the impact of negative traits and positive traits on the development of the child. If such individuals are not taken care they may loose equilibrium of the self with environment. Simultaneously their remedial measures along with the stress management processes must be suggested; otherwise they may be victims of more ailments of drastic nature. Hence, it is
very essential to identify the children possessing stress and also to see the effect of stress on psychological and sociological make-up of the child.

It is imperative that knowledge of the personality traits of different types of students is very much helpful in guiding students in a better way. Besides providing basic material for personal counseling and educational and vocational guidance to individuals, a knowledge of group difference may be useful in providing proper milieu, at home in the learning situations to a particular group in order to improve their healthy personality traits in the area in which they are found deficient. The knowledge of the personality traits of different dichotomies is always helpful to teachers, educational administrators in their sympathetic understanding of the fact that unruly behaviour of the students of certain categories is mainly rooted in their unhealthy personality traits and it needs proper psychological treatment rather than punitive measures.

The preceding discussions give us clear picture that the students whose personality traits are not studied at proper time, become a great source of wastage. Many of the first rate brains among students are allowed to a trophy at all levels of education. Humanity cannot afford to waste this human talent and country’s brain resources. Society cannot afford that the students remain under strain and stress which has dire consequences in development of the individual
personalities and on their reasoning ability and academic achievement. Therefore, cognitive and non-cognitive variables in relation to stress must be studied at all levels so that some concrete remedial measures can be initiated to safeguard the interest of such students.

There are studies on the variables of academic achievement, personality traits in India but almost negligible in the field of stress and its effects on the academic achievement personality traits and reasoning ability of the students. Therefore, this filed needs to be explored further.

It is expected that present study will highlights the points –how stress prone behaviour, sex-differences and differences due to locality affect the students in their academic achievement personality traits and reasoning ability and what are their interactional effect on theses dependent variables so that suitable measures can be taken by parents, guidance workers, counsellers, teachers, principals curriculum framers and government for the benefit of the students.

Findings of the present study will certainly add to the already existing quantum of knowledge in the field of psychology as results will enrich the subject matter for stress management. Results will also assist in properly planning, organizing, guiding teaching learning process and making it more rewarding.
1.14 ORGANIZATION OF RESEARCH REPORT

Introduction along with objectives, rationale and need and significance have been given in Chapter I, while the chapter II deals with the conceptual framework of the independent and dependent variables, in chapter III Review of related literature and hypotheses have been presented, while chapter IV is devoted for method and procedure employed in the present study. Chapter V deals with Analysis of data, results and discussion while in chapter VI Summary, findings and suggestions for further research have been presented. Bibliography and Appendices have been given at the end of the Research Report.