



Chapter 1 Introduction

1.0 Education of persons

Aim of education should be to convert the mind into a living fountain not a reservoir.

- John Mason -

Education today is increasingly considered to be a process of overall development of individuals. It needs to address both the cognitive as well as the affective aspects of learning. Fields of knowledge do not exist separately from each other, nor do they exist separately from the people who study them. Knowledge and learning – the processes by which people create knowledge – are living systems made up of often – invisible networks and inter relationships. The ideology of nature of knowledge and knowing, the teachers’ and learners’ underlying beliefs, values and emotions and their social interactions in learning environments are all part of that living system, and all affect the ability of individuals and groups to learn (Senge, P. et al.,2000).

From the time of Aristotle education was conceived as the ‘perfect development of man for maximum service to the state’. He considered education to be a way of social, moral, political and intellectual development. Educators like Montessori, Tagore, J. Krishnamurthy thought of education as an integrated way for the development of the mind and body. Despite the fact that such an integrated way of education has been accepted and encouraged by so many illustrious educators, it has not yet been absorbed in our schooling system.

Ferguson had said, "In education old models of teaching and learning are being replaced with what is known as humanistic education. It is based on the new image of man. In a way, it is a return to the idea of education as development of the whole person, but a return transformed by the new vision of man. Therefore, humanistic education represents today, an idea whose time has come." (Ferguson,1980 and Purkey,1984)

Humanistic education emphasizes the human view, based on the prime reality of human experiences itself (Maslow, 1967). The largest groups of human abilities that concern humanistic educators are the human relations skills. This shows in the desire to help people, get along with others more skillfully and happily while getting along with themselves.

The pervasive emphasis on the cognitive domain and its separation from the affective domain poses a threat to society, in that educational institutions may produce detached individuals, uncommitted to humanitarian ends (Weinstein and Fantini, 1971).

A major thrust of humanistic education is the recognition of the importance of emotions in education. Humanistic education stresses the benefits of education of emotions. As Buchen (Buchen, 1974) points out, one of the cherished goals of humanistic tradition is the notion of the 'whole' man. Hence, it attempts to bring together cognitive learning and affective, experiential learning (Lyons 1971, Huckins and Bernard, 1974). Since thinking and feeling almost always accompany each other, neglecting the proper education of feelings is stunting one of our greatest potentials.

Humanistic educators also see other human abilities that we under teach in schools- ability to perceive, feel, sense, wonder, intuit, fantasize, imagine and experience (Roberts, 1975).

Some fundamental concepts of humanistic education are summarized below (Lindzey 1978, Huckins and Bernard 1974):

- Man is innately good.
- He has an intrinsic urge towards growth and self actualization.
- He is free and responsible and creates himself by his choices.
- Awareness is basic to choice making.
- People behave in a holistic manner- cognitively, affectively and socially.
- Each individual determines his own meaning.
- He has capacities for evaluative judgements leading to balanced, realistic and self and other enhancing behavior.
- Person is unique and brings in a unique combination of qualities.
- He learns and grows and becomes what he is potentially only in interactions with others.
- Emotions are recognized as part of the person and as important as his intellect.

While it is established that learning occurs in the whole body, the traditional classroom is based on the assumption that learning is a purely intellectual affair. Only the head is required; the rest of the body can check out at the door. The result is a passive rather than an active learning environment. Book learning and lectures reign supreme. This over intellectualized notion of learning also accounts for why schooling

emphasizes mathematical and verbal development over other types. This is tragic, because, as Howard Gardener and others have shown that there is a spectrum of intelligences involved in learning, including musical, kinesthetic, spatial, interpersonal and emotional capabilities as well as abstract symbolic reasoning of the intellect. Each person has different talents and propensities but we all have the potential to embrace the full spectrum of intelligences in our personal development, and the more modalities of learning we engage, the broader and deeper is our growth (Senge,P. et al., 2000).

A few attempts have been made to include these principles into our education system. The aims laid down by The National Curriculum Framework (NCERT 2005) mentions a few of these principles. They are:

- A commitment to democratic values of equality, justice, freedom, concern for others' well being, secularism, respect for human dignity and rights.
- Independence of thought and action pointing to a capacity of carefully considered, value based decision making, independently and collectively.
- Sensitivity to well being of others and their feelings, together with knowledge and understanding of the world should form the basis of a rational commitment to values.
- Learning to learn and willingness to unlearn and relearn are important as means of responding to new situations in a flexible and creative manner.

The question is how much of this is actually seen in class rooms and how much of it is still only on paper.

In spite of research pointing out the vital importance of developing emotional competence, most educational institutions seek help for students in response to emotional problems that have already occurred. What we need is an ongoing program that prevents such problems from occurring; a program that is meant for all the students at all levels and not just 'problem children' identified by parents or teachers. Such emotional competence will help children to respond to stressors and cope with them, decrease at – risk or anti- social behavior. After all, all the students, at some point, will have to resist impulses, to assess situations, evaluate risks and choose the best possible way.

Our schools and education system have to recognize the importance of emotions in learning and over all growth and development of the child. We have to look beyond making children good at memorizing facts and making sure they get high grades in exams.

To be able to incorporate the humanistic aspect in education, a deeper understanding of emotions and their role in life, is imperative.

1.1 Emotion

Descend into thine own heart and there read what thou art and who thou shalt be.

- Jemima Wilkinson -

The Oxford dictionary defines emotions as “any agitation or disturbance of mind, feeling, passion; any vehement or excited mental state.” Daniel Goleman (Goleman, 1995) takes emotion to refer to “a feeling and its distinctive thoughts, psychological and biological states,

and range of propensities to act.” There are hundreds of emotions, along with their blends, variations, mutations and nuances and many more subtleties than we have words for.

Richard Lazarus (Lazarus, 1994) says, ” Emotions are complex reactions that engage both our minds and our bodies. They include a subjective mental state, such as anger, love etc.; an impulse to act such as fleeing or attacking, whether or not it is expressed overtly; and profound changes in the body, such as increased heart rate or blood pressure. Some of these bodily changes prepare for and sustain coping actions and others - such as posture, gesture and facial expression – communicate to others what we are feeling or want others to believe we are feeling.

Scientists have had lots to say about what emotions are. For some, they are bodily responses that evolved as part of the struggle to survive. For others, emotions are mental states that result when bodily responses are ‘sensed’ by the brain. Another view is that the bodily responses are peripheral to an emotion, with the important stuff happening completely within the brain. A popular view today is that emotions are thoughts about situations in which people find themselves. Another notion is that emotions are social constructions, things that happen between rather than within individuals.

We are under constant emotional trauma, most of it from everyday difficulties of living, some of it from betrayal and disappointment. Numbing is a natural response to trauma. By temporarily sparing us pain of a wound it gives us a chance to escape or to make life saving decisions

we could not make if we were blinded by agony or horror. Physical numbness that follows physical hurt is limited and provides a minute or two of anesthesia before pain comes flooding in. but the numbness that comes out of emotional hurt is more permanent. We have emotional traumas so often that we fight them off by freezing up emotionally. We survive psychological trauma by building psychological walls around us that insulate us from having disturbing thoughts, flashbacks or nightmares. This may sound good but it can be very problematic. These walls separate us from pain but they also separate us from our deepest feelings. What keeps us from pain can also keep us away from feeling love and joy. If these walls collapse occasionally, we can be flooded by chaotic and destructively strong emotions. Many of us live in a state of semi permanent emotional shock continually reinforced by recurring painful experiences and have lost touch with our feelings. We forget traumatic incidents, don't remember how we felt and may not have someone who will listen to us patiently and sympathetically. Consequently we go through life emotionally anesthetized, with most feelings locked up in our hearts.

As we adapt to these circumstances, we are forced to walk around with thwarted passions and wounded feelings locked inside of us, not knowing what to do or who to talk to. We don't speak about our feeling, we don't understand them and we understand the feelings of others even less. When in doubt, we hide our emotions, lie about them or pretend not to feel them. We grow accustomed to operating without regard to or even in spite of, our emotional selves.

Most of us sense that there should be more to life and we hunger for the intimacy of deeper feelings. We probably realize that connection with others, to be understood by others, to understand others, loving, crying, being happy, are rich and valuable experiences. This may be the reason why people seek indirect, vicarious ways of experiencing emotions. We fall in love with people we know are unattainable, go to action, horror or romantic movies, take drugs etc. These provide a taste of what we long without the risk of real participation.

In Transactional analysis Eric Berne (Berne, 1964) talked about 'rackets'. Racket is a stereotyped feeling which a person uses to get recognition or strokes. At an early age children learn that they are allowed to have certain feelings and not others. For example, a child may be told, "don't feel scared" or "don't feel angry". And they may be encouraged to be 'cheerful', 'energetic' etc. They will thus learn to have the acceptable feelings as it gets them approval or strokes. Strokes are defined as social recognition by others in the environment. Everyone needs strokes and children will learn to substitute the unacceptable feelings by ones that are approved, in order to get strokes. For example, a child may realize that her mother comforts her when she is sad but scolds her if she expresses anger. This child may learn to feel sad when she is actually angry, because she knows that it will get her mother's attention and love.

Everyone has the power to generate feelings within him or herself and thus any feeling generated by a person is genuine. However certain feelings are associated with appropriate experiences. For example, happiness is associated with experiences of fun whereas sadness in such

a time would not be appropriate. We can distinguish the counterfeit feelings from genuine ones which are appropriate to a situation. Taking the above example, if the child has learnt that the best way to get her mother's attention is to feel sad, it is a sadness racket. Even in grown up life, when she faces obstacles and feels frustrated or angry, she might substitute her feelings of anger with that of sadness. The feeling of sadness for her will be real and in response to an early decision to feel sad and not angry. In this sense, sadness would be a substitute feeling, and not a real one.

Thus, it can be concluded that emotions derive from instincts and give rise to feelings. They are a source of energy and information. What we do with this energy can be good or bad, right or wrong, but the feelings by themselves are not good or bad, neither right nor wrong. Without them we cannot function. As Jeanne Segal (Segal, 2000) says, 'Feelings are the most powerful resource we have. Emotions are a life line to self awareness and self preservation that deeply connect us to ourselves and others, to nature and the cosmos. Emotions inform us about things that are of utmost importance to us – the people, values, activities and needs that lend us motivation, self control, zeal and persistence.'

Even though this view has been supported by a vast body of research, there have been some schools of thought that have felt that cognition and affect are entirely separate of the other.

1.1.1 Separation of reason and passion

It is with the heart that one sees rightly; what is essential is invisible to the eye.

- Antoine de Saint Exupery -

Since ancient times, humans have found it compelling to separate reason from passion, thinking from feeling, cognition from emotion. These contrasting aspects of the mind have been viewed as waging a battle to gain control over the human psyche. Plato, an ancient Greek philosopher, said, that passions and desires and fears make it impossible for us to think. For him and many others even today, emotions are like wild horses that have to be reigned in by the intellect, which is thought of as a charioteer. Christian theology has also equated emotions with sins, temptation to resist by reason and willpower for immortal souls to enter God's kingdom. Even our legal system treats premeditated transgression differently from 'crimes of passion'.

Looking at the various developments in psychology during the century gives a clearer picture of reason – passion separation. Through much of the first century, psychology was dominated by behaviorists who believed all subjective states like perceptions, memories, and emotions as inappropriate topics for psychology. For them psychology was a study of observable facts, and objectively measurable behavior.

By mid century, the stronghold of behaviorists began to weaken and cognitive sciences came into existence and they brought in the notion of mind as an information processing device. One of their most important conceptual developments was a philosophical position called

functionalism. This theory proposes that mental functions, like reasoning, thinking etc. are functional rather than physical states. For example when a person and a computer add 2 and 5 get 7, the similar outcome cannot be based on similar make-up, but instead must be due to a functional equivalence of the processes involved. As a result, it is possible to study mental processes using computer simulations. Minds might, in principle, exist without bodies. Thus, the field was successful in its mission of understanding unconscious information processing but left out the entire field of conscious content that includes emotions.

The long tradition of separating passion from emotion has given rise to 'cognitive sciences', which is also described as the 'new science of mind'. However cognitive science is the science of only a part of the mind, the part having to do with thinking, reasoning and intellect. It leaves emotions out. And minds without emotions will make a human devoid of feelings – of desire, of pleasure, of fear, of pain.

Today emotion and cognition are best thought of as separate but interacting mental functions mediated by separate but interacting brain systems. This has come about by the understanding of how emotion is organized in the brain and how the brain has separate areas for dealing with cognition and emotion.

There have been many studies and experiments conducted to understand the occurrence of emotions and the way the human body and mind respond to it.

1.1.2 Historical background of understanding of emotions

One of the major goals of emotion research has been to identify the processes that intervene between the occurrence of an emotion-arousing stimulus and the conscious emotion it elicits. A few theories of emotions have been discussed and elaborated to understand the evolving concepts.

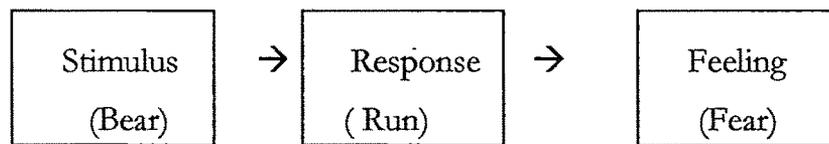


Fig . 1.1 Figural representation of theory of emotion by William James (1884)

In 1884, William James (James, 1884) published an article titled “What is an emotion?” This was a very big move, not because he answered the question but because of the way he phrased his response. He thought of emotion as a sequence of events that starts with the occurrence of an arousing stimulus and ends with a passionate feeling, a conscious emotional experience. According to him, emotions feel different from other states of mind because they are accompanied by bodily responses, like, increased heart rate, sweaty palms etc. He said that different emotions feel different because each is accompanied by a different bodily response. The feedback from bodily responses determines feelings. He gave the example of a man running away when he sees a bear. According to him, the man feels afraid because he runs at the sight of a bear and the bodily changes that occur at that point.

This theory was questioned in 1920 by Walter Cannon (Cannon, 1920), a physiologist who was researching bodily responses that occur in states of hunger and states of intense emotion. He proposed the concept of an

“emergency reaction” or “fight or flight response”, a response by the human body when the situation demands exertion of physical energy. He said that the emergency response is an adaptive response that occurs in anticipation of, and in service of energy expenditure, as is the case with emotional states. He believed this response to be initiated by the Sympathetic nervous system, a division of Autonomic nervous system. According to him the answer to emotions lay completely in the brain and the brain did not require reading bodily response as James had said.

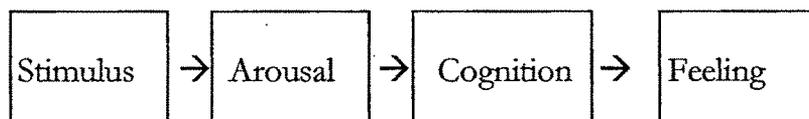


Fig.1.2 Theory of Emotion proposed by Schachter,S and Singer,J (1960)

In early 1960, Stanley Schachter and Jerome Singer (Schachter and Singer, 1960), social psychologists at Columbia University revised the issue of where feelings come from. They started with the assumption that physiological responses in emotion (sweaty palm, muscle tension etc.) inform our brain that a state of heightened arousal exists, even though it is not able to signal exactly what is happening. Once we detect bodily arousal we are motivated to examine our circumstances. On the basis of our cognitive assessment of the situation, we then label the arousal. The labeling of arousal is what determines the emotion we feel. Cognitions thus fill the gap between bodily feedback and feeling.

The theory proposed by Scachter and Singer had certain gaps. It explained how we deal with bodily responses once they occur but did not give an account of what generates them in the first place.

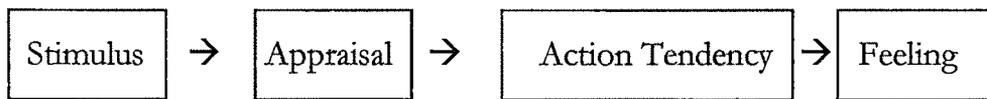


Fig. 1.3 The theory given by Arnold, M (1960)

The appraisal theory crystallized by Magda Arnold (Arnold, 1960) filled this gap. She argued that in order for a stimulus to produce an emotional response or an emotional feeling, the brain has to first appraise the significance of the stimulus. Appraisals then lead to action tendencies. The felt tendency to move towards desirable objects and situations and away from undesirable ones is what accounts for conscious feelings in this model. Although appraisals can be either conscious or unconscious, we have conscious access to the appraisal processes after the fact.

Many other researchers also adopted the appraisal theory but this theory took two wrong turns. One, they based their understanding of appraisal processes largely on self reports and introspective verbal reports and often we have no idea about why we feel the way we do. Secondly, they overemphasized the contribution of cognitive processes in emotion, thereby diminishing the distinction between cognition and emotion.

In 1980, Robert Zajonc (1980), a social psychologist published a paper called “Feeling and thinking: preferences need no inferences” and propounded the ‘Affective primacy theory’. He argued on the basis of logic and experiments that preferences or simple emotional reactions could be formed without any conscious registration of the stimuli. This showed that emotion has primacy over (can exist before) and is independent of (can exist without) cognition.

Zajonc was not the first to be interested in emotional unconscious. The new look movement had challenged the behaviorist theory of stimulus → response view of perception. The new look argued that perceptions are constructions that integrate sensory information about physical stimuli with internal factors such as needs, goals, attitudes and emotions. In their experiments, they showed that subjects could have Autonomic Nervous System (ANS) responses to emotionally charged stimulus in the absence of conscious awareness of stimuli. Later, the unconscious perception studies were criticized and dismissed.

Charles Darwin (1859) had proposed a theory of Natural selection, which said that the traits that were useful to the survival of species in a particular environment became, over the long run, characteristic traits of the species. Similarly, the characteristic traits of current species exist because they contributed to the survival of distant ancestors. Because of limited food, not all individuals survive to the point of sexual maturity and procreate. The less fit get weeded out so that over time more and more of the better fit become parents and pass on their fitness to their offspring. But if the environment happens to change, and it does so constantly, then different traits become relevant to survival, and these eventually get selected for. Species that adapt in this way survive, whereas those that do not become extinct. His theory is most often thought of as an explanation of how physical features of species evolved. However, he argued that mind and behavior are also shaped by natural selection.

In *'The expression of emotions in man and animals'*, Darwin (1860) proposed that the chief expressive actions, exhibited by man and by the lower animals, are now innate or inherited, that is, have not been learnt by the individual. As evidence of emotional innateness, he noted the similarity of expressions both within and between species. In humans, Darwin was impressed with the fact that the bodily expressions, especially of the face, occurring during emotions are similar in people around the world, regardless of racial origins or cultural heritage. He pointed out that these expressions are also present in people who are born blind and have had no opportunity to see others and learn them or in very young children who have had little opportunity to learn them.

Darwin collected many instances of all sorts of bodily expression to in that are similar in different species. Although, the greatest were found between closely related species, he was able to identify similar expressions even in very dissimilar organisms. For example, body hair of many organisms- lion, pig, dog- stand erect in face of dangerous situations. Even human beings get goose bumps, a mild form of the same phenomenon.

For Darwin, the function of emotional expression is communication between individuals – they show others what emotional state one is in. They serve as the first means of communication between mother and infant; the smile of approval or frown of disapproval. We readily perceive sympathy in others by their expression, our suffering decreases and mutual good feeling strengthened. The movements of expression

give vividness and energy to spoken words. They reveal thoughts and intentions of others more truly than words, which may be falsified.

Darwin argued that although emotional expressions can sometimes be muted with willpower, they are usually involuntary actions. He pointed out how easy it was to tell the difference between a real involuntary smile and one that is feigned.

He suggested that within the general class of emotions, some have older evolutionary histories than others. He noted that fear and rage were expressed in our remote ancestors almost as they are today, in humans. Suffering, as in grief and anxiety, though, he placed closer to human beings.

Many modern theorists carry Darwin's tradition in their emphasis on a set of basic, innate emotions. In Darwin's day, universality of emotional expression across cultures was presumed from casual observation but modern researchers have gone to remote areas of the world to firmly establish the theory. On the basis of this evidence, theorists like Sylvan Tomkins (1963) proposed the existence of eight basic emotions: surprise, interest, joy, rage, fear, disgust, shame and anguish. These were said to represent innate, patterned responses that are controlled by 'hardwired' brain systems. These theorists assumed that there are also non-basic emotions that are the result of blends or mixes of the more basic ones.

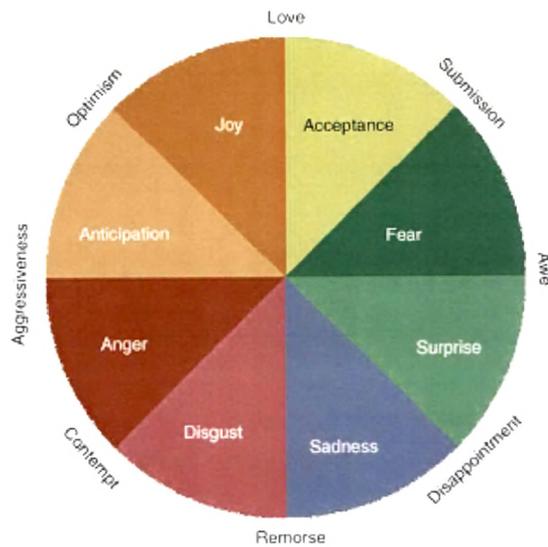


Fig. 1.4 Figural representation of Plutchik's circle of emotions (1980)

Plutchik (1980) has one of the better developed theories of emotion mixes. He has a circle of emotions, analogous to a circle of colors in which mixing of elementary colors gives new ones. Each basic emotion occupies a position on the circle. Blends involving adjacent emotions in the circle are first order dyads, blends involving emotions that are separated by one other emotion are second order dyads and so on. The further away two basic emotions are, the less likely they are to mix. And if two distant emotions mix, conflict is likely.

The mixing of basic emotions into higher order emotions is typically thought of as a cognitive operation. According to him, some, if not all, basic biological emotions are shared with lower animals but the non-basic emotions are more unique to humans.

Albert Ellis (1967) suggested a theory of personality that was based on the assumption that human beings are born with a potential for both

rational, straight thinking and irrational, crooked thinking. People have dispositions for happiness, loving and self actualization. They also have propensities for self destruction, intolerance and avoidance of actualization. Ellis asserted that individuals are not completely biologically determined animals driven by instincts. He saw the individual as unique and with the power to understand limitations, change views and values that he introjected as a child and to challenge self defeating tendencies. For him, emotions were the products of human thinking. He maintained that, “emotional disturbance, therefore, essentially consists of mistaken, illogical, unvalidatable sentences or meanings, which the disturbed individual dogmatically and unchallengingly believes, and upon which he therefore emotes or acts to his own defeat”.

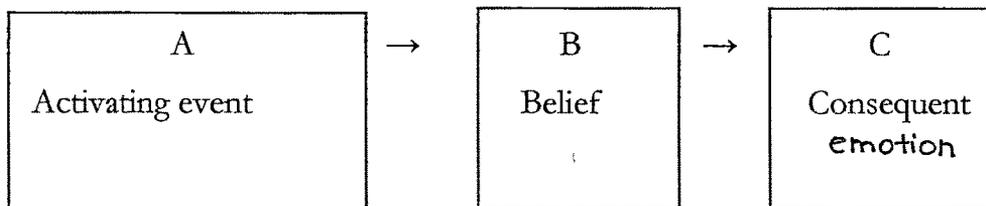


Fig.1.5 Figural representation of the A – B - C theory of personality by Albert Ellis (1967)

The A – B – C theory of personality is central to Rational Emotive Behavior Therapy suggested by Ellis. For him, A is the existence of a fact, an event or behavior or attitude of an individual. C is the emotional consequence or reaction of the individual which can be appropriate or inappropriate. A does not cause C. Instead, B, which is the person’s belief about A, causes C.

Another area that looks into why any characteristic evolves is Genetic determinism. It says that a characteristic evolves because of the representation of that characteristic in the genes of the species. But there are two different implications of genetics. On one hand, there is the way the genes maintain similar behavioral expressions of defense within a species and similar defensive functions across diverse species. This occurs because the neural system of defense is conserved in evolution. On the other hand, there is the question of how genes contribute to differences between individuals. Some are adept at detecting dangers, others are not, some are good fighters others are not etc. Differences among individuals in fearful behavior are due, at least in part, to genetic variation.

The idea of biologically primitive emotions has its own detractors too. One such approach is the social constructivist approach. These theorists argue that emotions are products of society, not biology. Cognitive processes play an important role in these theories by providing the mechanism through which the social environment is represented and interpreted on the basis of past experiences and future expectations. James Averill (1980), a major proponent of social constructivism, describes a behavior pattern called, 'being a wild pig'. The behavior is uncommon by western standards but is accepted by the Gururamba tribe of New Zealand. This gets its name from an analogy. There are no undomesticated pigs in this culture but occasionally and for unknown reasons, a domesticated one will go through a temporary phase where it will run wild. But the pig can be eventually redomesticated and returned among the villagers. In a similar vein Gururamba people can act this



way, becoming violent, aggressive, looting but rarely harming anyone. Eventually they would return to routine life and have no memory of the incident and nor would any villager remind him of it. In some instances, though, the man has to be captured and held over a smoking fire till his old self returns. The Gururamba believe that this happens when a person is bitten by a ghost. According to Averill, this is a social, not a biological or an individual condition. Westerners would be prone to think of this as psychotic, abnormal behavior, but for the Gururamba it is a way of relieving stress and maintaining community mental health.

Social constructivists can produce endless lists of ways in which emotions differ in different cultures or social situations. In an attempt to reconcile theories that emphasize similarities in facial expression across cultures and those that emphasize differences, basic emotion theorist, Paul Ekman (1982) proposed a distinction between universal emotional expressions (especially facial expressions) which are common to all cultures and other bodily movements (like emblems) that vary from culture to culture. Emblems are movements with a specific verbal meaning, such as head nodding to say yes. He says that social constructivists focus on learned cultural differences in emotional expression, while basic emotion theorists focus on unlearned, universal expressions.

Ekman claims that even basic emotional expression can be regulated by learning and culture. They can be interrupted, diminished, amplified by learned factors or masked by other emotions.

The bottom line is that our genes give us the raw material out of which to build our emotions. They specify the kind of nervous system we will have, the kinds of mental processes in which it can engage and the kind of bodily functions it can control. But the exact way in which we act, think and feel in a particular situation is determined by many other factors and is not predestined in our genes. Some, if not many, emotions, do have biological basis, but social, which is cognitive, factors are also important. Nature and nurture are partners in our emotional life. The trick is to figure out what their unique contributions are.

There has been another school of thought that has related moods / temperament of a person to his personality or body type.

1.1.3 Moods and personality

Two thousand years ago Hippocrates and a physician named Galen (Around 400 B.C) divided people into 4 temperament types. They had no understanding of science as we know today, that is no behavioral or psychological science. Their theory said each person has a preponderance of bodily fluids or humors that determined his or her emotional temperament. If blood was the major fluid, the person was said to have a sanguine or optimistic temperament. If yellow bile was the dominating fluid, the person was choleric or prone to anger. If phlegm dominated, the person was to be unexcitable and calm. If black bile was the major fluid, the person was melancholic or depressed. This theory survived until the 19th century.

In the 1920s, Ernst Kretschmer (1920), a Swiss psychiatrist, decided that physique was related to temperament. He believed that there was a connection between body type and mental disorders. He took pictures of thousands of people and speculated about their personalities. He coined the term ectomorph for thin nervous type, mesomorph for the athletic type, endomorph for the heavy and jolly type. His theories have remained a part of popular thought.

Concurrently, Carl Jung (1929), a Viennese psychiatrist, developed his famous theory of introversion and extroversion. Jung characterized introverts as inwardly focused. They were shy, reserved and rational minded. The extroverts were people of action – gregarious, ambitious and romantic. In 1929, Jung's theory inspired a fascinating paper that foresaw discoveries in brain science 50 years later.

In the 1950s, the American psychologist Stella Chess and Alexander Thomas (1950) did long term studies on children and theorized about inherited, innate temperament traits that seemed to be genetically dominant. They identified traits like activity level, approach or withdrawal tendencies, threshold of responsiveness and distractibility. Chess and Thomas went against popular belief of that time and claimed that some of what and who we are is not the result of environment but of inborn characteristics that interact with environmental forces to shape our personalities.

Since the 1960s, Hans Eysenck (1960), an English psychologist has done an enormous amount of research on introversion and extroversion and

their connection to arousal. Introversion is described as a turning inward of energy and attention to introspection and self – focusing. Extroversion is a turning outward, attending to objects, people and goals. Eysenck believes that introverts have high levels of internal, cortical or brain arousal and thus typically avoid external stimulation. Extroverts have a typically low level of arousal. He craves stimuli that excite him, increase his arousal, so he is attuned to external goals and stimuli.

It has been proven that emotions have a neurological basis. Their origin within the brain and the effect they have is one of the current topics of research in modern science.

1.1.4 Physiological /Neurological aspects of emotions

The field of neurosciences has the vast task of figuring out how the brain is organized and wired together. The human brain contains about ten billion neurons that are wired together in enormously complex ways. Although the electrical sparks within and chemical exchanges between these cells accomplish some amazing and perplexing things, the creation of our emotions stands out as one of their most amazing and perplexing feats. The brain has neurons that are responsible for passing on information to and from the brain to different body parts.

Neurons have three parts- cell body, an axon, and some dendrites. Typically information from other neurons comes into a brain cell by way of the dendrites (cell body and axon can sometimes receive inputs). Each cell receives inputs from many others. When a neuron receives inputs from many others at the same time, it will fire an action potential (a wave

of electrical charge) down the axon. Although a neuron has only one axon it branches extensively, allowing many other neurons to be influenced. When the action potential reaches the axon terminals, a chemical called a neurotransmitter, is released. The neurotransmitter diffuses from the terminal to the dendrites of adjacent neurons and contributes to the firing of action potential in these.

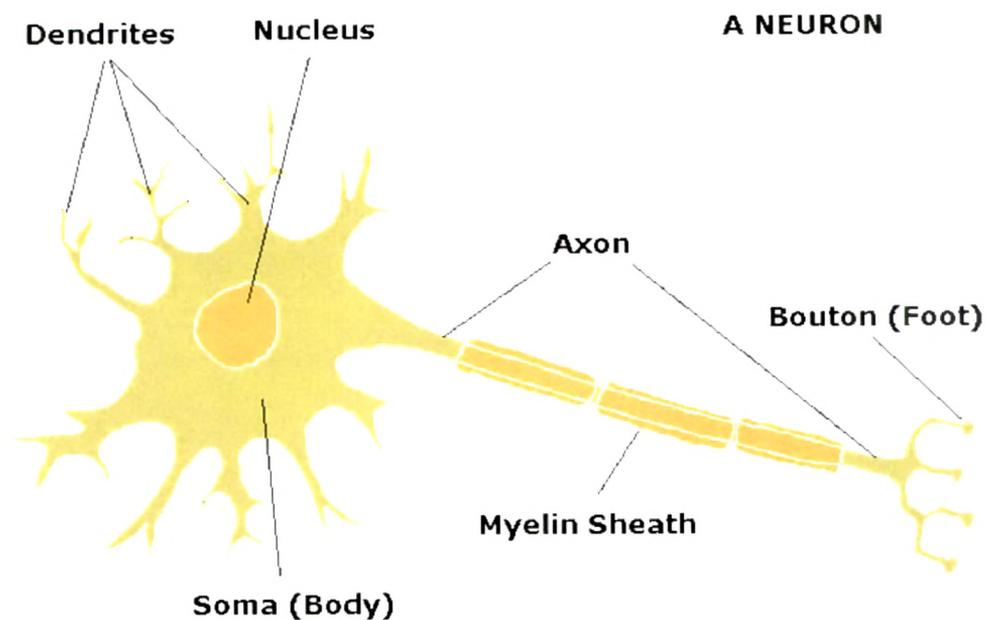


Fig. 1.6 Diagrammatic representation of a neuron

The space between the axon terminal of one neuron and its neighbor is referred to as synaptic transmission. Although trillions of connections made by billions of neurons in the brain seem to constitute a hopelessly complex web of relations, very systematic patterns of interactions exist between neurons in various brain areas.

The brain evolved over millions of years to monitor, integrate and regulate all the other organs of the body. It still functions in this way, though the brain has developed many other functions as well, including the capacity for reasoning. The brain maintains a representation of what is going on in the body. A change in the environment is immediately reflected in the brain's representation of the body state. The brain creates associations between body states and emotions and makes decisions by using these associations, sometimes but not necessarily in conjunction with reasoning.

A major goal of modern brain science is to figure out which parts of the brain are responsible for emotions. The notion that functions are localized to specific parts owes its origin to 'Phrenology'. It originated through the work of a scientist Franz Joseph Gall (1800). He suggested that mind has a lot of faculties like sensing, feeling etc. He went further to say that each faculty had its own organ in the brain. Unfortunately he and his followers took a step further and said that more developed faculties had larger brain organs and they protruded more through the skull. Thus it was possible to characterize personality traits and intellectual abilities by feeling the bumps on one's head. Their concepts were criticized and their theory discarded. But it was Gall's insight about localization of various functions that later won out.

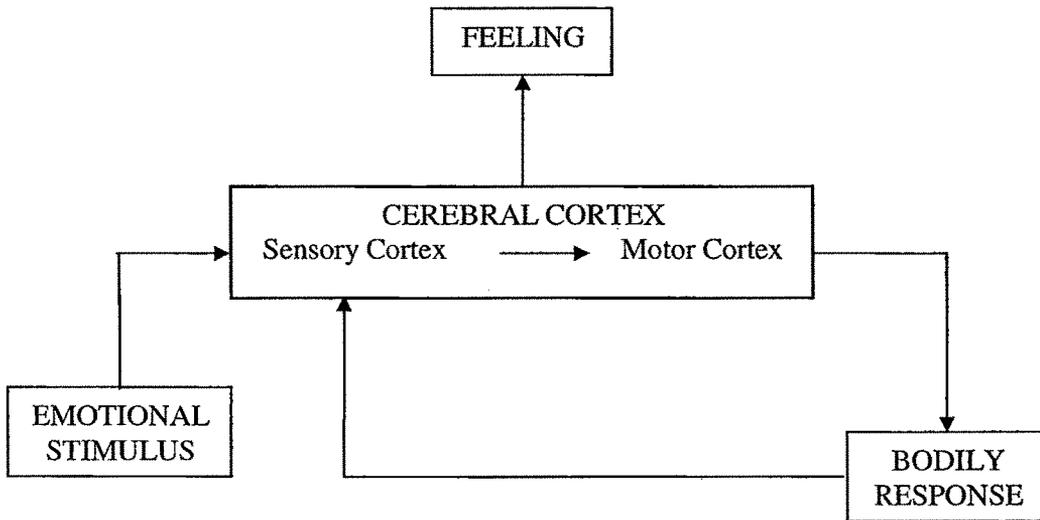


Fig.1.7 The figural representation of brain pathway of emotions, as suggested by William James (1884)

As we saw earlier William James (1884) had proposed a theory for the brain pathway of emotions. He said that external stimulus, such as the sight of a bear, is perceived by the sensory areas of the cerebral cortex. Through the motor cortex, responses, such as running away, are controlled. Sensations produced by the responses are fed back to the cerebral cortex, where they are perceived. The perception of bodily sensations associated with the emotional response is what gives the peculiar quality to the emotions in James' theory.

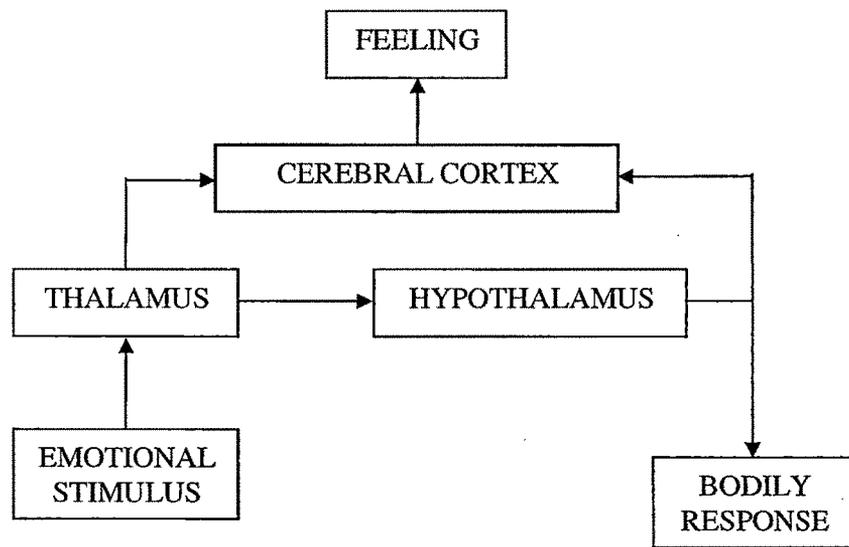


Fig.1.8 Figural representation of the brain pathway that challenged the works of William James (Cannon and Bard, 1920)

Walter Cannon and Philip Bard (1920) carried out many experiments and proposed a theory challenging James. They believed that external stimuli is processed by the thalamus and then routed to the cerebral cortex and the hypothalamus. The hypothalamus, in turn, sent messages to both bodily muscles and organs and the cortex. The interaction of messages in the cortex about what the stimulus is and about its emotional significance results in the conscious experience of emotions. Emotional responses and feelings occur in parallel in this theory.

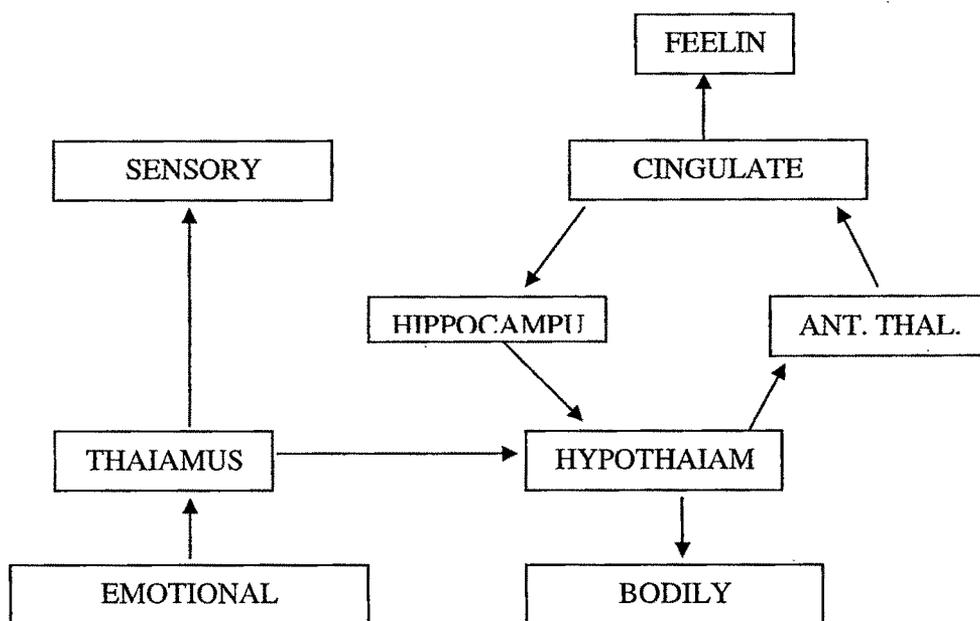


Fig.1.9 The figural representation of brain pathway as suggested by James Papez(1937)

In 1937, James Papez (1937), an anatomist proposed one of the most influential theories of the emotional brain. He believed that sensory messages reaching the thalamus are directed to both the cerebral cortex and the hypothalamus; the outputs of hypothalamus to the control of body control emotional responses and the outputs from the cortex gives rise to emotional feelings. The paths to the cortex were called the ‘stream of thinking’ and the ones to the hypothalamus ‘stream of feeling’. He was more specific than Cannon and Bard about how hypothalamus and cortex communicate. He proposed a series of connections from the hypothalamus to the anterior thalamus to the cingulated cortex. Emotional experiences occur when cingulated cortex integrates signals from sensory cortex and the hypothalamus. Outputs

from the cingulate cortex to the hippocampus and then the hypothalamus allow thoughts occurring in the cerebral cortex to control emotional responses.

Research on neural basis of emotion was interrupted by World war 2 but it picked up again in 1949, when Paul MacLean (1949) revived and expanded the Papez theory. Drawing on the works of Cannon and Papez, MacLean noted the importance of the hypothalamus in emotional expression and the importance of cerebral cortex in emotional experience. He sought to identify ways in which these regions might communicate and thereby allow the affective qualities of experience to act on autonomic control system in generation of emotional responses. He believed that the capacity to appreciate various affective qualities of experience and to differentiate them into feeling states required the cerebral cortex. At the same time the newly developed part of the brain, the neo-cortex, was known for its lack of significant connections with the hypothalamus.

MacLean's basic idea was that in primitive animals the visceral brain was the highest center available for coordinating behavior, since the neo cortex had not yet developed. In these creatures the visceral brain took care of the instinctual behavior and basic drives underlying the survival of the species. With the emergence of neo-cortex in mammals, capacity for higher forms of psychological functions, like thinking and reasoning began to emerge and reached its zenith in man. But even man, the visceral brain essentially remains unchanged and is involved in primitive functions it used to carry out in our ancestors.

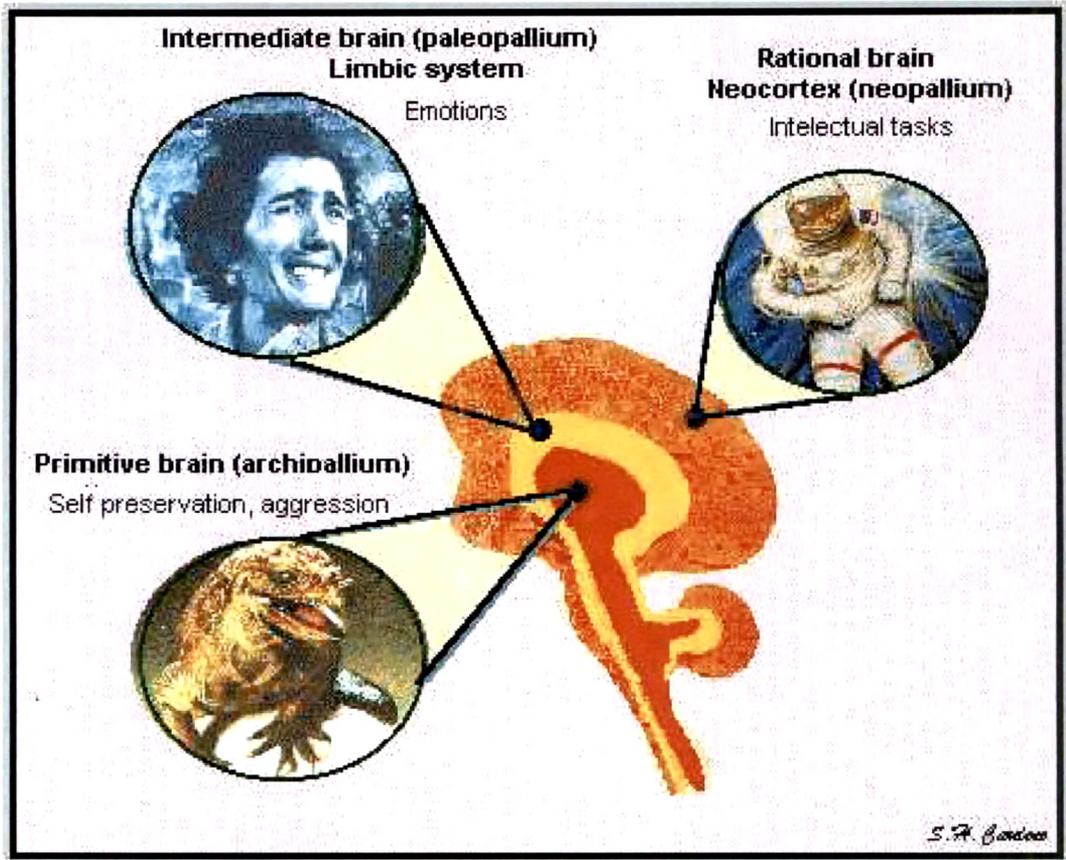


Fig. 1.10 Diagrammatic representation of the Triune Brain Theory proposed by Paul McLean (1949)

Thus, emerged the triune brain theory. The forebrain, according to MacLean (1949) has gone through three stages of evolution: reptilian, paleo-mammalian and neo-mammalian. He described these three, as being different in chemistry and structure. Each has its own special kind of intelligence, memory, sense of time and space, motor and other functions. In humans, other primates and other advanced mammals, all

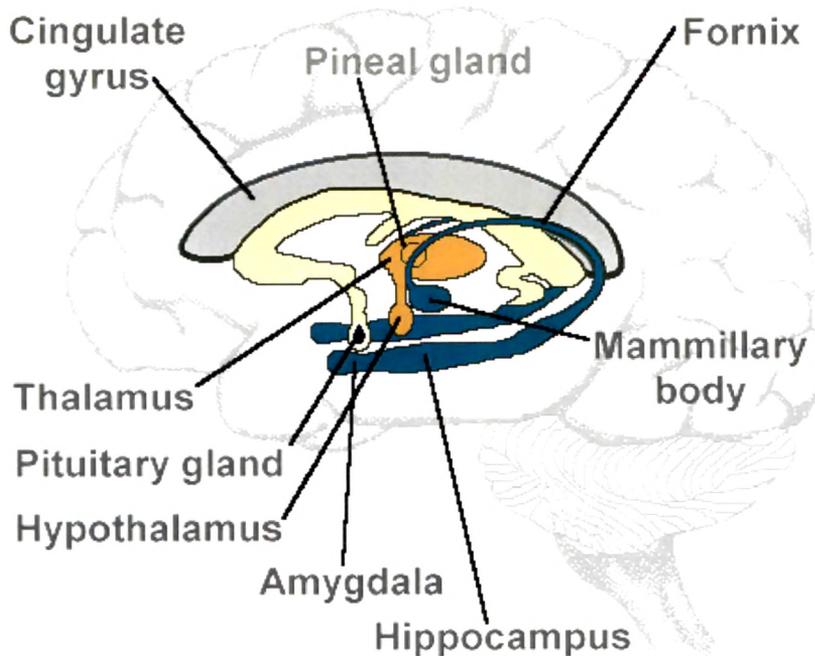
three brains exist. Lower mammals lack the neo-mammalian brain but have the other two.

In modern research, to understand and study these neurons and their systems of communication during emotional behavior, they need to be studied during the process of an emotional reaction. Using fear conditioning it has been possible to isolate from these neurons, those that are involved. Fear conditioning is the way in which meaningless stimuli are turned into warning signs, cues that signal potentially dangerous situations on the basis of past experiences with similar situations. For example, if your neighbor's dog bites you, you will probably be wary every time you walk past his property. His house and yard as well as the sight and sound of the dog, will become emotional stimuli for you because of their association with the earlier unpleasant incident.

Fear conditioning is an evolutionarily old solution to the problem of acquiring and storing information about harmful or potentially harmful stimuli and situations. This has been studied in several invertebrate and vertebrate species. Within the vertebrates, the behavioral expressions of fear conditioning and its neural basis appears very similar in all species that have been examined.

In fear conditioning done in labs, an unconditioned stimulus, like a brief mild shock is delivered at the end of the conditioned stimulus, which is usually a tone or light. After a few pairings, the conditioned stimulus acquires the capacity to elicit a wide variety of bodily responses. Similar responses occur in natural dangers that are innately programmed into our brain. When the conditioned fear stimulus occurs, the subject typically stops all movement and 'freezes'. Many predators respond to movement and withholding movement is often the best thing to do when danger is near. Danger can also be thought of as preparatory to rapid escape when the coast clears, or to defensive fighting when there is no chance to escape. Since muscle contractions that underlie freezing require metabolic energy, blood has to be sent to these muscles. The autonomic nervous system is strongly activated by conditioned fear stimulus, producing a variety of cardiovascular and other visceral responses.

Additionally stress hormones are released into the blood stream to help the body cope with the threatening situation. Reactivity to pain is suppressed and reflexes are potentiated, allowing quicker, more efficient reactions to stimuli. These responses are part of the body's overall adaptive reaction to danger.



The Limbic System

Fig. 1.11 A diagrammatic representation of the Limbic system

Much of the earlier work on the emotional brain had started in the limbic system. The work showed that lesions in the limbic areas can interfere with emotional behaviors and stimulation of limbic areas can elicit emotional responses. Joseph LeDoux (1996) used a different approach to study fear conditioning. He started at the beginning, at the point where the conditioned stimulus enters the brain and tried to trace the pathways forward to the final destination that controls the conditioned fear responses. He started by damaging the highest part of the auditory pathway, the auditory cortex. It had no effect at all on the conditioning of freezing or the blood pressure responses. Then he lesioned the next lower station, the auditory thalamus and this

completely prevented fear conditioning. So did the lesions to the next lower stations. This meant that auditory stimulus has to rise through the auditory pathway and don't necessarily have to reach the cortex. This was surprising as traditionally cortex is viewed as the supreme power over other processing structures. The lower structures are supposed to pass the information on to the cortex. But here the auditory stimulus was not going from the thalamus to the cortex.

On further research he found that if the auditory thalamus was disconnected from the amygdala, the fear conditioning did not take place. The amygdala is a small region in the forebrain and has long been thought of, as being responsible for emotional behavior. The discovery of a pathway that could transmit information directly to the amygdala from the thalamus suggested how conditioned fear stimulus could elicit fear responses without the aid of the cortex. The direct thalamic input to the amygdala allowed the cortex to be bypassed.

These findings match with those of Bruce Kapp (1998), who had studied a region of the amygdala. He had proposed that this region might be a link in the neural system through which the autonomic responses elicited by a conditioned fear stimulus are expressed. He went on to show that stimulation of the central amygdala produced heart rate and other autonomic responses. He proposed that central amygdala might not just be involved in the control of autonomic responses, but might be a part of the general-purpose defense response control network.

The fact that emotional learning can be mediated by pathways that bypass the neocortex is intriguing as it suggests that emotional responses can occur without the involvement of the higher processing systems of the brain, systems believed to be involved in thinking, reasoning and consciousness.

Till now it was clear that when a simple sound was paired with shock, the cortex was not required for the fear conditioning. Later experiments were conducted to see what happens if the animal gets two tones, one paired with shock and the other is not. Neil Schneidermann and McCabe (1992) looked at this question. They found that with training the rabbits would express increased heart rate responses to the sound that was paired with shock. But when the auditory cortex was lesioned, this capacity was lost. Lesions in the cortex did not stop fear conditioning; instead, the animal started showing the same increased heart rate response to both the sounds. This essentially means that the neurons in the cortex are very particular and react to only certain stimuli whereas the ones in the thalamus respond to a much wider range of stimuli.

Although the thalamic system, unlike the cortex, cannot make fine distinctions, it has an important advantage over the cortical input pathway to the amygdala. That advantage is time. The direct pathway from the thalamus to the amygdala is a shorter and thus a faster transmission route than the one that goes from the thalamus to the cortex and then to the amygdala. However because the shorter pathway bypasses the cortex, it is unable to benefit from cortical processing. As a

result, it can provide the amygdale with a crude representation of the stimulus. The direct short pathway allows us to respond to potentially dangerous stimuli before we know fully what the stimulus is. This can be very useful in dangerous situations but its utility requires that the cortical pathway be able to override the direct pathway.

Consider walking in the woods. A crackling sound occurs. It will go straight to the amygdale through the thalamus. The sound will also go to the cortex which will recognize it as a dry twig or a rattle snake. But by the time the cortex figures this out, the amygdale is already starting to defend against the snake. The information from the thalamus is unfiltered and biased towards evoking responses. The job of the cortex is to stop inappropriate responses rather than make appropriate ones. In the present example, if it really was a snake, the amygdale prepared the body for the response required. If not, one will overreact to a dry twig snapping under weight. From the point of view of survival, the cost of treating a stick as a snake is less than that of treating a snake as a stick.

Consider another example. You are walking down a road and you notice someone running towards you. The person reaches you, hits you on the head and takes away your money. The next time someone runs towards you, chances are that a set of fear responses will be set into play. Your heart rate will go up, palms will become sweaty, stress hormones will begin to flow through the blood stream. But supposing no one runs towards you but you have to cross the street where you were earlier mugged. Your body, may still go through the same reactions. The body will also react to the context (the street) of the earlier situation and not

just the immediate stimulus (the man running). This is called contextual conditioning. The damage of the amygdala would also interfere with contextual conditioning, just as it did with fear conditioning.

The amygdala is then like the hub of inputs from lower regions like the thalamus and also the higher level information from the cortex. Through such connections, the amygdala is able to process the emotional significance of individual stimuli and also complex situations. It is, in essence, involved in the appraisal of emotional meaning.

By way of the amygdala the brain is programmed to detect danger, both those that were routinely experienced by our ancestors and also those that were learned by each of us as individuals, and to produce protective responses that are most effective for the particular person. Prepackaged responses have been shaped by evolution and occur involuntarily, as Darwin pointed out. Cognition also contributes to emotions by giving the ability to make decisions about what kind of action should occur next. The reason that cognition is so useful is that it allows the shift from 'reaction' to 'action' (Darwin, 1860).

As seen above, research all point to the fact that emotions have a neurological basis and are there for a reason. We need to be able to understand their importance and harness the energy and potential they have. Emotional literacy can help individuals to utilize emotions effectively.

1.2 Emotional intelligence

Anyone can become angry – that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way – this is not easy.

- Aristotle, The Nicomachean Ethics

Mayer and Salovey (1990) were the first to define emotional intelligence, calling it 'the ability to monitor one's own feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action. It is the ability to accurately appraise and express emotion; the ability to access and /or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth'.

Paul Heim (1990) offers a simpler definition: 'Emotional intelligence is the ability to know what feels good, what feels bad, and how to get from bad to good.'

Harry Stack Sullivan (1947) wrote that human beings have a biological drive to develop and establish interpersonal relationships. The way in which we relate to human beings and form relationships is developed mostly during childhood. Although our attachment style tends to persist into adulthood, it can be modified positively or negatively through our interactions with other people.

Gardener (1993) gave definitions of personal intelligences. Interpersonal intelligence is the ability to understand other people, what motivates them, how they work, how to work co-operatively with them. Successful sales people, politicians, teachers, clinicians etc. are likely to have a high degree of this intelligence. Intrapersonal intelligence is a co relative ability, turned inward. It is a capacity to form an accurate, veridical model of oneself and to be able to use that model to operate effectively in life.

E.L.Thorndike (1920), was an eminent psychologist who was influential in popularizing I.Q in the 1920s. In a Harper's magazine article he proposed that one aspect of emotional intelligence is, 'social intelligence which is the ability to understand others and act wisely in human relations'. This according to Thorndike was an important aspect of a person's I.Q.

Daniel Goleman (1995), prefers to describe it as, 'The capacity for recognizing our own feelings, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.' He contrasts I.Q and E.I- 'The intellect is based solely on the workings of the neo cortex, the more recently evolved layers at the top of the brain. The emotional centers are lower in the brain, in the more ancient sub cortex; Emotional intelligence involves these emotional centers at work, in concert with the intellectual centers'.

Doctors have related emotional health and its impact to physical health for a very long time now. The discovery that certain molecules transmit

signals between the nervous and immune systems has only reaffirmed this belief. People, who are chronically anxious, depressed or who are prone to fly off the handle, are more likely to suffer strokes and heart disease than people who are emotionally stable.

Emotional stress increases muscle tension that leads to teeth grinding, tension head aches and other kinds of muscle pain. It can cause blood vessel spasms in the brain leading to migraine head aches. Other health problems related to stress include heart burn, gastritis, nausea, bulimia and anorexia, diarrhea, constipation etc.

According to the Harvard Mental Health Letter of April 1998,' Research on the relationship between health and emotion indicates that stress affects the body at the cellular level in ways that increase risk of disease. Stress is linked to heart disease and hypertension and may play a role in cancer.

When the brain perceives stress- either from an internal or external trigger-the fight or flight response kicks in. initially, this reaction stimulates the release of two stress hormones: adrenaline which is produced by the adrenal glands, and corticotrophin releasing hormone (CRH), from nerve cells in the hypothalamus. CRH then travels to the pituitary gland, where it causes the release of adrenocorticotrophic hormone (ACTH). This triggers the production of cortisol by the adrenal gland.

In response, blood platelets aggregate, immune cells activate, blood sugar rushes to muscles to give them energy, the heart and breathing rate quickens and blood pressure rises. Cortisol, a steroid hormone which at first sustains the stress response, later slows it down so body can return to normal functioning.

Sometimes, however, this feedback loop goes awry. If stress hormones fail to turn off once the challenge has passed or if a person is subjected to chronic stress, cortisol and other hormones can get out of whack. Instead of providing protection, they may suppress the immune system by interfering with the regular repair and maintenance functions of the body, leaving people open to infections and disease.'

According to Robert K. Cooper (1996), ' there is mounting evidence that how you feel about yourself and your work, and how open you are to engage in dialogue, to value others, to share ideas, and to make the most of normal, creative collaboration depend on how effectively you manage energy and tension.'

A report in the Journal of the American Medical Association, June 1997, links the fight or flight reaction to health problems. They found that people with a wide variety of social ties were much less likely to catch colds than those who had limited contact with friends, relatives, neighbors and business associates. According to the study, loneliness was a stronger risk factor for colds than smoking was.

There is proof today that high emotional intelligence can make one stay ahead. A study of engineers at the prestigious Bell Lab in Princeton, New Jersey, found that the star performers – employees who were responsible for creative breakthroughs – were not those with the best academic and technical credentials, nor those with the highest I.Qs. The star performers were the employees who possessed high E.Qs (Goleman, 1995). They were able to:

- Motivate themselves
- Establish rapport with team members
- Create a supportive network to handle unanticipated problems

Similarly, Egon Zehnder International (1998) studied 515 senior executives. Their research showed that those who scored high on E.Q assessment were more likely to succeed than those who had high scores only on high I.Q. the skills that employers now seek are:

- The ability to listen attentively and communicate orally
- Adaptability and creative responses to setbacks and obstacles
- Self confidence and self motivation
- Ability to co operate and work well with others
- Negotiation and mediation skills
- Leadership potential
- Desire to make a difference

Of the entire traits employers look for, only one is academic, competence in reading, writing and math.

Emotional intelligence plays a far greater role than just assuring satisfied employees and employers. The higher the E.Q, the more likely one is to succeed in personal relationships, in parenting, in self confidence in adding value to the community and in self satisfaction. Unless, emotions are applied intelligently and intentionally, no great feats can be achieved. They are the sources of energy, the spirit that actually moves us.

Let us take the example of anger. Anger is often an expression of fear. Whenever we are frightened, we either run or prepare to fight. If we choose to fight, anger will serve as a motivating force. In other words, anger can also be empowering. Anger can teach us what we value because if we are ready to fight for something it means that the thing is important to us. Guilt, grief, disappointment and other similar feelings indicate internal struggles. When our expectations are not fulfilled, when we act in ways that we regret later, we might be overwhelmed by bitter feelings. But if we learn from these situations and understand what evoked those negative emotions, we will know ourselves better. By paying attention to emotions, feeling them, accepting them, analyzing intentions, future mistakes can be avoided. One can plan more carefully, think of new ways of approaching problems, overcoming diversity and hence increasing emotional intelligence.

A higher emotional quotient allows us to

- Discover and express individuality
- Live from the inside out, and not merely follow dictates of society
- Identify our goals, ambitions, life's work

- Face crisis in a rational, calm and satisfactory way
- Become an effective leader
- Create an environment of trust
- Create and sustain meaningful and satisfying relationships
- Achieve mental and physical health
- Be more authentic, responsible and compassionate
- Exercise the ability to act responsibly in situations instead of reacting.
- Build problem solving skills and generate new ideas
- Be trusting of people
- Become aware of one's own shortcomings and able to work on them
- Develop the ability to make responsible, wise decisions.

Claude Steiner (1997) talks about 5 skills that make up emotional literacy.

1. Knowing your own feelings – it is the ability to define feelings of love, shame or pride, to be able to say why these feelings are triggered. The ability to say how strong emotions are and categorize them. It is important to gauge the strength of feelings to know how much they are affecting a person and those around him.
2. Having a sense of empathy – this is the ability to recognize other people's feelings, understand why they feel the way do, identify with another's situation or motive, to feel for others. It helps to intuitively sense what other's feelings are, how strong they are and what caused them.

3. Learning to manage emotions – it is to know when to express emotions and when to hold them back. We need to know when and how emotional expression or the lack of it, affects others. We need to learn how to assert feelings of hope, love and joy. We need to know how to let emotions like anger, fear or guilt, out, in a harmless and productive way.
4. Repairing emotional damage – Being human, we make mistakes and hurt others. We need to learn what we have done wrong and make amends. For this, we need to recognize mistakes, take responsibility, ask for forgiveness and make amends.
5. Putting it all together – Once we move up the emotional literacy scale, we develop a skill called ‘emotional interactivity’. It means one can tune in to feelings of people around, sense their emotional states and learn to interact with them effectively.

Interactivity is a much used concept in the communication age. In that context, it refers to intelligent interaction instead of passive acceptance. The same is true for emotional interactivity. Interactive awareness enables us to register the emotions within and around us, and to begin to see how they can be molded to creative ends, instead of going unnoticed and being allowed to run out of control. We can use our emotional awareness to have easier, more positive and productive interactions.

According to Dr. Melvyn Kinder (1994), we compare our own inner turmoil to the appearance of people around us and we get convinced that they do not experience the emotional ups and downs we suffer. This happens because of our different temperaments. Temperament is that

part of our self or personality that is defined by our characteristic emotions. People differ greatly in their emotional sensitivity and expression. Our sensitivity, emotional reactivity and whether we are shy or social, timid or aggressive inwardly focused or outwardly focused shapes the way we experience and respond to our environment.

There are six pervasive psychological myths which define a narrow standard of “normal” emotion and emotional health. They espouse emotional conformity. These messages become deep-seated and internalized in our early childhood and cause us to judge our feelings. They do a lot of damage.

1. The myth of uniformity

This myth makes us believe that all of us are alike in our emotional make up. All healthy and normal people should respond in the same way. The common belief is that all humans are wired the same way and that there is a normal range of feelings. We feel we might be going crazy if our feelings are different or more intense than what we have observed as normal in our experience.

A basic problem is that we do not know what the ranges of human feelings are, because they are kept so private. We have private selves and public selves and the latter is carefully kept away from all intense expression of emotions. Typically, our most powerful emotions are experienced and expressed rarely, and then too, with family and close friends. This is why we may not know what the actual range of emotions is.

We make judgments on others and ourselves because we believe which emotion and intensity is appropriate. This myth leads us to accuse others of responding incorrectly when they do not respond the way we feel is normal. We need to accept the variations in temperaments and emotions in people. It is possible to let go of judgments and comparisons and celebrate the richness

2. The myth of good and bad

This myth dictates which feelings are good and which are bad. Unpleasant feelings are bad and should be eliminated. It is good to be happy and confident, weak to be insecure or depressed, negative to be angry etc. there are values attached to all emotions and it is so pervasive that we may not even realize that we are making such black and white judgments about feelings.

We have learned that emotions are good or bad and so we move quickly to deny or push away the painful or unpleasant emotions that would make us feel in any way weak or vulnerable. From early childhood we learn to be intolerant of certain emotions. As young children, we are praised for being happy and often chided for showing 'bad' or 'negative' emotions.

Instead of pushing away certain emotions, we need to honor them as teachers. They are guideposts that make it possible for us to reframe reactions. Like adults, children need to be told that it is O.K to feel the way we feel. One of the smartest and most loving things a parent can do is to tell the child is to acknowledge and honor the child's range of

feelings. When the parent imposes this myth, he or she is unwittingly distorting the child's natural and honest responses.

3. The myth of control

This myth dictates that all of us should strive to control our emotions. It treats emotions like unruly children who must learn self discipline. We learn that we should always be calm, poised and in control. The training to be in charge of emotions starts from childhood; we are reprimanded for showing intense emotions, scolded when we are honest about any uncomfortable emotion. By adulthood if we are still honest about our emotions, we are branded over emotional, unstable or difficult.

Women are allowed a wider range of emotional expression than men, in most countries. They can get more excited, cry, express joy and can still be seen as warm and friendly. Men though are on a tight leash. They are considered sissies or weird if they are as expressive as women.

Eventually for everyone, this tight containment stops working. Either the person feels he is going to burst or these emotions might start leaking in physical illnesses or even distorted expressions of sarcasm, passive aggression etc. Emotions need to be embraced and acknowledged, not subdued. That is the only way to understand and master them.

4. The myth of perfectibility

This myth dictates that we need to stand for psychological perfection. We are told that we should set higher standards for personal growth leading to an enlightened, self actualized person characterized by openness spontaneity and emotional expressiveness. Higher standards

can be motivating but if we set unattainable goals, it will lead to failure and discontent. Nobody is completely perfect or operates at his peak performance.

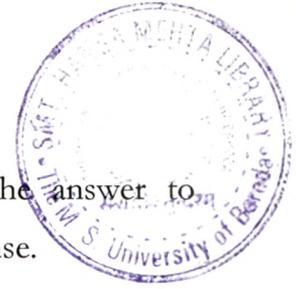
We need to try and be more genuinely who we are and not try and become a 'better' person.

5. The myth of emotional illness

This says that emotional distress is a sign for emotional illness. There has always been social stigma attached to what we call 'mental illness'. It is only recently that people have started to seek help for their problems. Many emotional distresses have now been defined as illnesses. Sufferings that are actually within the range of normal emotions have been put in categories of illnesses. For example, people who get divorce are given medication for depression. Whereas anyone undergoing an unpleasant phase like this, would have certain unpleasant and sad thoughts. This immediate categorization of the slightest suffering feeds into our sense of shame and deficiency. People are now awakening to the fact that all distress or suffering does not mean illness. We need to realize that we have temperaments with a wide range of emotions and categorizing them into illnesses may have self defeating consequences.

6. The myth of positive thinking

We believe that it is all in our minds and that will power will change how we feel. It is true that we affect our emotions about something by the way we feel for the certain thing. The falsity of the myth is that our emotions stem completely from our irrational thoughts and hence can be changed immediately by changing our thoughts. Fighting emotions and



trying to over power them by 'will power' is not the answer to uncomfortable feelings. Often it will only make them intense.

Positive thinking, self talk and visualization can be powerful and helpful. But acknowledging instead of denying uncomfortable feelings can lead to genuine confidence rather than wishful thinking.

Looking at the discussion above, we can conclude that there is need to promote emotional literacy. An emotionally intelligent person will stay open to feelings; feel them through, regardless of whether they are pleasant or painful. He will not detach or engage himself to the emotion, on the basis of their pleasantness, but he will try and focus on its usefulness. He will be able to monitor emotions and understand their utility. He will be able to identify emotions and interpret their meanings. His emotions are accessible and he is able to use them as aids for judgment, memory and enriching experiences. He will also be able to perceive other people's emotions by paying attention to their tone, mannerisms, behavior etc. and deal with them accordingly.

1.2.1 Aspects of Emotional Intelligence

Emotional intelligence, in its most simplistic sense means bringing intelligence to our emotions. It has two major parts – Intrapersonal aspect and the Interpersonal aspect. The intrapersonal aspect refers to our capacity for recognizing emotions in our selves and accepting them, managing our emotions and motivating ourselves. The interpersonal aspect deals with recognizing emotions in others, accepting them and thus developing healthy relationships.

They are a combination of a variety of dynamic, tactical skills or abilities that can be brought into play as the situation warrants. Hence, the individual building block of emotional intelligence can be improved by training and experience. The key skills are:

Intrapersonal aspect

- Awareness of emotions
- Acceptance of emotions
- Management of emotions
- Self motivation
- Interpersonal aspect
- Empathy
- Handling relationships

These skills have been discussed in detail below.

1.2.2 Awareness of emotions

The longest journey is the journey inwards.

- Dag Hammarskjold -

Self awareness is the ability to accurately sense and identify feelings and to understand and appreciate them. It is the ability to look within and acknowledge what we see. It is the keystone to emotional intelligence. The ability to monitor feelings from moment to moment is crucial to psychological insight and self understanding. In self awareness the mind observes and investigates experience itself, including emotions. An inability to notice out true feelings will leave us up to their mercy. People who are aware of their feelings will be better pilots of their lives.

This quality of self awareness is akin to what Freud called ‘an evenly hovering attention’. He said such attention takes in whatever passes through awareness with impartiality, as an interested and yet unreactive witness. Self awareness is not an attention that gets carried away by emotions, over reacting and amplifying what is perceived. It is a neutral mode that maintains self reflectiveness even during turbulent emotions. It manifest itself as a slight stepping back from experience, a parallel stream of consciousness that is ‘meta’ or hovers above or beside the main flow. It is aware of what is happening rather than being immersed or lost in it. For example, there is a difference between being completely enraged and being aware that ‘It is anger that I feel’, even as one is enraged. This subtle shift in mental activity presumably signals that neo cortical circuits are actively monitoring the emotions. It has a powerful effect as the realization of anger offers a great deal of freedom – not just the option to act on it but the added option to let go of it.

John Mayer (2002), a psychologist at the University of New Hampshire, says that people fall into distinctive styles of attending to and dealing with their emotions:

- a) Self aware – These people are aware of their moods having as they are having them. Their clarity about their emotions undergrid other personality traits, they are autonomous and sure of their boundaries, are in good psychological health and tend to have a positive outlook. Their mindfulness helps them to manage their emotions as they do not ruminate and obsess about bad moods.
- b) Engulfed – These people often feel swamped by their emotions and helpless to escape them, as though their emotions are in charge. They are

not aware of their feelings, get lost in them rather than having some perspective. They do little to escape bad moods, feeling they have no control over their emotional life.

c) Accepting – They are often clear about what they are feeling, they tend to be accepting of their moods and so don't try and change them. There are 2 branches of the accepting type – those who are usually in a good mood and so have little motivation to change them, and people who despite their clarity have bad moods but accept them with a laissez-faire attitude.

Our emotions speak to us through signals sent to our brain and body. We need to pay attention to them. We need to acknowledge the information that the emotions are trying to convey to us and how we can use that information.

1.2.3 Acceptance of emotions

Accepting does not mean liking, enjoying or condoning. I can accept what is and be determined to evolve from there. It is not acceptance but denial that leaves me stuck.

- Nathaniel Branden -

This is the ability to accept feelings, to feel comfortable in experiencing feelings. Unless we give ourselves permission to 'feel', we will not be able to deal with the emotion at all. An ignored or denied emotion will stay there, unresolved.

As we grow up, we look out for cues- smiles, frowns, pats - and this feedback tells how our emotions have been appreciated, disapproved of

and of how it has affected others. In this process we learn that some emotions are encouraged and thought of as 'good' whereas others are disapproved and are 'bad'. We learn to ignore or deny these 'bad' emotions and express the 'good' ones.

Postponing feelings like this leads to ignoring, masking or diluting them. If we do this long enough it might become a habit and we might land up in unhappy, unhealthy situations. We might become uncertain of our feelings, confused about what to do with them or the predicament we might be in.

Men, in most societies are taught not to expose their feelings, to not feel scared, vulnerable etc. in trying to keep up these facades they grow up to be 'hollow', not in touch with themselves, proficient at detaching themselves from emotions of themselves and others around them. Steven Hein (1996) describes it as follows – 'We intellectualize, rationalize, justify, deny and defend. In other words, we use our upper, thinking brain to quell the feelings in our lower, feeling brain. The role these two brains play in our emotions and our lives has been the focus of much of the emotional intelligence research. The findings show that each brain has a clear and distinct purpose, and that we function best when the two are working smoothly together and not fighting each other. When we do fight our feelings, we waste a lot of time and energy, since our feelings are very real. In effect, when we fight our feelings, we fight reality-something which is generally a frustrating exercise. Instead of finding out who we really are, we try to be who we are expected to be, who we are told we should be. We seek the approval of those important

to us, like our parents, our partners, teachers or religious leaders etc. But to be happy we can only be who we are. We can grow and change, but when we try to grow in a direction which is against our individual natures, we are fighting nature and millions of years of evolution. All this wasted and misdirected energy is not very smart, since both our time and energy are precious, limited resources.'

Just like positive emotions that make us feel happy and content, negative, uncomfortable emotions are also a part of us. Ignoring or denying them is fruitless. There are no good or bad emotions. Emotions are only sources of information and we need to listen to them. Blaming uncomfortable emotions on someone else or on the situation does not help. This does not mean resigning oneself to the pain or living with the pain. Behind each negative emotion, is a desire, an intention. We need to realize what this desire and intention is and then use the information to implement a plan or make a decision. Our feelings need to be channelised into appropriate and constructive behavior.

All of us make regrettable decisions sometimes. Our emotions are quick to inform us when we make a wrong choice. We need to learn from these experiences and become adept at anticipating how we will feel about our choices. Acknowledging uncomfortable feelings, accepting them and learning from them can turn them into positive experiences that we learn from or at least neutralize them so that we can continue to pursue our goals.

1.2.4 Management of emotions

It's not the big things that send us to the madhouse, not the loss of a love, but the shoelace that breaks when there is not time left.

- Charles Bukowski -

Self management is the ability to use our understanding of feelings, to reason well and act intentionally. From Plato's time, the virtue of being able to withhold in the time of emotional crisis, has been praised. The ancient Greek word for it was 'sophrosyne', which is 'care and intelligence in conducting one's life; a tempered balance and wisdom'. The Roman and Catholic Church called it 'temperantia', which is 'temperance or the restraining of emotional excess. As Aristotle observed, what is needed is appropriate emotion, feelings proportionate to circumstances.

The goal of managing emotions is to balance and not suppress feelings. Each feeling has its value and significance. A life without emotions will be one without passion, dull neutrality; cut off from the richness life has to offer. But at the same time, if emotions are allowed to run awry, they can be a problem. If they are too muted they create dullness, too extreme they become pathological like depression or manic agitation etc.

All of us are responsible for how we react to our feelings. Many of us believe that we have no control over how we react to our feelings but this is not true. It is possible to manage our responses to our emotions by recognizing, understanding and acknowledging our emotion. Once we understand our feelings, it is possible for us to take charge of our

thoughts and actions and respond responsibly. This is the ability to choose responses rather than reacting impulsively and thoughtlessly to emotions.

Many of us are afraid of our emotions; afraid they might cause us to lose control. What we lose by denying or suppressing our emotions, however, is our authenticity, our intentionality and our commitment. Repressing emotions serves no one. For example, we might subvert our interests for the sake of 'getting along by going along', then feel resentful about the choices made for us. We might say 'Yes' to please someone, then punish that person or ourselves by failing to accept the choice whole heartedly. We might take grim pleasure if the choice made, proves unsatisfactory or we might even sabotage the event consciously or unconsciously.

The first step is to recognize the value of our emotions. We can only begin to manage our emotions when we are able to look at them without flinching and value their importance in lending meaning to our lives.

The more aware we are of our emotions, the easier it is to manage our moods and actions. Feelings are always with us. The trick is to learn to be with them and use them appropriately. The more in touch we are with our feelings, the more we will be able to deal with them. Then the emotions will not sneak up and overpower us, we will be prepared for them. And this will help us use them effectively and efficiently.

Let us take an example of the processes involved in emotional management. Suppose a person realizes that someone in her office has stolen her work and taken all the credit due to her. This information will

bring about many bodily changes- her breathing will become shallow, her neck and back will become tense and she might feel her heart is pounding. If she has high emotional intelligence, she will recognize these signs and understand that she is feeling angry.

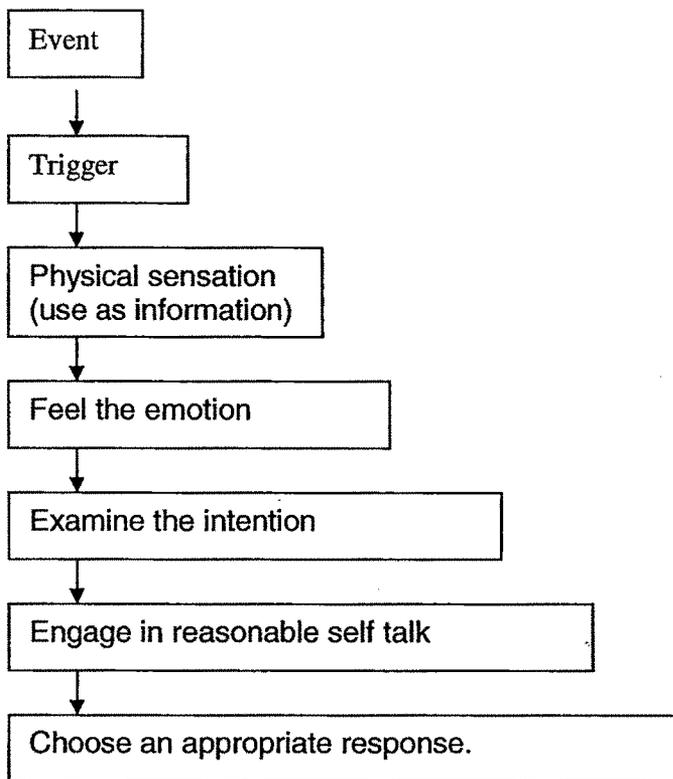


Fig. 1.12 Figural representation of the process of management of emotions in a person with high E.Q.

She will examine her intentions and values and decide what she wants out of the situation. She will give herself time and talk to herself rationally and come to the best possible solution.

Whereas, if she has low emotional intelligence, she will not recognize the bodily symptoms. She will not take time out to think about the situation rationally.

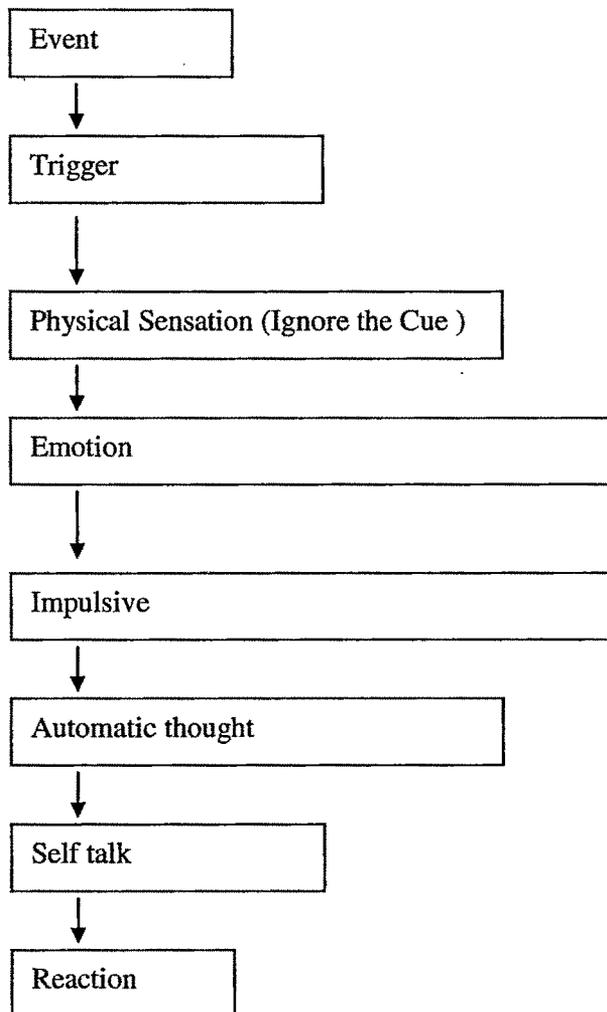


Fig.1.13 Figural representation of the process of management of emotions in a person with low E.Q

And hence, she might land up making a hasty and impulsive decision that may not be appropriate and something she might regret later.

Managing emotions does not mean that one should lose one's spontaneity. It means being:

- Open - welcoming new ideas and approaches. Being flexible and avoiding thoughtless reactions based on prejudice, unexamined beliefs and habit.
- Self regulated – keeping a watch on anger and other uncomfortable emotions, using the information they provide and responding to situations, instead of reacting to them impulsively.
- Conscientious – being dependable, responsible and accountable for one's professional and personal life.
- Honest – being true to one's values and feelings. Being trustworthy and acting with integrity.
- Thoughtful in decision making – taking time to think about the situation and emotions rationally. It is the ability to make smarter decisions after having thought through the problem.

1.2.5 Self motivation

Griefs, at the moment when they change into ideas, lose some of their power to injure our heart

- Marcel Proust -

Self motivation is the ability to focus the power of our emotions and use them towards a purpose. It is to marshal emotions in the service of a goal. When we are aware of our emotions, create the ability to manage them, we also become capable of channelising emotions to give us motivation. Edward Deci (1985) calls self motivation as, 'the heart of creativity, responsibility, healthy behavior and healthy change.' Emotions

are the source of energy, the motivating force behind action and decision making. Emotional self control, delaying gratification and stifling impulsiveness, underlies accomplishment of every sort.

Walter Mischel (1960), Columbia University, had done an experiment with pre schoolers. This came to be known as 'the marshmallow test'. A group of four year olds were brought into a room one at a time and told that they could have one marshmallow immediately or have two if they would wait till the researcher came after running an errand. Some children ate one immediately and some delayed gratification, and some tried to wait but ran out of patience before the researcher returned. A follow up study was done when this same group was graduating from high school. It revealed that the children who had delayed gratification scored two hundred points more in college entrance examinations. According to the study, the children who gave in to temptation were more likely to be lonely, frustrated and stubborn. They buckled under stress and shied away from challenges. This shows that people who can motivate themselves are the ones who are more successful.

Self motivation means taking responsibility for setting and achieving specific goals. Once we are aware of and are capable of managing emotions, we are also capable of setting our goals and fulfilling them. Without goals, intentions and purpose, we cannot focus on anything or achieve anything. It is up to us what we accomplish in life. Once we have set goals, we take charge of ourselves. Unless we are not sure of our direction, our goal, we will not know how to get there. We need to start

with a vision of where we are heading and then channel our energies towards it.

The attributes of a self motivated person are:

- Optimism
- The ability to delay gratification
- Passionate commitment
- Energy
- Resilience
- The ability to take action
- The ability to follow through
- The ability to generate emotions

1.2.6 Empathy

Your pain in my heart.

- Jessie Lair -

It is the ability to recognize and appropriately respond to the feelings and emotions of others. Empathy makes us more attuned to social signals that indicate what others need or want. It is the sensitivity to other people's feelings and concerns, and understanding their perspective; appreciating the differences in how people feel about things. A person, who learns to understand his own emotions, will learn to sense them in others more accurately. This will, in turn, enable him to deal with others according to how they are feeling.

Empathy enables us to see the other's perspective and hence, helps to avoid continuous uneasy interactions and produces collaborative alliances.

Developmental psychologists have found that infants feel sympathetic distress even before they fully realize that they exist apart from other people. Even a few months after birth infants react to disturbance in those around them as though it were their own, crying when they see another child crying. By the age of one year or so they realize that the misery is not theirs but still seem confused as to what to do about it. In a research done by Martin L. Hoffman (1984) at New York University, a one year old brought his own mother when another child cried, even though the crying child's mother was present. This confusion is also seen when one year olds imitate someone else's distress, possibly to better comprehend what the other is feeling. For example, if a baby hurts her finger and cries, another baby might put her own finger in the mouth to see if she hurts too. This is called motor mimicry and it is the original technical sense of the word empathy as it was used by E. B. Titchener (1920), an American psychologist. This sense is different from its original introduction into English from the Greek word *empathia*, which is 'feeling into', a term used by theorists of aesthetics to define the ability of perceiving someone else's subjective experience.

Motor mimicry fades away at the age of two and a half years, at which point they realize that someone else's pain is different from their own. At this point they diverge from one another in sensitivity for others, with some keenly aware and others tuned out. A series of studies done by

Marian Radke-Yarrow and Carolyn Zahn-Waxler (1984) at the National Institute of Mental Health, U.S, showed that a large part of the difference in empathic concern was related to how parents disciplined their children. Children were more empathic when discipline included calling strong attention to the distress their misbehavior caused to others. They also found that children's empathy is also shaped by seeing how others react when someone else is distressed; by imitating what they see, children develop a repertoire of empathic response, especially in helping other people who are distressed.

People's emotions are rarely put into words and they are expressed through other cues. The key to intuiting another's feelings is in the ability read non verbal cues: tone of voice, gesture, facial expression and the like. Robert Rosenthal (1968), a Harvard psychologist devised a test for empathy, the PONS (Profile of Non verbal Sensitivity). A series of video tapes of a young woman expressing feelings ranging from loathing to motherly love were taped. The video is edited in a way that in each portrayal one or more channels of nonverbal communication are symmetrically blanked out, in addition to having the words muffled. The test was conducted on over seven thousand people in the United States and eighteen other countries. People who were able to read the non verbal cues were better adjusted emotionally, more popular, more outgoing and more sensitive.

In keeping with findings about other elements of emotional intelligence, there was only an incidental relationship between scores on this measure of empathic acuity and SAT or I.Q scores or school achievement tests.

Independence of empathy from academic intelligence has been found in testing with a version of the PONS designed for children. In tests with 1,011 children, those who showed an aptitude for reading feelings nonverbally were among the most popular at school, the most emotionally stable. They also did better in school, even though on average their I.Q. was not higher than those who were less skilled at reading nonverbal messages – suggesting that mastering the empathic ability smoothes the way for class room effectiveness.

Some biologists believe that morality, traits like, kindness and compassion, might be ploys in the interests of the self. Frans de Waal (2003) counters these arguments by providing evidence that every society, even among animals, value principles of inclusivity and belonging. He says, 'the advantages of group life can be manifold, the most important being increased chances to find food, defense against predators and strength in numbers against competitors. For example, it may be of critical importance during a drought to have older individuals who can lead the group to a forgotten water hole. Or, during periods of heavy predation, all eyes and ears count, especially in combination with an effective warning system. Each member contributes to and benefits from the group, although not necessarily equally or at the same time.' Morality in humans moves from a desire to be socially acceptable to an internalized moral conscience.

1.2.7 Handling relationships

No man is an island, entire of itself.

- John Donne. -

Interpersonal relationships are established and maintained when they are mutually satisfying. They are characterized by meaningful social interchange, sensitivity towards the other, acceptance of the other and finally, intimacy and warmth.

Thus, this is the art of managing relationships by understanding and accepting emotions in others. These are the abilities that under gird popularity, leadership and interpersonal effectiveness.

One key to social competence is how well or poorly people express their own feelings. Paul Ekman (1982) uses the term display rules for the social consensus about which feelings can be properly shown and when. For example, in Japan, he and his colleagues studied the facial reaction of students while they watched a horror movie. When the students saw the movie with an authority figure present, there were very slight reactions. But when they thought they were alone, their faces twisted into vivid mixes of distress, dread and disgust.

There are several kinds of display rules. One is minimizing the show of emotion. This is seen in the Japanese society where feelings of distress are masked in front of authority figures. Another is exaggerating what one feels by magnifying emotional expression. This is sometimes used by children when they complain about siblings, to the parents. A third is substituting one feeling for another. This can be seen in some culture

where it would be considered inappropriate for a girl to display anger. We learn these display rules early in life, partly through observation and modeling and partly through express instructions given to us by people around.

Research also shows that we tend to imitate the emotions of people around us. We send emotional signals in every encounter and these signals affect those who we are with. The day to day imitation of feelings is quite subtle. Ulf Dimberg (2000), a Swedish researcher at the University of Uppsala, found that when people view a smiling or angry face, their own faces show evidence of that same mood through slight changes in the facial muscles. The changes are evident through electronic sensors but are not visible to the naked eye.

When two people interact, the direction of mood transfer is from the one who is more forceful in emotional expression to the one who is more passive. Some people are more susceptible to emotional contagion; their sensitivity makes their autonomic nervous system more easily triggered. This makes them more impressionable; sentimental movies can make them cry, a cheerful chat can invigorate them since they are more empathic.

John Cacioppo (2002), a social psychologist at Ohio State University who has studied the subtle emotional exchanges, observes, "Just seeing someone express an emotion can evoke that mood, whether you realize you mimic the facial expression or not. This happens to us all the time –

there is a dance, a synchrony, a transmission of emotions. This mood synchrony determines whether you feel an interaction went well or not.”

The degree of emotional rapport people feel in an encounter is mirrored by how tightly orchestrated their physical movements are as they talk – an index of closeness that is typically out of awareness. One person nods, as the other makes a point, both shift in their chairs at the same time or both lean forward. It is observed that same reciprocity links the movements of people who feel emotional rapport. This synchrony facilitates receiving and sending of moods, whether moods are negative or positive. For example, the synchrony between teachers and students indicate how much rapport they feel; studies show that the closer the movement coordination between teachers and students, the more happy, enthused and interested they feel.

Frank Bernieri (1992), a psychologist at Oregon State University, who conducted several studies, says, “How awkward or comfortable you feel with someone is at some level physical. You need to have compatible timing to coordinate your movements, to feel comfortable. Synchrony reflects the depth of engagement between the partners; if you are highly engaged, your moods begin to mesh, whether positive or negative.”

Cacioppo proposes that one determinant of interpersonal effectiveness is how deftly people carry out the emotional synchrony. If they are adept at attuning to people’s moods or can bring others under the sway of their own, their interactions are going to be smoother. The mark of

powerful leaders or performers is being able to move audience of thousands in this way.

Thomas Hatch and Howard Gardener (1993), who run a school based on multiple intelligence, called 'Spectrum', give four components for interpersonal intelligence.

- a) Organizing groups – the essential skill of a leader. It involves initiating and co coordinating efforts of a network of people. This can be seen military officers, movie producers etc.
- b) Negotiating solutions – the talent of a mediator. It means preventing conflicts or resolving those that flare up. People with this ability can make a career in diplomacy, law etc.
- c) Personal connection – is the art of empathy and connecting with others. This makes it easy to recognize and respond to other people's feelings and concerns. Such people are good team players, friends and can be good teachers, managers etc. these people are mostly liked by people around them.
- d) Social analysis – it is being able to detect and have insights about people's feelings, motives and concerns. This knowledge of other people's feelings can lead to easy intimacy or sense of rapport. It can make one a competent therapist or counselor.

Those who are adept in interpersonal intelligence connect with people smoothly, are astute in reading their reactions and feelings, lead and organize and handle disputes that may flare up.

1.3 Stress and emotional intelligence

Robert Hooke (1664), a physicist – biologist, defines stress as, “an environmental demand on a biological, social or psychological system, which is analogous to the load a bridge might carry.” The person – environment relationship that brings stress is a subjective imbalance between demands that are made on people and their resources to manage these demands. Depending on the degree of imbalance, we experience more or less stress. When the person’s resources exceed the environmental load, stress is low or absent, demands are easily managed and the person feels confident about handling them. And if the demand exceeds resources, the person feels pressure and feels over loaded. The subjective sense of imbalance varies with the nature of demands and the resources available to the person. Some are capable of handling high stress and some cannot even handle mild demands.

There are two types of stress: physiological and psychological. When our body is under stress because of physical demands, such as running or exercising, it is called physiological stress. Some signs of this are sweating, fatigue, rapid heart beat, higher blood pressure etc. If we make necessary measurements, we will find that at times of physiological stress, stress hormones are poured into the blood stream by the adrenal gland, causing the changes.

The bodily reactions generated by physiological stress can also be generated by psychological reasons, without the physical exertions. Feelings of anxiety, anger, fear can also result in the same physiological reactions. So these bodily reactions, and the purely psychological events

that result in them, are called psychological stress. Three major categories of stress are harm, which is an event that has already occurred; threat, which is a situation where we are exposed to harm but it has not yet happened; and challenge, which are events that are appraised as opportunities rather than occasions for harm.

Stress can occur due to life events, such as deaths, at school, such as getting good grades, competition with peers; at home, parental demands, sibling rivalry, single parent families and also among peers.

Stress and emotions are not separate and independent from each other. Stress is bound to cause emotions. Stress calls forth distressing emotions, like – anger, envy, anxiety, guilt, sadness etc. to be able to deal with stress, it is important to be able to deal with these emotions.

1.4 Health and emotional intelligence

A major reason for scientific interest in emotions is the conviction that our emotional lives can promote health or sickness.

Studies have shown that emotional factors affect many illnesses, like – cancer, heart disease, high blood pressure, psychosomatic disorders, gastric problems etc. Some of them are discussed below:

1.4.1 Psychosomatic disorders

Certain ailments have been recognized as being psychosomatic because they are especially responsive to stress. Gastrointestinal ailments are by far the most common of all ailments linked to stress. The list can be

greatly expanded to the universe of illnesses and disease because today scientists have reason to believe that any ailment can be affected by stress and emotions. In some instances stress exacerbates an ailment even when its main cause is not psychological. In other instances, psychological stress is considered a primary cause.

A psychoanalyst Franz Alexander (1946) is usually credited with being the major pioneer of the psychoanalytic approach to psychosomatic disorders. D.T. Graham (1965), a research oriented psychologist, later presented an influential analysis of psychosomatic disorders that centered on attitudinal conflicts about which the individual is unaware. Some examples of this conflicts are feeling humiliated for ulcers, endangered for hypertension etc. Graham's theory is expressed in two ideas: First, that each psychosomatic disorder is part of specific emotion; and second, that each emotion has its own unique physiological components, which help to explain how the bodily symptoms are brought about. To test these principles, he had psychiatrists identify the basic attitudinal conflict of numerous psychosomatic patients from selected psychiatrists. None of the psychiatrists, interviewers or the judges, knew the specific hypotheses that linked the attitudinal conflicts with each disorder. The task of the judges was to guess what each patient's disorder was from attitudinal conflict they identified in the interview segment. The judges were able to do this correctly. In effect, there appeared to be an ulcer personality, an asthma personality and so on.

Because of methodological difficulties and contradictory evidence the explanation was revised. It is now believed that victims of psychosomatic disorders had either been born with vulnerable organ systems or acquired them over the course of their lives. Stress was said to produce the irritable bowel seen in colitis in people whose intestinal tracts were vulnerable and gastric pain or ulcers would occur under stress only in people whose gastrointestinal tracts were vulnerable etc.

1.4.2 Heart disease

Doctors have at least three reasons to believe that heart disease is related to emotions. First, stress emotions increase the level of low density blood cholesterol, which is the primary cause of blockage of arteries supplying blood to the heart. Secondly, stress emotions result in maladaptive coping behaviors that are damaging to the heart and surrounding blood supply. For example, people under stress are said to smoke, eat excessively or not enough, drink in excess etc. Thirdly, stress emotions result in powerful hormones, such as adrenaline, being sent into the blood stream, markedly increasing heart rate and blood pressure. Coupled with a diseased cardio vascular system, these demands on the heart could subject a person to acute cardiovascular crisis under stress, which could provoke sudden death.

1.4.3 Infectious illnesses

Many studies on the effects of stress on the immune system have recently appeared and shown that prolonged stress weakens the ability of the body's immune system to fight infection. Some hormones secreted

in the presence of stress emotions impairs or weakens the immune process by reducing the available number of disease – fighting components, such as lymphocytes (white blood cells), thereby leaving the body more vulnerable to infections. It has been demonstrated that lonely students have a poor immune response to infection than those who are not lonely. It has also been shown that coping styles of H.I.V patients influences their immune system and therefore how fast they develop full blown AIDS. Patients with passive coping styles (accepting) had lower immunity than those with active coping styles (confident and forceful).

1.5 Achievement and emotional intelligence

There are two things to be considered in this section. Firstly, the parameters of achievement need to be reassessed. Considering the mounting body of research, we need to look at what we define as ‘achievement’. Is it only good marks in subjects that are taught at school? Or do we need to broaden our horizon and look into other areas of development such as music, interpersonal relationships etc?

Howard Gardener (1993), a psychologist at Harvard school of Education says, “The time has come to broaden our notion of the spectrum of talents. The single most important contribution education can make to a child’s development is to help him towards a field where his talents best suit him, where he will be satisfied and competent. We have completely lost sight of that. We subject everyone to an education where, if you succeed, you will be best suited to be a professor. And we evaluate everyone along the way according to whether they meet that

narrow standard of success. We should spend less time ranking children and more time in helping them to identify their natural competencies and gifts, and cultivate those. There are hundreds of ways to succeed and many different abilities that help you get there". He proposed that there was not just one monolithic kind of intelligence that is crucial for success, but rather a wide spectrum of intelligences. The operative word in this view is 'multiple' and he acknowledges that there is no one magic number to measure the multiplicity of human talents. The Stanford-Binet Intelligence scale he developed does not predict successful performance on a consistent scale of activities. It gives parents and teachers a clear guidance about the realms that these children will take an interest in and where they will do well enough to develop passions that can lead beyond proficiency to mastery.

Next, we need to acknowledge the role of emotions in enhancing achievement. Recent research points to the fact that achievement can be affected by addressing emotions and helping children deal with them. Schools have to realize that the task of holistic education is impossible if the student is absent, dealing with problems at home, depressed, scared or faces any other emotional problem. Many students deal with stressors, either at home, school or because of peers. They often do not pay attention in class, have low concentration, participate little, neglect assignments, act out etc. When tests do not show improvement, schools and parents traditionally respond by sending them for tuitions, extra classes at school, increasing the amount of time spent in class, choosing new text books, reassigning teachers, or re evaluating the assessment tools. Each of these responses can be beneficial. However, they do not

address the needs of the students who are in need of emotional support, need to be understood and helped in other ways than mere academic attention and encouragement to achieve more and get better results. Students need skills not usually considered part of a school's curriculum: impulse control, stress management, empathy, problem solving etc. To get the students to the next academic level, we must meet them where they are and give those skills and resources that help them cope with stressors so that they are able to attend to academics. Without these social and emotional skills, the stressors take over and prevent students from living up to their academic potential. Emotional skills are thus needed, not just for their own sake but also to impact academics positively.

1.6 Rationale for the study

The above discussion poses a very compelling argument for addressing emotions in our education system. Learners construct knowledge from an inner scaffolding of their individual and social experiences, emotions, aptitudes, beliefs, values, purpose and more. In other words, if we are learning in a class room, what we understand is determined by how we understand things, who we are and what we already know, as much as by what is covered and how and by whom it is delivered. Increasing students', teachers' and other people's awareness of these connections strengthens the process of learning. Disconnecting them weakens the scaffolding and consequently, the knowledge (Senge et al.,2000).

Emotional learning is important for each individual. Understanding emotions is directly connected to both cognitive achievements and motivation to learn. Dealing effectively with emotions helps individuals

to develop more positive relationships and provide a sense of mental or psychological well being. Those adolescents who are 'emotionally developed' are deemed to be better able to live with or cope with difference. Moral views and value systems are shaped by both attitudes and feelings. The sense of purpose and meaning that individuals gain in their lives is derived in equal parts from both feelings and understanding (McCarthy and Park, 1998).

Emotional literacy helps children to recognize their emotions to be able to label or define them; understand their emotions in order to become effective learners; handle or manage their emotions in order to develop or sustain positive relationships; and appropriately express emotions in order to develop as well rounded people who are able to help themselves and, in turn, those around them (Sharp, 2001).

To support this view, we need to teach the core competences of emotional literacy within the class room. The 'one – size – fits – all' class room probably accounts for why so many students are not motivated enough or do not perform to the best of their abilities.

The studies discussed in Chapter 2 under review of related literature show that developing skills of emotional intelligence clearly advantages children both in and out of school. It has a correlation with achievement, motivation, aggression and many other areas.

It would not be fair to say that no effort has been made in the direction of getting the humanistic principles into our class rooms. The

specifications mentioned in the National Curriculum Framework (NCERT, 2005) require many of these principles to be observed in schools. But converting these principles from written rules to actual practices in school still has a long way to go.

A continuous and on going program on emotional literacy for students will help address many of the issues discussed above. Looking at the dearth of such programs available, the present study is an attempt to develop the core competences of emotional literacy in school children. The study is an intervention program, developed on an experiential paradigm and designed to enhance the skills that come under emotional literacy. It intends to help children become aware of their own emotions, accept their emotions, become motivated to achieve, become empathic towards others and to develop positive and healthy relationships.

1.7 Statement of the problem

“A study of effectiveness of an intervention program developed to enhance emotional literacy in students of standard 8.”

1.8 Objectives of the study

- (1) To develop an intervention program to enhance
 - a) Awareness of emotions
 - b) Acceptance of emotions
 - c) Management of emotions
 - d) Self motivation
 - e) Empathy
 - f) Acceptance of emotions in others

(2) To implement the developed intervention program on the sample of subjects.

(3) To determine the impact of the intervention program on the following personal dimensions and the by products in the sample subjects.

- (a) Awareness of their emotions
- (b) Acceptance of their emotions
- (c) Management of their emotions
- (d) Intrinsic motivation
- (e) Empathy
- (f) Acceptance of emotions in others
- (g) Interpersonal relationships
- (h) Stress
- (i) Experience of satisfaction with themselves and their studies

1.9 Explanation of terms

1) Emotional literacy – the ability to recognize and identify feelings as they occur, manage the feelings effectively and recognize and accept feelings in others.

2) Intervention program – orientation provided to students in terms of structured experience, concepts and skills on aspects of emotional intelligence.

3) Effectiveness – the effectiveness will be measured by the difference in the personal dimensions and the by products, before and after the intervention program.

1.10 Delimitations of the study

Since this is an intervention program it will be delimited to one class of students, purposively selected by the investigator. Hence, the study is explorative in nature and the findings may not be generalisable across the student population.