

**A STUDY OF VIPASSANA MEDITATION  
ON  
ADOLESCENT BEHAVIOUR PATTERN**

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for the award of the degree of*

**DOCTOR OF PHILOSOPHY**

*By*

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**CERTIFICATE**

The thesis entitled "**A STUDY OF VIPASSANA MEDITATION ON ADOLESCENT BEHAVIOURAL PATTERN**" is a record of research work done by **Ms.RAJA RADHI** during the period of 1998 – 2002 under my supervision at the Department of Psychology, University of Madras, Chennai – 600 005 and this thesis has not formed the basis for award to the candidate of any previous Degree, Diploma, Associateship, Fellowship or other similar titles.

The dissertation represents an independent work on the part of the candidate.

Place: Chennai

Date :

**Dr.LATHA**  
Guide and Supervisor

## **STATEMENT BY THE CANDIDATE**

I hereby state that the thesis for the Degree of Doctor of Philosophy on "**A STUDY OF VIPASSANA MEDITATION ON ADOLESCENT BEHAVIOUR PATTERN**" is my original work and that it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or any other similar title.

Place: Chennai

Date :

**(RAJA RADHI)**

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*Namo tassa bhagavato, arahato, samma-sambuddhassa.*

Homage to the liberated, the all-conquering, the fully self-enlightened.

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## GLOSSARY OF PALI TERMS

<i>Anapana</i>	-	<i>ana</i> – incoming breath <i>apana</i> – outgoing breath Anapana Meditation is the observation of incoming and outgoing breath
<i>Annica</i>	-	Impermanence
<i>Dhamma</i>	-	Laws of nature
<i>Dhammapada</i>	-	The way of the Dhamma, the way of truth. Consists of the sayings of The Buddha
<i>Ehipassiko</i>	-	'Come and see quality' of the dhamma teaching the tendency to share with all others the benefits one has obtained through meditative practice.
<i>Ekhaliko</i>	-	The timeless quality of dhamma teaching. It is relevant in all times and all ages.
<i>Karuna</i>	-	Compassion
<i>Metta bhavanna, maitri</i>	-	Loving Kindness
<i>Mudita</i>	-	Sympathetic joy
<i>Punna</i>	-	Wisdom, insight
<i>Sati</i>	-	Mindfulness, awareness
<i>Sila</i>	-	Moral code
<i>Samadhi</i>	-	Meditative Concentration
<i>Sangha</i>	-	The group of people who have walked on the path of self-purification
<i>Vipassana</i>	-	<i>Passana</i> - to see <i>Vipassana</i> – to see things as they are
<i>Upekkha</i>	-	Serene detachment, enlightenment

# CHAPTER I

## INTRODUCTION

Adolescence is an extremely difficult period when the individual goes through various physical and mental changes. Children and young adults go through a lot of stress (Fontana, David and Slack, Ingrid, 1997). The pressure of school, meeting expectations of parents and teachers and planning out a career for themselves puts them under considerable strain and tension. These conditions are more often imposed upon them by adults. Added to this is the adolescents' experience of his own intense feelings of joy, sorrow, fear, love, disappointment and anger. Relationships with friends are of utmost importance and success or failure in these interactions weighs heavily on them. They have to go through formal education in these formative years and at the same time need to develop their self-confidence and a sense of personal identity.

Recognizing the nature and strength of these pressures allows us to appreciate that stress, neuroses, unhappiness and depression are by no means the prerogative of adults. Unfortunately, little is done with formal education to help adolescents learn to understand themselves, to control their anxieties and their thought processes, and to discover tranquility, harmony and balance within themselves. Little is done to help them manage their own inner lives, to use their mental energies productively instead of dissipating it in worries and random thinking and to access the creative levels of their own minds.

A lack of education in mind training at this stage has resulted in most adolescents developing bad mental habits. Often their minds are a turmoil of excitements, hopes, expectations, anxieties and fantasies. The rate of depression

among adolescents is typically high. Their mood swings lead to agonizing periods of self-doubt. Virtually at no other time in life is there more a need for a mind training that, without denying or seeking to judge or repress a single feeling or emotion, can settle the individual into a calm and relaxed state.

Mind training is particularly important because bad mental habits tend to persist in adulthood. The seeds of many psychological problems in adulthood are sown during childhood and adolescence, making the individual less productive and less creative. Therefore, a mind training programme introduced in early life, is likely to help individuals become effective and fully functioning adults.

### **1.1 EARLY THEORETICAL CONCEPTS**

The American psychologist, Erik Erickson (1968) considered that the prime task of adolescence is to discover a sense of identity, to answer at least in part the question “Who am I?” The young person searches for a coherent personal and vocational identity. A favourable outcome of this stage is the individual’s ability to see oneself as a consistent and integrated person with a strong, personal identity. The unfavourable outcome is confusion over who and what one is.

Carl Rogers (1961) in his book “On becoming a Person” says, ‘One of the most revolutionary concepts to grow out of clinical experience is the growing recognition that the innermost core of man’s nature, the deepest layers of his personality, the base of his “animal nature”, is positive in nature---is basically socialized, forward-moving, rational and realistic.’

For Jung (1933), every patient over thirty-five years old “fell ill because he had lost that which the living religions of every age have given to their

followers, and none of them has really healed who did not regain his religious outlook” (p.229). He addressed narcissism when he stated, “man is never helped in his suffering by what he thinks for himself, but only by revelations of a wisdom greater than his own” (Jung, 1933, pp.240-241). Jung acknowledged both processes of growth when he noted that it is in personality unfoldment (individuation) that a person develops a transcendent function that gives one the ability to move beyond the self-centered ego.

Abraham Maslow (1949) puts up a vigorous case for man’s animal nature, pointing out that the anti-social emotions-hostility, jealousy, etc.—result from frustration of more basic impulses for love and security and belonging, which are in themselves desirable.

He defined self-actualizing persons as being self-determined, self-organized, and self-directed Maslow (1970). Their behaviour is marked by a naturalness and spontaneity that is congruent with the “positive personality” of Seligman and Csikszentmihalyi (2000,p.8). Maslow (1971) noted two processes in his two types of self-actualizing people, nontranscenders and transcenders. Whereas nontranscenders are high achievers, transcenders are more spiritual, more ego transcendent, and have a greater number of peak experiences.

Viktor Frankl (1967,1986) pointed out that happiness cannot be sought as an end in itself, but rather is the side effect of the normal pursuit of meaningful activities. He stated that when self-actualization “is made an end in itself and is aimed at as the objective of primary intention, it cannot be attained” (Frankl, 1967, p.34).

Frankl (1967,1986) asserted the existence of three dimensions of human existence: soma (the physical), psyche (including the emotions), and noetic (of the spirit). To Frankl (1967), illness manifests only in soma and psyche, not in the noetic dimension. Logotherapists are trained to assess whether the philosophical stance of the individual is materialistic (mechanical) or teleological (spiritual).

Roberto Assagioli (1965) argued that psychology had for too long focused on pathology instead of health and giftedness. He proposed psychosynthesis: the discovery and formation of a dynamic relationship of the personality with a spiritual Self. The goal is not bliss, but creativity, service, and practical livingness. The two stages of psychosynthesis involve the attainment of the following: first, individualization and self-identification in the personality and, second, the discovery of and identification of the personality with—a transpersonal, spiritual Self.

Each of the above theorists, proposed two processes of wellness in the human being. The first is the development of individuation or personality unfoldment. The second involves alignment of that personality with a spiritual or transcendent function one explicitly concerned with traits emphasized in positive psychology, such as collective well-being, optimism, resilience, and faith.

## **1.2 EMERGING THEORETICAL FRAMEWORK**

In keeping with the early theoretical concepts, is a new emerging trend towards **Positive Psychology** that emphasizes happiness, well-being and creativity rather than focusing on psychopathology (Seligman and Csikszentmihalyi January 2000).

Western psychology has highly developed theoretical concepts. Freud, Jung, Adler, Rogers and a host of others, have greatly enriched the subject matter of psychology with their unique contributions. However, most of the western theories have no practical technique to validate the theoretical conceptions.

Eastern psychology, in contrast has focused on the individual's practice of a technique like meditation or yoga and theory has then provided a conceptual framework for understanding the experience. Theory has thus developed out of practice of technique.

Indian psychologies of Buddhism and Yoga contain a wealth of information on psychological health, post conventional transpersonal development, exceptional abilities, and the method for cultivating them (Tart, 1992; Walsh, 2000). A large body of research suggests that meditation and yoga have effects ranging across psychology, physiology, and biochemistry and can enhance both psychological and physical health (Walsh, 2001).

Studies of transcendental meditation suggest that it can foster maturation as measured by scales of moral, ego, and cognitive development, intelligence, academic achievement, self-actualization, and states of consciousness (Alexander, Rainforth, & Gelderloos, 1991; Murphy & Donovan, 1997; Walsh & Vaughan, 1993; West, 1987). A variety of specific meditation exists to cultivate exceptional capacities such as concentration, compassion, and altruism, although little experimental work has been done on these (Walsh, 1999). The field of transpersonal psychology draws on this data and has developed theories that integrate Asian ideas with Western concepts and research.

### **1.3 MEDITATION AND TRANSPERSONAL DEVELOPMENT**

In their book “Paths Beyond Ego”, Walsh, Roger N and Vaughan, Frances E (1993) describe Meditation as one of the transpersonal disciplines. Others include yoga, consciousness and altered states, mysticism, mythology and psychological well-being to mention a few. Transpersonal disciplines include those experiences in which the sense of identity or self extends beyond (trans) the individual or personal to encompass wider aspects of humankind, life, psyche, and cosmos. One interpretation of the term transpersonal is that the transcendent is expressed through (trans) the personal.

According to them, there are six common elements that constitute the art of transcendence.

#### **1.3.1 Ethics**

Ethics is an essential foundation of transpersonal development. Contemplative traditions, view ethics not in terms of conventional morality but rather as an essential discipline for training of the mind. Unethical behaviour both stems and reinforces destructive mental factors such as greed and anger. Conversely, ethical behaviour undermines these and cultivates mental factors such as kindness, compassion and calm. Ultimately, ethical behaviour is said to flow spontaneously as a natural expression of identification with all people and all life. For a person at this stage, which corresponds to Lawrence Kohlberg’s highest stage of moral development, “whatever is .....thought to be necessary for sentient beings happens all the time of its own accord.” Gampopa (1971)

### **1.3.2 Attentional training and the cultivation of concentration**

It is essential for training the mind. According to psychologist William James, “The faculty of voluntarily bringing back a wandering attention over and over again is the very root of judgment, character and will. No one is *compos sui* if he have it not. An education which would improve this faculty would be education par excellence...” James, W (1962)

Being able to direct attention at will is so important because the mind tends to take on qualities of the objects to which it attends. For example, if we think of an angry person, we tend to feel angry; if of a loving person, we tend to feel loving. The person who can control attention can, therefore, control and cultivate specific emotions and motives. Ultimately, said the Indian sage Ramakrishna, the mind of such a person “is under his control; he is not under the control of his mind” Ram Dass (1998).

### **1.3.3 Emotional Transformation**

There are three components to this

- i.) The reduction of inappropriate destructive emotions such as fear and anger. What is implied here is not repression or suppression but rather clear awareness of such emotions and consciously relinquishing them where appropriate.
- ii.) The cultivation of positive emotions such as love, joy and compassion. Whereas conventional Western therapies have excellent techniques for reducing negative emotions, they have virtually none for enhancing positive emotions.

- iii.) The cultivation of equanimity, an emotional imperturbability that allows love and compassion to remain unconditional and unwavering even under duress.

#### **1.3.4 Motivation**

Ethical behaviour, attentional stability and emotional transformation all work together, along with practices such as meditation, to redirect motivation along healthier, more transpersonal directions. The net effect is a reduction in the intensity and the compulsivity of motivation and a change in its direction, variety and focus. Most important, the compulsive power of both addiction and aversion is reduced.

As motivation becomes less scattered and more focused, the things desired become more subtle, more internal. There is less emphasis on getting and more on giving. Desires gradually become less self-centered and more self-transcendent.

Traditionally this motivational shift was seen as “purification” or as “giving up attachment to the world.” In contemporary terms it is movement up Maslow’s hierarchy of needs.

The reduction of compulsive craving is said to result in a corresponding reduction in intrapsychic conflict and suffering, a claim now supported by studies of advanced meditators. Walsh, R (1993).

#### **1.3.5 Perception and Awareness**

Perception and Awareness becomes refined, more sensitive and more accurate. Meditation is one way of achieving this.

The psychiatrist historian Henri Ellenberger observed, “ the natural tendency of the mind is to roam through the past and the future; it requires a certain effort to keep one’s attention in the present.” Ellenberger, H (1970). Meditation is training in precisely that effort. The result is a present-centered freshness of perception variously described as mindfulness (Buddhism), *anuragga* (Hinduism), the “sacrament of the present moment” (Christianity), the “draught of forgetfulness, “ in which one forgets the past and comes anew into each present moment (Steiner); and as a characteristic of self- actualizers (Maslow).

When we see things clearly, accurately, sensitively, and freshly we can respond empathically and appropriately. Thus both ancient wisdom traditions and modern psychotherapies agree with Fritz Perls, the founder of Gestalt therapy, that “awareness per se---by and of itself---can be curative” Perls, F. (1969)

### **1.3.6 Wisdom**

This is something significantly more than knowledge. Whereas knowledge is something we have, wisdom is something we become. Developing it requires self-transformation. This transformation is fostered by opening defenselessly to the reality of “things as they are,” including the extent of suffering in the world.

Existentialism has emphasized this recognition most forcefully. With its description of the inevitable existential challenges of meaninglessness, freedom, and death it has rediscovered aspects of the Buddha’s first noble truth, which holds that unsatisfactoriness is an inherent part of existence.

Whereas existentialism leaves us marooned in a no-exit situation of heightened awareness of existential limits and suffering, the art of transcendence

offers a way out. For existentialism, wisdom consists of recognizing these painful facts of life and accepting them with authenticity, resoluteness (Heidegger), and courage (Tillich). For contemplative traditions this existential attitude is a preliminary rather than final wisdom and is used to redirect motivation away from trivial, egocentric pursuits toward the contemplative practices that lead to deeper wisdom. This deeper wisdom recognizes that the sense of being marooned in a no-exit situation of limits and suffering can be transcended through transforming the self that seems to suffer. Such wisdom springs from the development of direct intuitive insight into the nature of mind, self, consciousness, and cosmos. This insight matures into direct intuitive wisdom-which transforms and liberates. And with this liberation the goal of transcendence is realized.

Meditation is central because it works directly on so many processes essential to transpersonal development. It stabilizes attention, transforms emotions and motivation, cultivates awareness, heightens sensitivity to unethical behaviour, and fosters wisdom.

Meditation thus refers to the family of practices that train attention in order to bring mental processes under greater voluntary control and to cultivate specific mental qualities such as awareness, insight, concentration, equanimity and love. It aims for development of optimal states of consciousness and psychological well-being.

Thus we see that meditation is being recognized as a transpersonal discipline and is slowly gaining acceptance among Western psychologists.

However, meditation as a practice to reach higher states of human perfection, has been in existence in the east for many centuries. Since most of the meditative practices were cloaked in religion, it was not essentially looked upon as a psychological discipline.

Western psychologists have interested themselves in meditation mainly for enhanced psychological health. Meditation technique has been systematically explained in Buddhist literature. Buddhist thought has considerable implications for our psychological models of humans. For although Buddhism cannot be neatly categorized as a 'psychology', it nevertheless, in the complete picture of human beings that it represents, subsumes even the most rarefied and specialized concerns of the Western psychologist. So much so in fact that no scientific or analytical psychologies have developed in the cultures of the East. There has been no need. Buddhism together with Hinduism, Taoism and Confucianism have satisfactorily provided all the answers to the questions that easterners ask about their mental life (Fontana, David 1986).

We shall now examine some of the interventions for adolescents.

#### **1.4 INTERVENTIONS FOR ADOLESCENTS**

There has been a number of evidence of the benefits of Meditation for adults. Experimental studies have shown that Meditation affects personality, performance, and perception. Findings include evidence for enhanced creativity, perceptual sensitivity, empathy, self-actualization, a positive sense of self-control and marital satisfaction (Shapiro, D. & Walsh, R, 1984; Kwee, M, 1990; Murphy, M., & Donovan, S., 1988).

As we observe the life-span development of the human being, it becomes very clear that the adolescence is a very important stage. It is a period of growth and development wherein the direction of self-development needs to be channeled carefully and firmly. The seeds for the formation of a stable personality structure can be best laid at this stage of life.

The establishment of a stable personality structure involves different areas of an adolescent growth such as emotional stability, rational thinking, goal direction, cognitive efficiency, and creative skills and most importantly the concept of self and identity. These aspects of personality enable the adolescent to adapt and adjust to life situations efficiently. Guidance for harnessing and attaining the maximum positive human potential comes from many fields. The psychoanalytic theory, cognitive psychology and behaviour therapy to name a few.

There have been a few coping skills training programs for adolescents that have been reported. Schinke, P. Steven et.al. (1987) developed a coping skills intervention program for adolescents and found that the experimental group scored positively among others on measures of problem solving, ability to handle stress and peer pressure.

Danish, Steven J. (1997) examined how intervention agents can intervene in the life of youth to enhance the likelihood that they will be successful during adolescence and adulthood. He has described two life skills interventions to help adolescents succeed in their various life domains. They are based on the belief that adolescents are capable of being productive and responsible. The Going for the Goal (GOAL) program (S.J. Danish et.al.1992) has been taught primarily in

schools although it has also been taught after school. The second program, SUPER (Sports United to promote Education & Recreation) is an after school, sports based program.

These interventions have largely been introduced to a western population. There have been very few interventions to help the Indian adolescents to cope with the pressures they experience. The growing urban pressures of making a successful living have compelled parents to spend more time away from home. In an attempt to cope with the stresses they experience and the lack of close bonding with a significant parent, a number of adolescents and children have taken to drugs, promiscuity and alcohol.

Therefore a need has been felt to apply a technique for an Indian population that can be practiced in Indian schools, so as to help adolescents cope with difficulties they face.

## **1.5 VIPASSANA MEDITATION**

Vipassana meditation for youngsters between the ages 8-15 years has been observed to help them deal with the “storms and stresses” they face in the tumultuous growing adolescent years.

The long term goal of the practice of Vipassana meditation is the complete purification of mind wherein an individual is freed from all suffering. Not all youngsters are expected to reach this goal by the practice of meditation. However, the practice has been observed to help one improve his concentration, manage his anger and anxiety, increase his emotional stability and develop a sense of identity. These are a few by products of meditation. The regular practice of meditation can

help a person to reach the final goal of total well-being, freedom from all suffering---enlightenment. Unfortunately, in our present times, the by-products themselves (concentration, anxiety and anger control) have become the major goals of meditation.

Many courses conducted for children between the age groups 8-15 years in India and some places abroad have reported significant positive changes in their behaviour and emotional stability. However there has not been any systematic study to establish the efficacy of the technique and the benefits it can provide.

The present research is an attempt to introduce meditation practice to adolescents in a systematic manner and observe the changes they undergo as a result. A preliminary study by the present researcher, showed significant changes in anger and anxiety in a sample of 21 boys who were introduced to meditation in a school in Chennai (Raja, Radhi, 1998). The study has focused on Anapana Meditation, which is the first step of Vipassana Meditation.

At this stage, it may be pertinent to briefly highlight the myths regarding meditation.

### **1.5.1 Myths Regarding Meditation**

- Meditation is a religious practice.

This belief has long held people back from exploring or using the technique. It needs to be emphasized that different religious beliefs can in no way prevent an individual from the practice of Anapana Meditation. There is no

initiation or religious ceremony, or repetition of a mantra in this practice. All people, irrespective of their religious affiliations, can practice it universally.

- Meditation makes a person withdrawn and passive.

This belief is also widely prevalent. However, a deeper understanding of how the technique works, reveals the fact that the mind is usually cluttered with too many things with the result, individuals' thinking becomes confused. Meditation helps to clear the mind, calming it down and therefore making the thinking process clearer. The decisions and actions taken thereafter tend to be more socially productive, rather than blind reactions to stimuli.

- Meditation practice is subjective and therefore unscientific.

This premise has prevented many researchers to explore the efficacy of the technique. One has to bear in mind, however that the technique originated in the east and researchers have tried to measure its efficacy using western parameters. However, as the use of the technique has benefited quite a number of practitioners it needs to be studied and new methods of investigations may be explored.

- Meditation is a kind of daydreaming, a process in which the mind is allowed to follow flights of fancy or idly play with ideas. Almost as common is the belief that listening to music or focusing upon the associations by a theme such as peace is meditation.

- Meditation is a kind of trance, comparable in some ways to a hypnotic trance, or as deep relaxation in which the mind experiences tranquil

thoughts or happy memories, or visualizes pleasant scenery or imagines itself floating in the air or drifting on bright water.

Each of the above states has its own benefits at appropriate times, but none of them is meditation. In each of them the mind is occupied by thinking or enjoying a sleepy or dreamy condition in which there is no particular clarity of focus. Such activities are very different from meditation.

- Meditation is to “stop thinking” and an effort has to be made to keep it like a blank sheet upon which nothing is allowed to be written. Or occupy the mind with a mantra (a repeated word or phrase), so that it has no place for anything else.

Activities of this kind restrict the mind rather than allow it gradually to expand into a richer and deeper dimension, and lead to boredom and frustration.

### **1.5.2 The Meaning of Meditation**

In one form or another, meditation has been practiced by all the great spiritual traditions. It finds mention in the Hindu Vedas, which date around 1,500 BCE and constitute some of the oldest scriptures in the world. Some of the earliest teachings on the basic technique of meditation (watching of breath) were given orally by the Buddha around 500 BCE. Patanjali, the semi-legendary founder of yoga philosophy, provides even more details in the Yoga Sutras, which date from the second century BCE. An unbroken tradition of meditation extends from Patanjali down to the present day, when probably more people meditate worldwide than ever before.

Meditation involves sitting in a quiet place focusing on a certain object, for example, the breath. It is a state of poised, highly directed concentration towards the object. Meditation is the very opposite of wandering thoughts or even of a directed train of thinking. Early writers have referred to it as training the mind, (Buddhaghosa), or as a way of understanding what is going on within the mind. Other writers have defined meditation variously as stilling the mind, as focusing mental energy, as discovering the true self, as achieving inner peace, as harmonizing body and mind, or simply as sitting quietly, doing nothing (Harvey R. John 1988). By sitting quietly and doing nothing, the mind is held clear and still, alert and watchful, and free from losing itself in thinking.

### **1.5.3 The need for meditation**

Training the mind is assumed to be the task of formal education in schools and universities. By learning the facts and figures and techniques of the various academic subjects it is assumed that the mind is trained. The knowledge one gains through formal education may be of immense value, but it is not the same as training of the mind. Thinking skills gained through formal schooling can be useful to an individual, provided he/she has some power over the way in which thoughts arise and the direction which they take. Very often thoughts arise involuntarily and unbidden, and set off typically on their own course, with associations giving rise to each other. Happy thoughts, sad thoughts, anxieties, memories, hopes of the future and regrets of the past, each of them goes its own way and exerts its own power over the individual. The same is true for feelings and emotions.

Intelligence, knowledge and thinking abilities allow the mind to be very good at handling the outside world, but they may be of little value in helping an individual control his inner life.

A great many children and adolescents often find it difficult to focus on their studies or on important tasks given to them. They recognize that most of their difficulties come from thoughts, which dominate, obsess or in other ways trouble their minds. Even though they may know that these thoughts are unhelpful and often untrue and counter productive, they can do nothing to stop their incessant flow.

Meditation is one way to help them train their minds to focus on the tasks at hand.

## **1.6 THE TECHNIQUE OF VIPASSANA MEDITATION**

There are many different types of Meditation. The focus of this research is Vipassana Meditation and its efficacy in helping adolescents through their difficult years.

Vipassana, which means to see things as they really are, is one of India's most ancient techniques of meditation. It was rediscovered by Gotama Buddha more than 2500 years ago and was taught by him as a universal remedy for universal ills, i.e., an Art Of Living.

This non-sectarian technique aims for the total eradication of mental impurities and the resultant highest happiness of full liberation. Healing, not merely the curing of diseases, but the essential healing of human suffering, is its purpose.

Vipassana is a way of self-transformation through self-observation. It focuses on the deep interconnection between mind and body, which can be experienced directly by disciplined attention to the physical sensations that form the life of the body, and that continuously interconnect and condition the life of the mind. It is this observation-based, self-exploratory journey to the common root of mind and body that dissolves mental impurity, resulting in a balanced mind full of love and compassion.

The scientific laws that operate one's thoughts, feelings, judgments and sensations become clear. Through direct experience, the nature of how one grows or regresses, how one produces suffering or frees oneself from suffering is understood. Life becomes characterized by increased awareness, non-delusion, self-control and peace.

## **1.7 TEACHINGS OF THE BUDDHA**

The Buddha was an experimental scientist. He identified a problem, formulated a hypothesis, tested it, modified it in the light of experience and proceeded once again with his research by testing the reformulated hypothesis.

His system for the discovery of a genuine method for the attainment of Enlightenment was to test upon himself the various available methods purported to achieve this goal. He would find a good teacher, research his methods and test them by practicing them to their limits, that is, until he had become the equal of the teacher. At this point he would critically compare where he was at, so to speak, with his intended goal, and he invariably found the available methods unsatisfactory and rejected them. Once he had discovered a method that satisfied him, that is, a method through which he succeeded in attaining a state of

Enlightenment, he then made it available to others on the same terms. His disciples were not asked to believe him, but to test his method through practicing it themselves (Manne-Lewis, Joy 1986). He entreated his disciples in the Kalama Sutra:

Do not believe in what you have heard;

Do not believe in the traditions, because they had been handed down for generations;

Do not believe in anything because it is rumoured and spoken by many;

Do not believe merely because a written statement of some old sage is produced;

Do not believe in conjectures;

Do not believe in that as truth to which you have become attached by habit;

Do not believe merely the authority of your teachers and elders.

After observation and analysis, when it agrees with reason and is conducive to the good and gain of one and all, then accept it and live up to it.

The Buddha thus taught a technique of meditation through which the practitioner discovered for himself the laws of nature that governed the universe.

The practice of meditation begins with taking refuge in the triple gems (*tri-ratna*). The Buddha, the Dhamma and the Sangha. At the outset this practice might seem like an empty ritual, but in fact it is not.

The Buddha, himself fulfilled his mission through concerted effort, rather than receiving his enlightenment by divine grace. That effort stands, not as a miraculous exception to be revered, but as an example to be emulated. To go for refuge in the Buddha is not to worship him as a deity, but to seek inspiration and assurance in his example.

To take refuge in Dhamma, is to understand the laws of nature that govern the universe as it is these laws that one must abide by in order to reach ones' goals.

To take refuge in Sangha is to seek inspiration and help from all the people who are on the road to the discovery of truth and liberation.

The practice of *Sila*, the ethical moral code of conduct is the next step on the path to self-realisation. This systematic cultivation of virtuous thought, word, and deed focuses the meditator's efforts for progress in meditation. "Unvirtuous thoughts", for example, sexual fantasies or anger, lead to distractedness during meditation. They are a waste of time and energy for the serious meditator. Psychological purification means paring away distracting thoughts (Goleman, Daniel 1988).

The five *Silas* are:

To abstain from taking the life of sentient beings, to abstain from taking possession of anything that has not been given by its owner, to abstain from sexual misconduct, to abstain from lying or evil speech, and to abstain from intoxicating drinks.

These five *silas* are observed as precepts before the individual begins to meditate. These are not blind rules to be followed, and those deviating from them need not fear punishment from any external source.

Observance of the moral code (*sila*) helps to prepare the individual for meditation. Concentration of mind is not possible when the mind is cluttered with distracting, negative thoughts, feelings and ideas. For to indulge in any of the five activities mentioned above, one has to generate strong negative emotions. Any emotion expressed that causes harm to oneself or another is a negative emotion. To indulge in any of the above activities, causes harm to oneself or another.

On one level these are codes for proper social behaviour, but that is secondary in importance to the motivational purity that proper behaviour foreshadows. Purity is understood not only in the ordinary sense of propriety but also as the mental attitudes out of which proper speech, action, and thought arise. Behaviour is controlled because it affects the mind. Acts of purity are meant to produce a calmed and subdued mind. The purity of morality has only purity of mind as its goal.

Because a controlled mind is the goal of purity, restraint of the senses is part of purification. The means for this is *sati* (mindfulness). In mindfulness, control of the senses comes through cultivating the habit of simply noticing sensory perceptions, not allowing them to stimulate the mind into thought chains of reaction. Mindfulness is the attitude of paying sensory stimuli only the barest attention. When systematically developed into the practice of *Vipassana* (seeing things as they are), mindfulness becomes the avenue to nirvanic state. In daily practice, mindfulness leads to detachment toward the meditator's own perceptions

and thoughts. He becomes an onlooker to his stream of consciousness, weakening the pull to normal mental activity and so preparing the way to concentrated states.

*Sila* is one of the three major steps in training the mind. The other two are *Samadhi* (meditative concentration) and *Puñña* (insight).

*Samadhi* (meditative concentration) is achieved by selecting a quiet place, sitting in an upright posture and being aware of one's natural respiration. The entire focus of attention is brought to the entrance of the meditator's nose and he observes his breath going in through his nostrils and out of his nostrils. Initially this may be difficult but with sustained and persistent practice the meditator learns to focus on his respiration. He realizes that when the mind wanders away, it usually goes to two places---the past or the future. When he focuses on his breath he stays in the present. Thus he trains his mind to focus more often in the present.

Regular and sustained practice, helps a meditator to move to the third stage of training of the mind--- *Puñña* (insight). The meditator observes all the sensations arising within the body. He observes these sensations, objectively without reacting to them with craving (as in the case of a pleasant sensation) or aversion (as in the case of an unpleasant sensation). He learns to see the true nature of all phenomena---their impermanence (*annica*).

Insight is understood in the special sense of "seeing things as they are." Purification, concentration, and insight are closely related. Efforts to purify the mind facilitate initial concentration, which enables sustained insight. By developing further concentration or insight, purity becomes, instead of an act of will, effortless and natural for the meditator. Insight reinforces purity, while aiding concentration. Strong concentration can have as by-products both insight

and purity. The interaction is not linear; the development of any one facilitates the other two. There is no necessary progression, rather a simultaneous spiral of these three in the course of the meditation path. Though the presentation here is of necessity linear, there is a complex interrelation in the meditator's development of purity, concentration, and insight. These are three facets of a single process (Goleman, Daniel 1988).

Another special kind of meditation involves the practice of *metta bhavana* or *maitri* (loving kindness). This is practiced at the end of a meditation session, when the meditator radiates the peace and harmony he has achieved to everyone around him.

Absorbed in meditation, "the disciple lets his mind pervade the four quarters of the world with thoughts of loving-kindness. And so, recognizing himself in all, he suffuses the whole world with love beyond measure." (Nyanamoli, 1976). From this attitude of non-possessive love, *metta*, is born compassion, *karuna*: it takes the active form of empathy with those who suffer, who have lost hope, who are sunk in anguish. As a condition of understanding, *karuna* melts down all the barriers of separateness. It leads, also to *mudita*, joy in others' joy, the renunciation of envy and malice. Finally, having shared in the emotions of others, the meditator returns to a condition of serene detachment, *upekkha*. He responds to the world neither with attachment nor with aversion: he stands quiet witness to the flow of events, watching as each action brings into being its own series of consequences.

Thus, The Buddha's is a sophisticated psychology, in which joy emerges, not from the pursuit of goals, but from the serenity of having freed oneself from such pursuit. For The Buddha, the truly joyous person is not the hunter, but the witness. The practice of *metta bhavana*, liberates the self from the chains of obsession that bind it to the objects of longing or hatred. Joy consists, not in hating those who hate us, but in refusing to be tainted by such an emotion—which is freedom from the burden of harmful feeling.

Significantly, The Buddha says:

Victory breeds hatred.

The defeated live in pain.

Happily the peaceful live,

Giving up victory and defeat.

*Dhammapada* (XV, 201)

Such words point to the clear path that leads one out of the maze of conflicting thoughts in which people find themselves at present. In the age of “Me First” and the Bomb, when so many persuasive voices urge us to subscribe to a creed of mutually assured destruction in the name of deterrence, these words demonstrate the essential futility of war. Again war of nations finds an echo in the war of individuals, their need to subjugate those around them—whether partners, children, colleagues or subordinates.

The attitude of being a witness is to formulate a relationship with the world—with beings, objects and events, emphasizing understanding, cooperation and respect for the values of others.

The above discussion, focuses on the salient aspects of the teachings of The Buddha and their relevance in today's world. The emphasis is always on practice rather than belief in the theoretical explanations.

### **1.7.1 Relevance of the Teachings for Children/Adolescents**

The Buddha began teaching the technique of meditation to a large number of people and initially they were all adults. When his own son became his disciple, he specified the content of the teaching to make it practical and relevant for children.

Children and adolescents below the age of 18 years are taught the first two steps, namely *Sila* (moral code) and *samadhi* (meditative concentration). This is followed by the practice of *maitri* or *metta bhavana* (loving kindness).

The practice of this form of meditation is beneficial for children and young adults. A child/adolescent's mind being relatively pure makes them amenable for training. Many of one's faulty beliefs and bad mental habits are sown during childhood. Invariably, children are punished or asked to suppress their negative emotions. This does not prove to be effective, as children need to be taught how to manage their negative emotions and their distracted, unfocused pattern of thinking.

The teachings of The Buddha can have far-reaching benefits for people of all ages, the younger they are the more meaningful and useful it becomes.

## **1.8 THE TRADITION**

Since the time of Buddha, Vipassana has been handed down, to the present day, by an unbroken chain of teachers. Although Indian by descent, the current teacher in this chain, Mr. S.N. Goenka, was born and raised in Burma (Myanmar). While living there he had the good fortune to learn Vipassana from his teacher, Sayagyi U Ba Khin who was at the time a high Government official. After receiving training from his teacher for fourteen years, Mr. Goenka settled in India and began teaching Vipassana in 1969. Since then he has taught tens of thousands of people of all races and all religions in both the East and West. In 1982 he began to appoint assistant teachers to help him meet the growing demand for Vipassana courses.

### **1.8.1 The Courses**

The technique is taught at ten-day residential courses during which participants follow a prescribed Code of Discipline learn the basics of the method, and practice sufficiently to experience its beneficial results.

The course requires hard, serious work. There are three steps to the training. The first step is, for the period of the course, to abstain from killing, stealing, sexual activity, speaking falsely, and intoxicants. This simple code of moral conduct serves to calm the mind, which otherwise would be too agitated to perform the task of self-observation.

The next step is to develop some mastery over the mind by learning to fix one's attention on the natural reality of the ever changing flow of breath as it enters and leaves the nostrils.

By the fourth day the mind is calmer and more focused, better able to undertake the practice of Vipassana itself: observing sensations throughout the body, understanding their nature, and developing equanimity by learning not to react to them.

Finally, on the last full day participants learn the meditation of loving kindness or goodwill towards all, in which the purity developed during the course is shared with all beings.

The entire practice is actually a mental training. Just as we use physical exercises to improve our bodily health, Vipassana can be used to develop a healthy mind.

### **1.8.2 Children's Courses**

Mastery over the mind is important in all human activity and purification of the mind is essential for true peace and happiness. School is an appropriate place to introduce this to children. Children can learn the first step of Vipassana--the technique of Anapana--at an early age.

Anapana, which literally means "incoming and outgoing breath" in the ancient Pali language, is a technique used to concentrate and sharpen the mind for Vipassana meditation. Practicing Anapana, children learn to observe one's own natural respiration. In Anapana children find a technique that is simple, easy to learn, always available, objective and scientific. It is not pranayam. There are no rites or rituals involved in it. It provides children with a much-needed method for getting in touch with their inner selves and a way to deal with the fears and anxieties of childhood and adolescence.

In three days, children learn the basics: the know-how to use a tool that lasts as long as they do--their own breath.

For the child learning starts as he observes his own breath-- as it comes in and goes out, as it is, with no regulation or control, with no imagination, verbalisation, no artificially created elements. By watching his natural breath, the child realizes he is watching his own mind.

During the course, the children learn how to practice Anapana meditation along with the Five Precepts. It is a relaxed course specifically designed for children; short practice periods and discussions in the meditation hall are interspersed with games and activities throughout the day. The course is open to children between the ages of eight to fifteen years.

### **1.8.3 Code of Conduct for Children's Courses - The Five Percepts**

To help one succeed in practicing meditation it is important that he/she agree to follow the Code of Conduct given below. In the same way that a house needs a good foundation to support it, so the practice of meditation needs a good foundation. The good foundation for meditation is built by following the Code of Conduct. It will help one not to harm or hurt oneself or anybody else in any way.

The following rules are to be observed, as they would help in providing a good foundation for the meditation practice.

1. I promise to try to treat all beings kindly and not kill them or harm them in any way.

2. I promise to take only what is given to me and not take anything which belongs to others without permission.
3. I promise not to indulge in any sexual activity. I promise to treat other boys and girls as if they were my brothers, sisters, or best friends.
4. I promise to speak truthfully, kindly and gently, and not to tell lies or to say hurtful things to anybody or about anybody.
5. I promise not to take any alcohol, drugs or intoxicants, but to keep my mind clear.

Also, I promise to do my best to follow the instructions that I will be given during my meditation course.

So far we have discussed the technique of Vipassana Meditation and the method to be followed while teaching youngsters, namely Anapana Meditation.

Now we shall focus on the purpose of the present research.

The purpose of this research is

- To find out the efficacy of the technique of Anapana Meditation for adolescents.
- To find out whether the meditation can bring about a positive change in adolescents

- To find out whether the meditation can be a useful technique for adolescents to train their mind to concentrate in their studies
- To find out whether the meditation can bring about a change in interpersonal relationships among the adolescents.

A review of research has indicated that there is usually an intervention programme for adolescents who have met with some crisis in their lives. However there is no systematic technique to teach adolescents to carry on with their lives in a positive and healthy manner.

This study attempts to examine the role that meditation can play in shaping the lives of adolescents so that they emerge from this stage of development into fully functioning individuals.

The next chapter will deal with a review of research in this area.

## **CHAPTER II**

### **REVIEW OF RESEARCH STUDIES**

The purpose of the present study is to investigate the effectiveness of Vipassana Meditation on certain areas of the adolescents' life.

This chapter is a survey of some of the studies conducted in this area.

This is a new area of research, and therefore there is a paucity of research studies. Meditation research, so far has focused on an adult population and there have not been many systematic and scientific studies on adolescents. Therefore, the researcher has reviewed the available literature on meditation in the past few decades. The sources of research studies were from books, classical test, research journals and on-line journals.

The studies are organized in the following manner:

First, studies emphasizing the need for an intervention for adolescents are reviewed.

Second, studies of research interventions for adolescents are presented. Third, a survey of all the studies on meditation research is presented under psychological variables and physiological variables. Meditation and personality and meditation as therapy are the other areas where studies are reviewed.

Finally, a review of studies on meditation in the last decade is presented.

## **2.1 THE NEED FOR AN INTERVENTION PROGRAM FOR ADOLESCENCE**

Adolescence is quite often a period of personal adjustment and stress and previous research has found that adolescents are vulnerable to the negative effects of stressful life events (Brown, D. Jonathon and Lawton Millicent 1986). In their study they sought to determine whether a subset of adolescent girls, who routinely engage in physical exercise, escape stress-induced disturbances in physical and psychological well-being. They found that stress had a substantial debilitating effect on physical and emotional health among persons who reported exercising infrequently but not among those who reported exercising regularly.

Hurrelman, Klaus (1990) examined research on problem behaviour like drug consumption, precocious sexual activity, risky driving and aggressive behaviour, in adolescence. Many of these behaviours have important psychosocial functions in adolescent development. Some of these behaviour signal stress. The author discusses the strategies of intervention addressed toward individual behaviour (personal resources) as distinguished from those addressed toward living conditions (social resources).

Adolescence is viewed as the key transition period between childhood and adulthood. During this time, adolescents experience intense internal conflicts as they search for a balance between the need for independence and the continued need for dependence on significant others. Donald R. Nims presents a model that is designed to assist young people in becoming more self-differentiated, thus enabling them to move successfully through this developmental stage (Nims, Donald R 1998).

This has been further brought to light in Ruby Takanishi and David A Hamburg's book, *Foundation for Child Development*, (1997). According to them, early adolescence is a critically important developmental phase that has been neglected in terms of its potential to prevent educational and health problems. The book attempts to address this neglect by focusing on cross-national perspective and linking fundamental research on adolescent development to the challenges of preparing young people for adult life. Serious examination is given to increasing the positive influence of education in promoting literacy for a high-technology economy, healthy lifestyles and responsible citizenship.

## **2.2 REVIEW OF RESEARCH ON INTERVENTIONS FOR ADOLESCENTS**

Philip H. Dryer (1994) outlines ways in which educational environments and curricula can be structured to promote identity achievement in adolescents in secondary schools.

Steven P. Schinke, et al. (1987) report an outcome study of coping skills intervention to help adolescents manage stress associated with the transition from elementary school to junior high. Subjects who underwent intervention scored more positively on measures of problem solving, assertive direct refusals, adequacy of information about junior high school, ability to handle stress, ability to deal with peer pressure and general readiness for junior high school.

Moderate involvement of sports is related to lower depression levels among adolescents as reported by Sanders E. Christopher et al. (2000)

Impact of inquiry training model on the tolerance of ambiguity of students has been studied by Rengarajan V. (1999). Findings show that the inquiry training model was more effective than the conventional methods for academic achievement and tolerance of ambiguity.

Richard Bulkeley and Duncan Cramer (1995) tried to determine whether social skills training (SST) for adolescents would be more effective if clients were given diverse skills according to their individualized need within the context of group of SSTs. 22 boys and girls (aged 12-13 yrs) in SST were randomly allocated to an individualized training (IT) group or a standardized training (ST) group. The program ran over 2 yrs with each client receiving 10 weeks of consecutive training. Subjects also completed the self-report Social-Problem checklist and a role-taking test. In IT, significant change was found on all three measures; in ST, significant improvement was found on the self-report only.

The above studies describe some of the intervention programs for adolescence. Besides these, a large number of studies have focused on crisis intervention, as when the adolescent abuses drugs and alcohol.

The need was felt to examine the efficacy of an eastern method of development of personality by which the adolescent can benefit and find himself an anchor to sail through the difficulties of his age.

### **2.3 REVIEW OF RESEARCH IN MEDITATION**

Meditation research is a young but vigorous field. Over fifteen hundred publications have appeared and demonstrated psychological, physiological, and chemical effects. Different types of meditation appear to elicit overlapping but also distinct effects. The most frequently studied practice has been Transcendental Meditation.

Scientific research on meditation represents a meeting of psychological methodologies from two quite distinct philosophical and theoretical backgrounds. Meditation may be described as the methodology of Eastern psychology in that it is a means to experiential knowledge of mind and self, whereas Western psychology has adopted the scientific approach to understanding, relying on procedures, which are publicly observable and verifiable. Transpersonal psychologists have researched meditation hoping to forge a mutually beneficial link between the practices of the consciousness disciplines and the experimental techniques of science.

## **2.4 EFFECTS OF MEDITATION**

Focusing on some modernized ancient techniques that have survived to the present, Marlene R. Greenspan (1995) highlights their practical applications to modern living through a process of creative education. She presents a variety of meditative approaches to enable people of differing points of view to find a comfortable way to reap its benefits.

She describes meditation as a guideline to fulfilled living and education, in the light of health benefits, harmonious creative flow, feeling in control, and personal productivity.

Healing meditation applies meditative techniques to practical life experiences, providing the creative growth in human education that enables people to find a satisfying reason for being with positive contributions to living a good life.

Patric Barbieri (1996) discusses how becoming a more integral part of the healing process and getting to know oneself on a deeper level can lead to understanding the reasons why ineffective organized behaviours are chosen to deal with stressful situations.

Mindfulness, an eastern meditation technique, can be used to increase utilization of control theory. People would benefit from stress reduction techniques by increasing their awareness of themselves. After they have learned to slowly bring in their fears and observe the behaviours they have used to repress them, they can learn how to stop the conflict within and transform and heal the mind and body.

We shall now examine the effects of meditation in the following aspects:

Psychological, Physiological, Meditation and Personality and Meditation as Therapy

#### **2.4.1 Psychological Variables**

Among the earliest studies on meditation were those carried out in the 1950s by Das and Gastaut (1955), Bagchi and Wenger (1957) and Kasamatsu and his colleagues (1957). Their interest was primarily in physiological changes occurring during the practice of meditation, and they chose as subjects expert practitioners—yogis and Zen Buddhist monks. The research showed unusual patterns of brain wave activity during meditation, especially during periods of ‘samadhi’ or ecstasy. While methodologically crude these early attempts to understand meditation were significant in their focus on accomplished practitioners of meditation rather than on novices.

The range of experiences that can emerge during mediation is enormous. Experiences may be pleasant or painful, and intense emotions such as love or anger can alternate with periods of calm and equanimity. Although the idea of meditation as simply a relaxation response is a vast oversimplification, the general trend as meditation practice continues is toward greater calm, positive emotions, and perceptual and introspective sensitivity. Advanced experiences include profound peace, concentration and joy, intense

positive emotions of love and compassion, penetrating insights into the nature of mind, and a variety of transcendent states (Alexander, C., et al. 1991, Shapiro, D. & Walsh, R, 1984).

Enhanced perceptual ability allows insight into psychological processes and habits. One of the first insights is how extraordinarily out of control, unaware, fantasy-filled, and dreamlike our usual state of mind is. To date most knowledge of meditative experiences has come from personal accounts, and there has been little phenomenological research.

However there have been a large number of experimental studies of meditation's effects on personality, performance, and perception. Findings include evidence for enhanced creativity, perceptual sensitivity, empathy, lucid dreaming, self-actualization, a positive sense of self-control, and marital satisfaction (Shapiro, D. & Walsh, R, 1984, Kwee, M., 1990, Murphy, M., and Donovan, S. 1988). Studies of TM suggest that it may foster maturation as measured by scales of ego, moral and cognitive development, intelligence, academic achievement, self-actualization and states of consciousness (Alexander, C., et al. 1992).

A fascinating study of perception examined the Rorschach test responses of Buddhist meditators ranging from beginners to enlightened masters (Wilber, K., et al. 1986). Beginners showed normal response patterns, whereas subjects with greater concentration saw not the usual images, such as animals and people, but simply the patterns of light and dark on the Rorschach cards. That is, their minds showed little tendency to elaborate these patterns into organized images, a finding consistent with the claim that concentration focuses the mind and reduces the number of associations.

Further striking findings characterized subjects who had had an initial experience of nirvana and thereby reached the first of the four classic stages of Buddhist enlightenment. At first glance their Rorschach tests were not obviously different from those of nonmeditators. There was, however, a difference in their accounts of the test: these subjects viewed the images they saw as creations of their own minds and were aware of the moment-by-moment process by which their stream of consciousness became organized into images.

Interestingly, the initially enlightened subjects displayed evidence of normal conflicts around issues such as dependency, sexuality, and aggression. However, they showed remarkably little defensiveness and reactivity to these conflicts. In other words, they accepted and were unperturbed by their neuroses.

Those few meditators at the third stage of enlightenment gave reports that were unique in four ways. First, these meditation masters saw not only the images but the ink blot itself as a projection of the mind. Second, they showed no evidence of drive conflicts and appeared to be free of psychological conflicts usually considered an inescapable part of human existence. This finding is consistent with classic claims that psychological suffering can be dramatically reduced in advanced stages of meditation.

The third and fourth unique features were that these masters systematically linked their responses to all ten cards into an integrated response on a single theme. The result was a systematic teaching about the nature of human suffering and its alleviation. In other words, the meditation masters transformed the Rorschach testing into a teaching for the testers.

### 2.4.2 Physiological Variables

Few studies were conducted in the West until the 1970s, though as early as 1960, Peter Fenwick, of the Institute of Psychiatry in London, reported at a conference in Marseilles on his study of brain wave patterns during meditation.

In 1970 Keith Wallace published details of physiological arousal levels during the practice of Transcendental Meditation (TM) creating an interest among both psychologists and doctors.

Wallace, Benson and Wilson (1971) argued that they had evidence of a fourth major state of consciousness (after waking, sleeping and dreaming) which was characterized by very low levels of physiological arousal. They reported significant and dramatic decreases in heart rate, respiration rate, oxygen consumption and skin conductance. However, with further studies and more careful research methods, the reliability of some of these results has been thrown into doubt. There is much doubt about whether for example, heart rate and oxygen consumption decrease during meditation (Fenwick, P. et. al 1977). Some reviewers see meditation as having no effects that distinguish it from simply sitting quietly (Holmes, D.S. 1984), whereas others claim that meditation is important in bringing about a generalized reduction in many physiological system (Shapiro, D. and Walsh, R 1984). What is clear is that studies of meditation have failed to establish that it is a fourth major state of consciousness---at least in physiological terms. The evidence suggests that there are decreases in arousal that can be achieved by other relaxation practices (West, M.A. 1979a).

Little research has been carried out to assess the long-term physiological effects of the regular practice of meditation. In one six month longitudinal study (West, M.A. 1979b), people learning and practising meditation showed significant decreases in

spontaneous skin conductance responses (a measure correlated with anxiety) outside of meditation. This study also showed greater decreases in arousal during meditation as subjects practised regularly over the six-month period. Goleman and Schwartz (1976), on the basis of their research, argue that experienced meditators show faster recovery from stressful experiences than do other people.

There has been much research interest in patterns of brain wave activity during meditation. The results of some studies suggest that meditation might simply be sleep by another name, while others suggest that meditation is a basis for creative ability and holistic growth (West, M.A. 1980a and Delmonte, M.M. 1984a). Overall the EEG research indicates that there is a pattern of lowered arousal during meditation and that it may be possible to differentiate meditation from other relaxing activities and altered states of consciousness by reference to patterns of EEG activity.

The cardiovascular system is clearly affected (Shapiro, D. & Walsh, R 1984, Murphy, M. and Donovan, S. 1988). During meditation the heart rate drops, and with regular practice blood pressure also falls. Meditation can therefore be a useful treatment for mild high blood pressure, but the benefits dissipate if practice is discontinued. Blood chemistry may also shift. Hormone levels may be modified, lactate levels—sometimes regarded as a measure of relaxation—may fall, and cholesterol may be reduced.

Harte, Jane, L. et al (1995) examined the effects of running and meditation on beta-endorphin, corticotropin-releasing hormone (CRH), cortisol, and mood change in 11 elite runners (mean age 31.3 years) and 12 highly trained meditators matched in age, sex, and personality. It was predicted that mood change after these activities would be similar when associated with similar hormonal change. There were significant elevations of beta-endorphin and CRH after running and of CRH after meditation, but no significant

differences in CRH increases between groups. CRH was correlated with positive mood changes after running and meditation.

In summary, research on the physiological effects of meditation reveals decreases in arousal during the practice of meditation though it is not possible to isolate these as due specifically to the mechanics of meditation. Some remarkable changes in physiological functioning have been observed among expert practitioners of meditation but these have been single case studies rather than controlled studies of groups of meditators (Anand, B. K.Chhina, G.S. and Singh, B.1961).

### **2.4.3 Meditation and Personality**

It was shortly after the publication of Wallace and Benson's research that psychologists began to examine the effects of meditation practice upon behaviour and personality.

Comparisons of meditators and non-meditators revealed the former to be less depressed, less anxious, less irritable, more self-actualized and happier (Hjelle, L.1974 and Ferguson, P. and Gowan, J.1976). Futhermore, long-term meditators were significantly less anxious than short-term meditators. Longitudinal studies have confirmed a causal relationship by showing decreases in anxiety and neuroticism over time among those learning and regularly practicing meditation (Williams, P., Francis, A and Durham, R.1976, Fehr, T.1977, Delmonte, M.M 1984b).

Three characteristics of this research should be borne in mind. First, almost all the research focused on TM rather than other types of meditation. Second, only three studies examined changes in personality over a period greater than three weeks. Third, that a number of studies have shown that those attracted to TM are more anxious and neurotic

than the general population and are therefore more likely than other groups to exhibit large changes on such measures (Rogers, C., and Livingston, D., 1977, West M.A. 1980b).

An outcome study of a brief anxiety management programme, investigated the efficacy of anxiety control training (Snaith, R. Philip et.al. 1992). A home-based practice of meditation technique was demonstrated by the therapist in a series of 15 minutes weekly session. Considerable reduction in both generalized anxiety as well as phobic anxiety was seen.

#### **2.4.4 Meditation as Therapy**

Of the three major areas of meditation research-physiological changes, personality changes and therapy-therapy has been the least productive. Early interest was aroused by the possibility that meditation might be a useful treatment for drug addiction, but research in this area has been inadequate. While meditation has become increasingly popular as a therapy over the last 20 years, most studies evaluating its effectiveness have failed to overcome the methodological problems which dog research on psychotherapeutic outcomes.

Benson and others (1978) in one of the more careful studies, compared self-hypnosis and meditation as treatments for anxiety. Thirty-two patients practiced their techniques daily for eight weeks. Change in anxiety was determined by psychiatric assessment, self-assessment and physiological testing. Overall improvement occurred as a result of both interventions. The authors concluded that meditation is effective in the treatment of anxiety and is simple to use. Regular long-term meditation seems to reduce both legal and illegal drug use and to help prisoners by reducing anxiety, aggression and recidivism.

Woolfolk and others (1976) found meditation to be more effective than no treatment and equally effective as progressive relaxation in the treatment of insomnia over a six month period. The use of meditation in the treatment of hypertension has been carefully investigated. Most studies show only short term decreases in blood pressure, dependent upon regular meditation practice, suggesting the importance of sustained practice for beneficial outcomes (Patel,C. and North,W. 1975, Blackwell, B et.al 1976, Pollack, A.A et.al 1977). There have been no large scale and careful studies of the effectiveness of meditation as an adjunct in psychotherapy, though there are many interesting anecdotal reports of its use (Shafii, M. 1973, Carrington, P. 1977, Shapiro, D. and Giber, D.1978).

Parallels between meditation and psychoanalysis are described as methods for uncovering the unconscious, using both Freudian constructs and the constructs of G. A. Kelly (1955). Meditation, like free association, can be used to facilitate the emergence of unconscious (subverbal) material and allow for its integration at a higher (more cognitive) level of awareness ( Delmonte, Michael, M. 1989).

Psychosomatic benefits may include reduction of blood pressure, cholesterol, and the severity of asthma, migraine and chronic pain (Shapiro, D. & Walsh, R, 1984, Kwee,M., 1990, Kabat-Zinn, J.1990).

These therapeutic effects may reflect enhanced general psychological and physical health. In fact, TM meditators use less than normal amounts of psychiatric and medical care, and meditators in their mid-fifties measured twelve years younger on scales of physical aging than members of control groups (Orme-Johnson, D. and Alexander C.,1988). How much of this superior general health is actually due to meditation and how

much to associated factors such as prior good health and a healthy life-style is still unclear.

Greg Bogart (1991) reviewed research focusing on the therapeutic integration of meditative techniques. The article considers theories suggesting that meditation leads to physiological, behavioural, and cognitive changes that have potential therapeutic benefits and suggests ways in which meditation is more than just a relaxation, behavioural or cognitive technique. Views are presented of authors associated with the field of transpersonal psychology who have done work comparing Eastern psychologies and Western views of the self to illuminate how psychotherapy and meditative disciplines might inform and assist one another.

Meditative techniques can be used to help therapists learn to ground their work in their own being according to William Dubin (1991).

One well-controlled study clearly demonstrated dramatic effects on the aged (Alexander, C. , et al. 1991). A group of nursing home residents whose average age was eighty-one and who learned TM performed better on multiple measures of learning and mental health than did residents who were taught relaxation, given other mental training, or left untreated. Most striking was that after three years all the meditators were alive, whereas only 63% of the untreated residents were still alive.

The most startling research claim is that meditators can exert “action-at-a-distance.” TM researchers see fundamental reality as a field of consciousness. They therefore argue that minds are interconnected and that meditation groups of sufficient size can influence nonmeditating individuals and society at large. Several studies report that TM groups have beneficially influenced social problems. These benefits include reduced

rates of crime, violent death, traffic accidents, terrorism, and when a group meditated in the Middle East, the intensity of conflict in Lebanon (Orme-Johnson, D., et al 1988).

These findings are certainly dramatic. However, most of this and other research on TM have been conducted by members of the TM organization. Unconscious biases can easily affect research findings, so studies by researchers independent of the TM organization are essential.

In summary, meditation may produce a large number of effects and therapeutic benefits. However, some experimental designs and control groups have been less than ideal, most meditation subjects have been more beginners by traditional standards, and it is often unclear whether meditation is necessarily more effective for clinical disorders than other self-regulation strategies such as relaxation training, biofeedback, and self-hypnosis. On the other hand, meditators often report that the practice is more meaningful, enjoyable, and easier to continue than other approaches and fosters an interest in self-exploration (Shapiro, D. & Walsh, R, 1984 and Kabat-Zinn, J. 1990)

## **2.5 STUDIES ON MEDITATION IN THE LAST DECADE**

Meditation has contributed to the mental health in India since the beginning of its civilization. It is now used along with psychotherapy in many places in the west. According to Vignes, Jacques (1997) it should be studied by clinical psychologists in India both theoretically and practically, the result of this work could be one of their important contributions to the emerging world psychology.

Urbanowski, Ferris B. and Miller, John J. (1996) have presented a model, whereby meditation practices are interwoven in the process of traditional psychotherapy to facilitate healing and empower the client. Five actual therapy cases are presented to

demonstrate the diversity of treatment approaches with this model. The authors discuss how combining meditation practice with psychotherapy can simultaneously develop ego strengthening as well as meaningful experiences of egolessness, even for the trauma survivor. A strong therapeutic alliance as well as trust between client and therapist is the cornerstone of this integrated approach. The combined treatment of meditation with psychotherapy may decrease mental care utilization and yet enhance the psychotherapeutic process in this era of managed care and cost containment.

Although research evidence exists concerning the efficacy of meditation in psychotherapeutic settings, therapists and counselors are often unfamiliar with meditative techniques and their usefulness (Kelly, Gary, F. 1996). Those in professional fields frequently lack ways of bridging the gap between what may represent the spiritual domain of life and the more pragmatic concerns typically presented by clients. He presents a model that employs meditative approaches to enhance the therapy process for practitioners as well as their clients. The model is designed to provide a sequential approach to dealing with relaxation, self-awareness, inner control mechanisms, emotional felt senses, and intuition, within a non-religious context.

Smith, W. Paul et al (1995) investigated the impact that meditation has on M.W Fordyce's Personal Happiness Enhancement Program. The group of undergraduates who were introduced to meditation significantly improved on all dependent measures-The happiness, measure, Beck Depression Inventory and State-Trait anxiety inventory.

Significantly lower anxiety was found for post-graduate counseling students who exercised and meditated. They had significantly greater inner-directedness than those who only exercised or who did neither (Brown, Lynn L.& Robinson, Sharon E 1993).

Frequent meditators reported significantly fewer stressors and illness symptoms, lower levels of anxiety, hostility, depression and dysphoria and higher levels of positive affect and sensation seeking than did infrequent meditators (Beauchamp-Turner, et al 1992). Frequent meditation was also associated with reductions in the degree of correlation between stress and dysphoria. Thus for frequent meditators, increased stress and illness symptoms were not necessarily accompanied by increased negative effect.

Pearl, Joseph H and Carlozzi, Alfred F.(1994) compared the responses of 24 subjects practicing Clinically Standardized Meditation for 8 weeks and 26 non-meditating control subjects on measures of empathy and anxiety. Meditation decreased anxiety but did not increase empathy.

Another study exploring the differences between meditators and non-meditators with regard to ahamkara, ego-functioning and anxiety, it was observed that meditators manifested less ahamkara and anxiety and strong ego functions compared to non-meditators (Kumar, S.K. Kiran and Raj, Archana 1999).

A follow-up of a previous study (J. Kabat-Zinn et al 1984) of 22 medical outpatients showed maintenance of the gains obtained in the original study on depression and anxiety scales as well as on the number and severity of panic attacks. Ongoing compliance with the meditation practice was also demonstrated in the majority of subjects at 3 years. (Miller, John J; Fletcher, Ken and Kabat-Zinn, Jon 1995)

Contrary to the above finding was the study of Joseph Tloczynski (1994). Anxiety and family problem scores significantly increased for a group of undergraduate students who meditated regularly. Also their scores on Feeling Reactivity Scale increased. The study also had a high rate of dropout.

No differences in psychosocial adaptation between meditators and non-meditators were found in a study by Lepuschitz, Judith K and Hartman, Valerie L. (1996).

The majority of the studies suggest that the practice of Meditation leads to lower anxiety levels. This is also brought out clearly by Snaith, Philip (1998). According to him, meditation is a seldom used therapeutic practice and the reasons for this neglect are worth consideration. However all reviews of the topic point to benefits reported in the reduction in anxiety. The advantages of self-management, by meditation or other means (autogenic training and the relaxation response) include

- the abbreviation of therapist time;
- perceived self-efficacy
- the importance to the individual of the realization that he or she has played the major part in improvement,
- consequent increase in self-esteem have wide implications for generalization of the beneficial effects.

John, J Janowiak and Robert Hackman (1994) explored the efficacy of meditation and relaxation in promoting self-actualization and changes in self-reported stress among 62 university students. One group was given mantra meditation and the other a yogic relaxation technique referred to as Shavasana. Both groups showed significant increases in scores on self-actualization, however no differences were found between groups. Meditation training was associated with larger gains in scores on measures of systematic relaxed behaviour than of the relaxation training.

In summary, it can be said that recent years have seen an increase in meditation research. However, most studies have centered on Transcendental Meditation (TM) and on an adult population. Experiences of those from a variety of meditative traditions, other than TM need to be explored and studied.

## **2.6 STUDIES ON VIPASSANA MEDITATION**

Young, Shinzen (1994) presents a formula for the Buddhist practice of Vipassana meditation as ordinary experience plus mindfulness plus equanimity yields insight and purification. Thus, Vipassana Meditation requires becoming aware of all of ones' senses and acknowledging any negative feelings, pain or blockages in order to achieve equanimity. Equanimity is defined as not interfering with the follow of senses at any level, including the level of preconscious processing. The achievement of purification and insight leads to spiritual reality and energy, as well as empowerment.

Courses on Vipassana meditation have been held in jails since 1975. Courses conducted at the Central Jail, Jaipur, in 1975 and 1975-77 (Shah, 1976) and in Gujarat in 1991-92 (Unnithan and Ahuja, 1977) have revealed many positive changes in inmates. There are some studies documenting the efficacy of Vipassana in Drug Addiction and other psychiatric disorders (Hammersley & Cregan 1986).

Chandiramani, et al (1994) studied the impact of Vipassana Meditation on the Jail inmates' (Tihar Jail) personality, anti social tendencies and certain psychological aspects such as well-being, hostility, hope and helplessness. They found a considerable reduction in the neurotic predisposition, hostility and feelings of helplessness reported by the prisoners while the sense of hope and well-being were enhanced following Vipassana courses.

Khosla (1994) presented case studies demonstrating the efficacy of Vipassana meditation on the improvement in the mental health of individuals with mental disorders.

Kabat-Zinn and associates (1984) have used Mindfulness Meditation for the self-regulation of chronic pain. They found that Mindfulness Meditation Training in the context of a stress reduction and relaxation program can be highly effective in reducing self-reports of both pain and pain-related behaviors in the majority of patients referred to it for chronic pain.

Forty-eight adults who were diagnosed with mild-moderate essential hypertension were evaluated for electrophysiological changes following biofeedback technique ( Dixit, S.P, Agarwal, A. & Dubey, G.P.1994). Twenty-eight cases were trained in Vipassana meditation. Electrophysiological parameters showed a significant effect of the meditation in regulating blood pressure.

The most recent study was conducted by Emavardhana, Tipawade & Tori, Christopher D. (1997). According to them, to enhance psychological adjustment, Vipassana meditation assists individuals to perceive the transitory nature of the self. Because the consequences of this potentially troubling insight are not well understood, changes in self-concept and ego defense mechanisms of 438 young (mean age 18yrs) Thai subjects who attended 7 day Vipassana meditation retreats and a non-treated control group of 281 subjects were compared. Multivariate statistical analysis revealed positive gains in all areas of self-representation among meditators relative to controls. Ego defense mechanisms of the meditation participants also underwent significant changes with coping becoming characterized by greater maturity and tolerance of common stressors. Increases in Buddhist beliefs were significantly correlated with heightened self-esteem and less impulsiveness.

Apart from the above study, there have not been many studies which attempted to train adolescents in meditation. Meditation, hitherto has been beneficial to large number of adults, while researchers have not focused on studying the impact of meditation on children or adolescents.

Therefore, a need was felt to conduct a systematic study on the impact of Vipassana meditation on some cognitive, conative and affective aspects in children.

## **2.7 COMPLICATIONS IN THE PRACTICE OF MEDITATION**

A general principle in psychiatry states that any therapy powerful enough to be helpful is also powerful enough to be harmful. This seems to hold true for meditation, though serious casualties are rare. While meditators may experience psychological difficulties at any stage, problems are more frequent in beginners, those doing intense practice without adequate supervision, and in people with pre-existing psychopathology. Some difficult experiences may prove to be cathartic and beneficial, a process TM calls “unstressing.”

The range of difficulties is wide. It may include emotional lability with episodes of anxiety, agitation, depression, and euphoria. Psychological conflicts may surface and somatic symptoms such as muscle or gastrointestinal spasms may appear. Meditators may ruminate obsessively or be confronted by painful existential questions. On rare occasions, defenses may be overwhelmed, resulting in a psychotic break, especially in those with a history of previous psychosis (Epstein, M., and Lieff, J. 1981). Advanced practitioners may also experience difficulties, although they are more likely to be subtler and to involve existential or spiritual concerns (Wilber, K. 1993). Development at any level involves challenges.

## 2.8 SUMMARY OF THE REVIEW OF RESEARCH STUDIES

A few important aspects have been brought to light in this chapter of review of research studies on meditation.

In general, research studies tended very much to follow a 'medical model' approach. Those who participated as subjects in this research were viewed rather like patients with an illness, for which meditation was the hypothesized cure. Thus, measures of personality were taken before they began meditation practice and again after a short period of practice. Improvement on these measures was then assessed. Meditation has come to be seen as a kind of therapy for current maladies such as hypertension, drug abuse, headaches and even as an aid to memory and scholastic performance (West, Michael A 1986).

Such concerns with short-term gains accruing from meditation practice limits its scope. The benefits of meditation far exceed this. The technique of meditation is unique in that it is a resource to enhance ones' potential and it can become a healthy way of living. The forms of meditation may vary, but the underlying principle remains similar. In that, wellness and health, whether physical or psychological comes from within the individual. And when the individual is made strong from within, by the practice of meditation, he learns to deal with external threats and dangers effectively.

Adolescence is an extremely important stage in the life-span development of an individual. The inner turmoil, storms, and stresses need to be dealt with in a positive and creative manner. At no other time is there a greater need to train an individual to manage his emotions and behaviour that could help him to lead a healthy and productive life. This also goes a long way in helping him achieve his goals. This technique of meditation helps

the adolescent to learn to cope with stressors as well as manage negative emotions experienced. Above all it serves as an anchor in difficult times.

An intrinsic part of any scientific investigation involves the framing of objectives for the study. The boundaries of the objectives limits the far reaching scope of meditation. However, the present research uses the scientific paradigm to study the effect of meditation practice on adolescents by setting up objectives for the study. So far, there has not been any research that involves the teaching of Vipassana Meditation to adolescents and studying its effects in a systematic and scientific manner.

## CHAPTER III

### PROBLEM AND HYPOTHESES

The research evidence reviewed has suggested that alternate interventions like meditation has proved to be effective for adults and clinical sample. Irrespective of the meditation techniques adopted, the studies reviewed have equivocally indicated the efficacy of various forms of meditation. However, the efficacy of meditation among adolescents has not been investigated.

The present research has attempted to address this aspect by setting up the following research questions.

1. Is it feasible to teach meditation to early adolescents?
2. Does Vipassana Meditation has an impact on concentration, social isolation, anger, disruptive classroom behaviour of adolescents and their relations with teachers and parents?
3. Do adolescents trained in Vipassana Meditation fare better when compared to adolescents who are not trained in Vipassana Meditation on concentration, social isolation, anger, disruptive classroom behaviour and their relations with teachers and parents?
4. What is the nature of experiences of adolescents who practice Vipassana Meditation regularly?
5. At what point in the entire duration of training programme, would Vipassana Meditation be most effective?

Keeping in mind the above issues, the present investigation was carried out. A review of research literature focusing on Meditation Research revealed a positive impact of meditation on certain personality factors and emotional factors (Chandiramani et al, 1994, Emmavardhana, Tipawade & Tori, Christopher D 1997). Most of the research has centered on adult population and clinical samples. Having come across positive evidence for such samples, the hypotheses for the present study was set up.

### **HYPOTHESES**

1. There will be a significant improvement in the level of concentration of adolescents after meditation.
2. There will be a significant reduction in feelings of social isolation after meditation.
3. There will be a significant reduction in expressed anger after meditation.
4. There will be a significant reduction in disruptive classroom behaviour after meditation.
5. There will be a significant improvement in the adolescent's relation with teachers and parents after meditation.
6. There will be a significant gain in the groups that underwent training in meditation on certain cognitive, emotional and social factors when compared to the group that did not undergo training in meditation.
7. As the training period increases there will be a significant gain in cognitive, social and emotional factors in adolescents.

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7. As the training period increases there will be a significant gain in cognitive, social and emotional factors in adolescents.

## CHAPTER IV

### METHOD OF INVESTIGATION

#### 4.1 OBJECTIVE OF THE STUDY

The present study is an investigation of the efficacy of Vipassana Meditation on certain cognitive, social and emotional factors among early adolescents.

To test the hypothesis, a Before and After Experimental Two-Arm Cross-Over Design was chosen. The investigation was carried over a period of 6-months and multiple assessments were employed.

#### 4.2 OPERATIONAL DEFINITION OF KEY TERMS

1. **Vipassana Meditation:** This is a form of Meditation that was taught by The Buddha. When taught to adults, it consists of three stages:

*Sila* (moral code)

*Samadhi* (concentration of mind)

*Panna* (wisdom)

When taught to adolescents and children only the first two stages are involved.

*Sila* is the moral code of conduct for the entire meditation programme.

*Samadhi* is the observation of ones natural respiration as it comes in and leaves the nostrils.

This meditation for adolescents and children is called *Anapana Meditation*, which is the first stage of Vipassana Meditation.

2. **Cognitive Factors:** Concentration: Specifically in the classroom situation. It involves inattentiveness in the classroom, mind wandering and distraction in a classroom.
3. **Social Factors:** These include
  - a. Social Isolation---not being included in a group, feeling left out
  - b. Disruptive classroom behaviour---playing mischief in class, teasing other children, gossiping
  - c. Relation with teachers and parents---enjoying quality time spent with each other.
4. **Emotional factor:** Expressed Anger-----behaviour, feelings and thoughts expressed outward such as, throwing things when angry, arguing with teachers and other superiors.

#### **4.3 SAMPLE**

The location of the present study was Lady Andal Higher Secondary and Matriculation School, Harrington Road, Chetput, Chennai.

Students from class six and eight took part in the research study.

The sample was a purposive sample and all the children were of 11 years to 13 years and were of high socio economic strata.

## **4.4 TOOLS**

The existing psychological assessment tools that were surveyed were not found to be comprehensive by themselves. The school's student's requirements were very specific. The intervention was aimed at fostering better discipline in students especially in the classroom. Therefore a need was felt to develop a questionnaire, keeping in mind the needs of the students of the school. Other questionnaires that were available were not found to be relevant to this particular group.

Previous experience of the present researcher, in another school, showed that there were many aspects of behaviour, which were not covered by the existing questionnaires, and these aspects had to be addressed. Therefore an inventory was constructed and validated.

### **4.4.1 Tool Construction**

A questionnaire containing statements, which describe the attitude, feelings and behaviour of adolescents was constructed. Variables chosen generally involved classroom behaviour and emotions of adolescents.

Items were selected keeping in mind the review of literature, opinions of experts in their area and other questionnaires that are currently in use.

The items were edited by thoroughly perusing the list, consulting experts in this process and eliminating the less relevant items. A total of 55 items were thus finalized. The questionnaire was then administered to a sample of 297 respondents and scored on a 4-point scale. ( Always, Often, Sometimes, Never).

**4.4.2 Scoring:** The questionnaire was scored separately for each of the five factors. 48 items were scored directly.

Always – 4

Often – 3

Sometimes – 2

Never – 1

The other seven items were reverse scored.

Therefore, higher the score, the higher the negative trait.

For example, a high score on concentration would mean the lack of concentration. The range of scores for this factor is 64-16.

A high score on social isolation would mean greater social isolation. The range of scores for this factor is 56-14.

A high score on expressed anger would mean higher levels of anger. The range of scores for this factor is 32-8.

A high score on disobedience would mean high level of disobedience. The range of scores for this factor is 36-9.

A high score on relation with parents and teachers would mean poor relations with parents and teachers. The range of scores for this factor is 20-5.

#### 4.5 FACTOR ANALYSIS

The data obtained after scoring the questionnaire were subjected to factor analysis. The items not showing enough variation of responses and those with low correlation with the total score were eliminated. Items with enough variance and high correlation with the total score were retained.

The Chronbach Alpha coefficient was found to be 0.98, which indicated a high internal consistency. Factor analysis to extract principle components was carried out. This resulted in 5 factors explaining 75% variance.

**Table I: Showing the Common Factor Variance & the Eigen Value**

Factor	Communality	Eigen Value	Percentage of Variance	Cumulative percentage
I	0.58	35.84	65.2	65.2
II	0.63	1.999	3.6	68.8
III	0.50	1.57	2.9	71.7
IV	0.62	1.21	2.2	73.9
V	0.41	1.07	1.9	75.8

The original 55-item version was subjected to principle component analysis. This resulted in 5 factors contributing to 75% of total variance. Major portion of this variance is taken by the first factor (65.2%). It also had a very high Eigen value indicating its unique and optimum contribution.

Items loading above 0.25 were taken into consideration for arriving at final version of the questionnaire.

The factor structure is given below.

Table II Showing the Factor Structure

## Factor I

ITEM NO.	FACTOR LOADING	DESCRIPTION	NAME OF THE FACTOR
10	0.66	Concentration	<b>Concentration</b>
35	0.61	Distraction	
25	0.59	Distraction	
14	0.57	Lack of memory	
12	0.55	Inattentiveness	
38	0.51	Memory	
28	0.51	Hesitation in speaking	
44	0.51	Daydreaming	
47	0.51	Lack of memory	
23	0.51	Stage fear	
9	0.46	Fear of exams	
42	0.40	Forgetfulness	
45	0.37	Lack of understanding	
27	0.36	Restlessness	
24	0.33	Fear, lack of confidence	
54	0.33	Restlessness	

The first factor (F1) was loaded with 16 items having a coefficient ranging from 0.65966 to 0.32820. These items described concentration, distraction, lack of memory, and restlessness in the classroom. Though all the items assess cognitive related components, they are directly or indirectly related to concentration—an essential component of classroom behaviour for an adolescent. Keeping this in mind, the factor was named **Concentration** rather than cognitive factors. This factor contributed to 65.2% of total variance, which is the highest.

**Table III Showing the Factor Structure**

**Factor II**

<b>ITEM NO.</b>	<b>FACTOR LOADING</b>	<b>DESCRIPTION</b>	<b>NAME OF THE FACTOR</b>
33	0.50	Do not 'fit-in'	Social Isolation
21	0.50	Do not 'fit-in'	
6	0.47	sorrow	
3	0.46	likeability	
52	0.46	Keep quiet when bullied	
19	0.44	Bad dreams	
13	0.43	Feel bad when teased	
2	0.38	Fear of speaking in front of group	
31	0.36	Upset with bad language	
55	0.35	Lack of assertiveness	
40	0.33	Bullied in school	
32	0.28	jealousy	

The second factor (F2) was loaded with 12 items having a coefficient ranging from 0.50 to 0.27. These items described feeling left out in a group, sorrow, fear of speaking in front of a group and being bullied. Since all these tendencies describe inhibition in social situations, the factor was named **Social Isolation**. This factor contributed 3.6% of the total variance.

Table IV Showing the Factor Structure

## Factor III

ITEM NO.	FACTOR LOADING	DESCRIPTION	NAME OF THE FACTOR
4	0.64	Anger, violence	Expressed Anger
48	0.63	Defiance	
46	0.60	Defiance, hostility	
17	0.56	Abusive	
15	0.51	Aggression	
53	0.44	Violence	
36	0.42	Belligerent	
8	0.40	Care of father	
1	0.29	Anger	

The third factor (F3) was loaded with 9 items having a coefficient ranging from 0.63604 to 0.29386. These items described anger, violence, defiance and aggression. Since all these tendencies clearly describe anger expressed outward, the factor was named **Expressed Anger**. This factor contributed to 2.9% of the total variance.

**Table V Showing the Factor Structure**

**Factor IV**

<b>ITEM NO.</b>	<b>FACTOR LOADING</b>	<b>DESCRIPTION</b>	<b>NAME OF THE FACTOR</b>
51	0.56	Playing mischief in class	Disobedience
39	0.52	Teasing other children	
30	0.51	Gossiping	
49	0.46	Disobedience	
7	0.44	Jealousy	
16	0.43	Disturbing children in class	
50	0.42	Speak rudely to parents	
37	0.42	Disobedience	
18	0.38	impatient	

The fourth factor (F4) was loaded with 9 items having a coefficient ranging from 0.56391 to 0.38072. These items described indulging in mischief in class, teasing other children and disturbing other children in class. All these behaviour was clearly against the class rules and hence this factor was named **Disobedience**. This factor contributed to 2.2% of total variance.

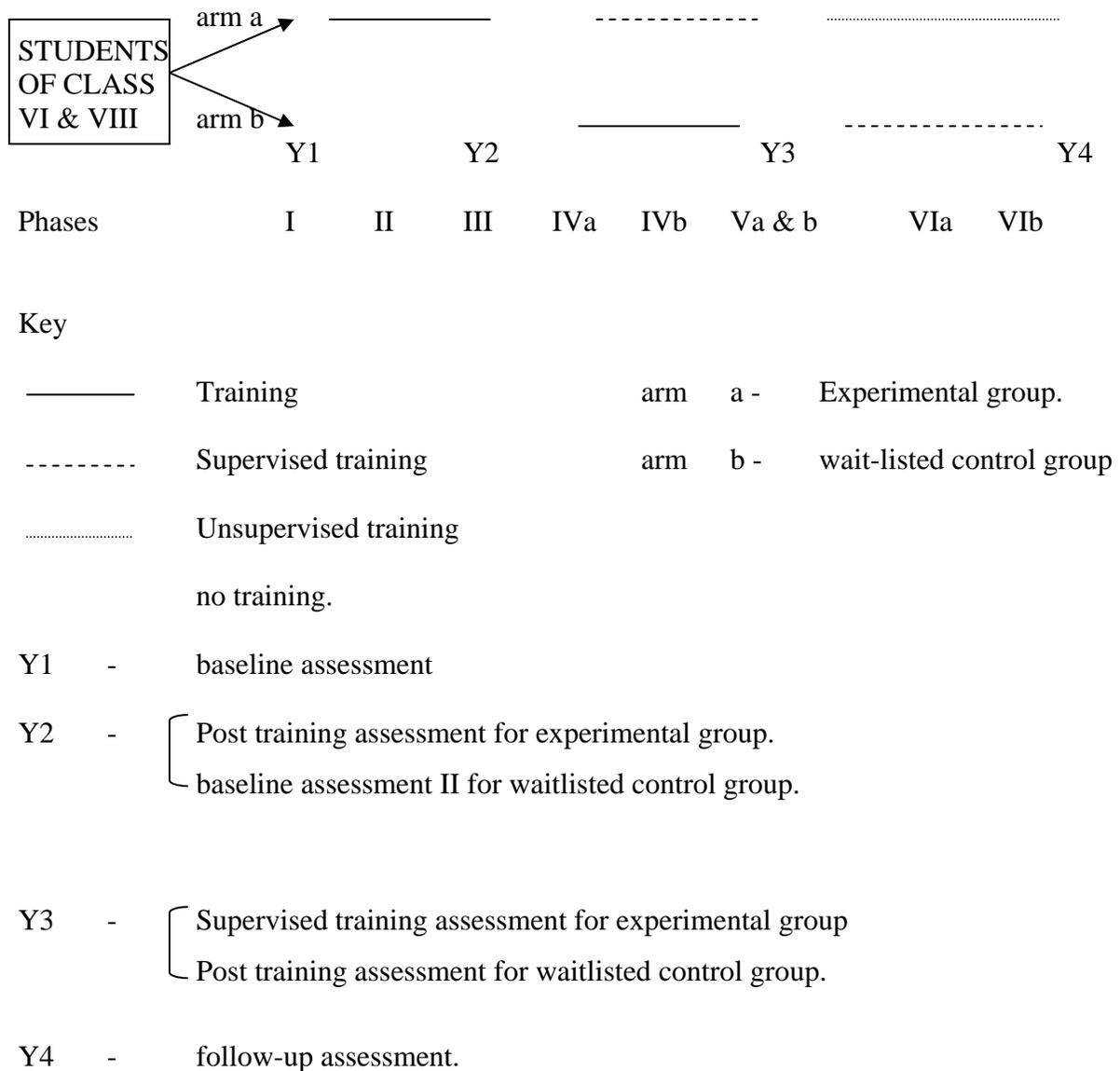
**Table VI Showing the Factor Structure****Factor V**

<b>ITEM NO.</b>	<b>FACTOR LOADING</b>	<b>DESCRIPTION</b>	<b>NAME OF THE FACTOR</b>
5	0.53	Good time with mother	Relations with parents and teachers
22	0.52	Well provided for by parents	
34	0.47	Help from teachers when in trouble	
41	0.47	Talks to mother when upset	
20	0.46	Obedient	

The fifth factor (F5) was loaded with 5 items having a coefficient ranging from 0.52813 to 0.46452. These items described rapport with parents and teachers and obedience. As these descriptions reflected feelings towards parents and teachers, this factor was named **Relations with Parents and Teachers**. This factor contributed 1.9% of total variance.

The Factorial Validity of the Questionnaire used in this investigation was established and the researcher proceeded for the main study.

#### 4.6 RESEARCH DESIGN OF THE MAIN STUDY



The research design chosen for this study was a **Before and After Two-arm Crossover Design**.

This was chosen keeping the following factors into consideration:

1. Review of research has suggested that it is unethical to deprive the control group of the benefits of experimental intervention enjoyed by the experimental group.
2. As the sample was chosen from the school, the management requested the researcher to extend the training programme to the other classes (control group) as well. The school management viewed the meditation training programme more as an educational programme rather than as a therapeutic intervention.
3. To replicate the effect of the training programme on the experimental group and observe whether the same changes occur in the control group.

#### **4.7 PHASES OF STUDY**

Phase I: Pre-test period. The first assessment for both experimental and waitlisted control group is taken as Baseline 1 assessment. During this period, the entire sample (N=103) were administered the above standardized questionnaire.

Phase II: Training for Experimental group 1. Total number of meditation sessions was 10hours and were spread over 5 days with 2 hours everyday.

Beginning with the ground rules and instruction on moral code of conduct (*sila*) the students were instructed to observe their natural respiration (*samadhi*) with the guidance of the teacher. The entire training involved the observation of the incoming and out going breath, interspersed with guidance on how to use the learning in every day life. Stories were also narrated to make the training more interesting to students and also to reinforce the concepts learnt. There was an audio-visual presentation throughout the training, which served as an additional reinforcement.

Phase III: Post Training Assessment (Immediate). This was carried out for both, the experimental and waitlisted control group after the training for the experimental group.

Phase IVa: Supervised training for experimental group was carried out for two months. The subjects meditated under supervision and doubts and queries on the practice were clarified.

Phase IVb: Training period was carried out for the wait-listed control group. It followed the same pattern as that of the experimental group.

Phase Va: Post training Assessment after Supervised Training for experimental group was conducted.

Phase Vb: Post Training Assessment for Wait-listed Control Group (Immediate). This assessment was carried out soon after the 5-day meditation training.

Phase VIa: Unsupervised training for Experimental group. This involved practice of the meditation technique on their own without supervision. This phase terminated with Final Post test Assessment.

Phase VIb: Supervised training for wait-listed control group was carried out which also involved clarifications of the technique. This phase terminated with Final Post test Assessment.

#### **4.8 QUALIFICATIONS OF THE TRAINER**

The researcher completed three 10-day Vipassana Meditation Courses as taught by Shri.S.N.Goenka in the Vipassana International Meditation Center, Hyderabad. She

also served in a number of courses as a volunteer. She was trained as a Children's Course Teacher (CCT) under the guidance of Mrs. Sabrina Katakam, Senior Meditator, a Children's Course Teacher and presently an Assistant Teacher of Vipassana Meditation. Mrs. Sabrina Katakam assisted in conducting the training programme for the students in the present research study.

#### **4.9 TRAINING CONTENTS, KEY CONCEPTS, RATIONALE AND PROCEDURE OF MEDITATION**

The meditation training began with a brief orientation for the sample that included both the experimental group and the control group. The subjects were students of sixth and eighth class. They were instructed about the questionnaire to be answered by them and they were then distributed. This constituted the pre-training assessment.

The meditation training began on 29<sup>th</sup> of November 1999 and ended on 3<sup>rd</sup> of December 1999 for the experimental group of the sixth and eighth class. Post training assessment for control and experimental groups was carried out at the end of the weeks' training.

##### **Training contents**

The first day began with the taking of five precepts, which also constituted the ground rules of the week long training programme.

1. abstain from stealing
2. abstain from speaking lies
3. abstain from using harsh words and gossip
4. abstain from taking intoxicants
5. abstain from indulging in sexual activities

The instructions for meditation followed, which included the purpose and rationale for the training. The instructions were given by Mr. S N Goenka (the teacher of Vipassana Meditation) and played on the tape. They were as follows:

“Sit with back and neck straight and eyes closed. Those wearing glasses could remove them. Focus your entire attention at the entrance of your nostrils, and observe your incoming and outgoing breath. Your normal, natural breath, as it is. Observe whether it has gone in or come out.”

The initial time period for meditation lasted for 10 minutes and was gradually increased to 30 minutes by the end of the training.

The training programme lasted for 2 hours each day with a break of 10 minutes in between. It ended on the fifth day. Stories were narrated in order to bring home the purpose of the training and video instructions helped reinforce the learning. The training was so designed so as to make it relevant to the subjects and to help them deal with their day-to-day problems.

The final session on the fifth day was a special meditation session (*maitri*) in which the children spread their happiness to everyone around them. This way, they learnt the importance of sharing the peace they have found, with everyone around them.

Supervised training continued for the experimental group for two months. At the end of this, an assessment was made using the responses made by the experimental group on the questionnaire. The control group was wait-listed during this period.

After 2 months, the control group was taken for the training. The same instructions and procedure was followed for this group as the experimental group. A post training assessment was carried out for this group also.

The final follow-up post training assessment was carried out after one month of the training programme.

The entire training and collection of data, lasted for six-months.

In addition to the assessments made at various intervals, the researcher kept a diary of all the comments and feedback of the subjects in all the phases. The researcher's observations and other teachers' observations were also recorded in this diary. This is analyzed separately as content analysis.

After the completion of training for the entire sample, and the completion of assessment, the data sheets were checked for completion. Only the completed data was taken up for statistical analysis.

## CHAPTER V

### RESULTS AND ANALYSIS

The focus of the present study is to examine the efficacy of Vipassana meditation on certain cognitive, social and emotional factors among early adolescents.

The data, collected in phases over a period of six months, and described in detail in the previous chapter, was taken up for statistical analysis. The present chapter describes in detail, the results obtained from the statistical analysis.

#### 5.1 SAMPLE CHARACTERISTICS

**Table 1: Showing the Sample Characteristics**

a)

Boys	Girls	Class VI	Class VIII
52	51	52	51

b)

	Class VI Boys	Class VI Girls	Class VIII Boys	Class VIII Girls
Mean age	11	11	13	13

The sample taken up for study consisted of 103 boys and girls from classes VI and VIII. 52 of the total sample were boys and 51 were girls. The class VI students numbered 52 while 51 were from class VIII.

The mean age of class VI students was 11 years and mean age of class VIII students was 13 years.

**Table 2 : Showing the Mean & SD on 5 factors at Baseline level for the Total Sample**

Baseline	Experimental Group		Wait-Listed Control Group		F-Ratio
	Mean	SD	Mean	SD	
<b>Concentration</b>	35.17	8.17	34.25	7.66	0.3522
<b>Social Isolation</b>	30.04	5.99	26.71	5.8	8.18 **
<b>Anger</b>	12.90	3.07	12.77	2.89	0.511
<b>Disobedience</b>	15.43	3.54	15.55	3.5	0.033
<b>Relations with parents and teachers</b>	9.58	2.49	10.46	2.49	3.16

\*\* Sig. At 0.01 level

The table shows the mean and SD on 5 factors at the baseline level for the total sample. This is to test the homogeneity of the two groups before they were introduced to the meditation programme.

The results show that the experimental group has a mean of 30.04 and SD of 5.99 for Social Isolation. This differs significantly from the wait-listed control group that has a mean of 26.71 and SD of 5.8. Therefore the experimental group at the beginning of the meditation programme was more isolated in social situations. In that, they felt lonely, uncomfortable in a group, afraid to talk in front of a group and put up with bullying by others. This tendency was seen more in the experimental group than the wait-listed control group.

This significant difference between the groups on Social Isolation will be considered while discussing the later changes under different training conditions. Therefore it can be accepted that the groups were matched for age, gender and school environment and also in their classroom behaviour pattern except for Social Isolation.

## 5.2 CLASSROOM RELATED BEHAVIOUR

**Table 3: Showing the Within-Group analysis across conditions for Experimental Group on the 5 factors**

Conditions	FACTORS				
	Concentration	Social Isolation	Expressed Anger	Disobedience	Relations with parents and teachers
<b>Baseline</b>	35.17	30.04	12.90	15.43	9.59
<b>Post training</b>	33.80	28.08	13.53	15.61	9.76
<b>Supervised training</b>	34.65	27.57	13.61	15.51	9.98
<b>Follow-up</b>	32.76	26.14	13.68	15.53	10.45
<b>F-ratio</b>	0.82	3.25	0.63	0.0255	1.0091
<b>Significance level</b>	NS	Significant 0.02 level	NS	NS	NS

The table shows the within-group analysis across the four conditions for the Experimental Group on the 5 factors. Duncan's Multiple Range test was used to find out if the Experimental Group changed significantly on the 5 factors as the conditions progressed. This test enables one to make multiple comparisons at a glance.

The results show that the Experimental Group changed significantly on Social Isolation as the conditions progressed. This means that the group at the beginning of the meditation programme was lonely, afraid to talk in front of a group, uncomfortable within the group. Towards the end of the 6-month period they emerged more comfortable with each other, and less distant from one another. They experienced less isolation in social situations. This enhancement in social participation and involvement can be attributed to the training effect where the adolescents were taught about self-awareness and sharing

whatever they have with others and channelizing their energies to constructive group activities. It must also be mentioned that during this period the adolescents did not involve themselves in any other social skills activities.

This is in line with Del Monte's description of the practice of meditation, examining it from the constructivist perspective of G. Kelly (Del Monte, Michael M. 1995). Meditation practice sensitizes the world within, which includes subverbal and unconscious material. With increased adeptness, its practice may lead to the temporary suspension of habitual, dualistic, cognitive construing, and thus facilitate the experience of no-thought, tranquility and a sense of oneness or unity. This feeling of oneness with others, improves social participation, making it mutually enriching experience.

However, there is no significant change on all the other factors across the four conditions. We can thus conclude that meditation training has helped in reducing the feelings of Social Isolation in the Experimental Group.

**Table 4: Showing Within-Group analysis across conditions for the Wait-listed Control Group on the 5 factors**

Conditions	FACTORS				
	Concentration	Social Isolation	Expressed Anger	Disobedience	Relations with parents and teachers
<b>Baseline I</b>	34.25	26.71	12.76	15.55	10.46
<b>Baseline II</b>	33.78	25.86	12.71	15.42	10.55
<b>After Training</b>	32.21	26.28	14.73	11.34	10.36
<b>Follow-up</b>	32.76	25.48	14.73	12.00	10.15
<b>F-ratio</b>	0.84	0.48	6.88 *	25.35 **	0.21

\* Sig. At 0.05 level    \*\* Sig. At 0.01 level

The table shows the within group analysis across the four conditions for the wait-listed control group on the five factors. Duncan's Multiple Range test was used to find out if the wait-listed control group changed significantly on the 5 factors as the conditions progressed.

The results show that expressed anger has increased significantly after the meditation-training programme. This means that the tendency to throw things when angry, arguing with teachers and others when they disagree with the adolescent was gradually on the rise as conditions progressed. This suggests that meditation practice has stirred up feelings of negativities and were being released. However it must be borne in mind that the group is an adolescent group going through their own turmoil and the tendency to express their anger is a characteristic of this age. They are also observed to be less amenable to change.

The groups increase in expressed anger after the meditation training is contrary to earlier research by investigators. Hjelle, L. (1974) and Ferguson, P. and Gowan, J. (1976) found meditators to be less depressed, less anxious, less irritable, more self-actualized and happier. Further, long-term meditators were significantly less anxious than short-term meditators. Longitudinal studies have confirmed a causal relationship by showing decreases in anxiety and neuroticism over time among those learning and regularly practicing meditation (Williams, P., Francis, A. and Durham, R. 1976, Fehr, T. 1977, Delmonte, M. M. 1984b).

Similar differences in long-term and short-term meditators are also reported by Sridevi, K., and Rao, P.V. Krishna (1998) in a study of temporal effects of meditation and personality.

The present group of subjects have just learned the meditation technique, and therefore are not long-term meditators, which could explain the results.

However, the disruptive classroom behaviour, or disobedience, has reduced as seen from the results. That is, behaviour such as teasing other children, jealousy, disturbing other children and talking back to parents has reduced.

Therefore it is observed that although anger has increased, it has not affected interpersonal relationships especially with classmates. However anger is expressed when the adolescents wishes are not fulfilled. It must be noted that increase in expressed anger has not taken place after supervised training (14.73).

It is a general occurrence among meditators that in the initial stages of meditation a lot of negativities are stirred up and released. As one progresses in practice one learns to manage these negativities, understanding their impermanent nature. When anger has

arisen, it is bound to run its course and subside. Thus the meditator realizes that he has to only observe this and not react to the emotion experienced. Practicing in this manner, one eventually discovers that under the mass of such negativities, lays the finer aspects of human nature. Positive qualities like loving kindness, compassion emerges. At this stage anger gets completely transformed.

The wait-listed control group may have been going through such a process.

It is significant that the group has not allowed this to affect their interpersonal relationship and camaraderie with the others in the class. Therefore we may infer that they do not allow their personal battle of transforming their anger to influence their interpersonal relationship among their classmates.

Apart from this, as the class was experiencing a training programme together, social facilitation effect may have also played a role.

Next, between group analysis on each of the variables (concentration, social isolation, expressed anger, disobedience, and relations with teachers and parents) were taken up for analysis.

**Table 5: Showing the Between Group analysis across conditions on Concentration**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	33.80	33.80	34.64	32.76
	<b>SD</b>	8.48	8.48	8.65	7.86
<b>Wait listed Control group N=52</b>	<b>Mean</b>	33.782	32.21	32.76	32.76
	<b>SD</b>	6.69	7.64	7.17	7.17
<b>t-value</b>		0.01	1.05	1.22	0.01

The Experimental Group and the Wait-listed control group were similar at the start of the present study. The only difference was with regard to Social Isolation. The Experimental Group was more isolated in social situations than the Wait-listed control group at the baseline assessment. After the Experimental Group was trained in meditation, assessment was carried out again. Therefore, the table shows the comparison between the mean and SD for the two groups (Experimental and Wait-listed control group) on four conditions on the variable Concentration.

First, the mean score obtained for the Experimental group immediately after training is compared with the mean of baseline assessment II of the Wait-listed control group.

Second, the mean score obtained for the Experimental group immediately after training is compared with the mean score obtained for the Wait-listed control group immediately after training.

Third, the mean score obtained for the Experimental group after the supervised training practice is compared with the mean score obtained by the Wait-listed control

group after their supervised training practice, which also constitutes the follow-up assessment.

Finally, the mean scores obtained by the two groups at the end of the study have been compared.

There has been no significant difference in the concentration level of the two groups at all points of investigation.

**Table 6 : Showing the Between Group analysis across conditions on Social Isolation**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	28.08	28.08	27.68	26.14
	<b>SD</b>	6.48	6.48	6.39	6.80
<b>Wait listed Control group N=52</b>	<b>Mean</b>	25.86	26.28	25.48	25.48
	<b>SD</b>	5.29	5.89	4.98	4.98
<b>t-value</b>		1.91	1.47	1.98 *	0.56

\* Sig. At 0.05 level

In the case of Social Isolation, the table indicates that there is a significant difference in the mean scores of the two groups after the supervised training practice. The Wait-listed control group is less isolated socially when compared with the Experimental Group. This trend is in keeping with the results obtained at the baseline level. The experimental group at the beginning of the training programme was significantly different from the Wait-listed control group on Social Isolation. They were more isolated and gradually have become more participative, whereas in the wait-listed control group, the tendency for social participation is already higher, hence not much change is seen.

**Table 7: Showing the Between Group analysis across conditions on Expressed Anger**

		<b>Immediately after training and Baseline II</b>	<b>Immediatel y After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	13.52	13.52	13.60	13.68
	<b>SD</b>	3.35	3.35	3.05	3.4
<b>Wait listed Control group N=52</b>	<b>Mean</b>	12.71	14.73	14.73	14.73
	<b>SD</b>	3.56	3.25	2.87	2.87
<b>t-value</b>		1.19	1.86	1.98 *	1.69

\* Sig. At 0.05 level

In the case of Expressed anger, the mean score of 13.60 (SD 3.05) for the Experimental group is significantly lower than the mean score of 14.73 (SD 2.87) obtained by the Wait-listed control group. This shows that when a comparison is made of the scores taken after the supervised practice period was completed for the two groups, the Wait-listed control group expressed anger more often than the Experimental group.

**Table 8: Showing the Between Group analysis across conditions on Disobedience**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	15.61	15.61	15.70	15.56
	<b>SD</b>	3.26	3.26	3.20	3.33
<b>Wait listed Control group N=52</b>	<b>Mean</b>	15.42	11.35	12	12
	<b>SD</b>	3.43	3.07	2.63	2.63
<b>t-value</b>		0.28	6.87 **	6.49 **	6.03 **

\*\* Sig. At 0.01 level

When the variable Disobedience was considered, the mean of Experimental and Wait-listed control group differed significantly on three occasions.

The Wait-listed control group showed reduced tendency to bully other children in class, speak ill of others and play mischief in the class. This change in the Wait-listed control group was seen soon after the training programme for the group and it was sustained throughout the conditions.

The Experimental group did not show any significant change throughout the investigation on this variable of Disobedience, even though they were identical to the wait-listed control group at the baseline level.

**Table 9: Showing the Between Group analysis across conditions on Relations with parents and teachers**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group</b> <b>N=51</b>	<b>Mean</b>	9.84	9.84	9.98	10.45
	<b>SD</b>	2.86	2.86	2.84	2.5
<b>Wait listed</b> <b>Control group N=52</b>	<b>Mean</b>	10.55	10.36	10.15	10.15
	<b>SD</b>	2.57	2.84	2.8	2.8
<b>t-value</b>		1.34	0.92	0.30	0.57

With regard to Relations with parents and teachers there has been no significant difference between the two groups at all points of the investigation.

Thus we see that the Wait-listed control group not only shows a change in Social Isolation, a significant change occurred at their emotional level too. They have scored slightly higher (1.13) than the Experimental group on expressed anger after supervised practice.

The group also became more cooperative with their classmates and tendencies such as teasing other children and bullying reduced significantly after meditation training and this trend sustained till the end of the study.

Therefore, we may conclude that the meditation training had a greater influence on the Wait-listed control group than the Experimental group.

The sample of students taken up for study in this particular school may not have shown significant gains in the factors investigated, especially in the area of concentration.

It is must be borne in mind that the students came from a very high socio-economic class and were less amenable to discipline and control

Perhaps a sample of students from a predominantly middle income school, where parents instilled discipline in their children which were internalized by them, would have shown different results.

### **5.3 GENDER AND CLASS RELATED BEHAVIOUR**

There were no gender differences on all the factors across the treatment conditions.

### **5.4 DIFFERENCES IN CLASS VI AND CLASS VIII ON CLASS RELATED BEHAVIOUR**

The total sample was taken together and analyzed for changes in relation to meditation practice, based on class status.

**Table 10: Showing Class VI and Class VIII scores on the factors across the treatment conditions**

Factors	Class	Baseline			Immediately after training			Supervised Training			Follow-up		
		Mean	SD	t-value	Mean	SD	t-value	Mean	SD	t-value	Mean	SD	t-value
Concentration	VI	32.5	7.8	2.9**	32.26	8.15	2.09*	31.4	7.7	2.58*	31.19	7.36	2.19*
	VIII	36.9	7.4		35.35	6.7		35.47	8.27		34.37	7.33	
Social Isolation	VI	29.36	6.7	1.7	27.7	6.8	1.32	27.21	7.39	0.38	26.19	7.09	0.66
	VIII	27.33	5.29		26.17	4.9		26.74	4.62		25.41	4.51	
Expressed Anger	VI	12.0	2.63	2.62**	12.15	2.77	2.94**	13.59	2.98	1.88	13.86	3.27	1.12
	VII	13.58	3.11		14.0	3.84		14.76	3.30		14.56	3.06	
Disobedience	VI	14.92	3.38	1.68	14.73	3.11	2.46*	12.86	4.16	1.73	13.67	3.85	0.27
	VII	16.07	3.56		16.31	3.39		14.15	3.34		13.86	3.09	
Relations with Parents and Teachers	VI	9.6	2.35	1.69	9.42	2.54	3.04**	9.4	2.62	2.88**	9.71	2.35	2.32*
	VI	10.45	2.63		11.00	2.71		10.96	2.85		10.90	2.81	

\* Sig. at 0.5 level      \*\* Sig. at 0.01 level

## CHAPTER V

### RESULTS AND ANALYSIS

The focus of the present study is to examine the efficacy of Vipassana meditation on certain cognitive, social and emotional factors among early adolescents.

The data, collected in phases over a period of six months, and described in detail in the previous chapter, was taken up for statistical analysis. The present chapter describes in detail, the results obtained from the statistical analysis.

#### 5.1 SAMPLE CHARACTERISTICS

**Table 1: Showing the Sample Characteristics**

a)

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	Class VI Boys	Class VI Girls	Class VIII Boys	Class VIII Girls
Mean age	11	11	13	13

The sample taken up for study consisted of 103 boys and girls from classes VI and VIII. 52 of the total sample were boys and 51 were girls. The class VI students numbered 52 while 51 were from class VIII.

The mean age of class VI students was 11 years and mean age of class VIII students was 13 years.

**Table 2 : Showing the Mean & SD on 5 factors at Baseline level for the Total Sample**

Baseline	Experimental Group		Wait-Listed Control Group		F-Ratio
	Mean	SD	Mean	SD	
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This significant difference between the groups on Social Isolation will be considered while discussing the later changes under different training conditions. Therefore it can be accepted that the groups were matched for age, gender and school environment and also in their classroom behaviour pattern except for Social Isolation.

## 5.2 CLASSROOM RELATED BEHAVIOUR

**Table 3: Showing the Within-Group analysis across conditions for Experimental Group on the 5 factors**

Conditions	FACTORS				
	Concentration	Social Isolation	Expressed Anger	Disobedience	Relations with parents and teachers
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<b>Post training</b>	33.80	28.08	13.53	15.61	9.76
<b>Supervised training</b>	34.65	27.57	13.61	15.51	9.98
<b>Follow-up</b>	32.76	26.14	13.68	15.53	10.45
<b>F-ratio</b>	0.82	3.25	0.63	0.0255	1.0091
<b>Significance level</b>	NS	Significant 0.02 level	NS	NS	NS

The table shows the within-group analysis across the four conditions for the Experimental Group on the 5 factors. Duncan's Multiple Range test was used to find out if the Experimental Group changed significantly on the 5 factors as the conditions progressed. This test enables one to make multiple comparisons at a glance.

The results show that the Experimental Group changed significantly on Social Isolation as the conditions progressed. This means that the group at the beginning of the meditation programme was lonely, afraid to talk in front of a group, uncomfortable within the group. Towards the end of the 6-month period they emerged more comfortable with each other, and less distant from one another. They experienced less isolation in social situations. This enhancement in social participation and involvement can be attributed to the training effect where the adolescents were taught about self-awareness and sharing

whatever they have with others and channelizing their energies to constructive group activities. It must also be mentioned that during this period the adolescents did not involve themselves in any other social skills activities.

This is in line with Del Monte's description of the practice of meditation, examining it from the constructivist perspective of G. Kelly (Del Monte, Michael M. 1995). Meditation practice sensitizes the world within, which includes subverbal and unconscious material. With increased adeptness, its practice may lead to the temporary suspension of habitual, dualistic, cognitive construing, and thus facilitate the experience of no-thought, tranquility and a sense of oneness or unity. This feeling of oneness with others, improves social participation, making it mutually enriching experience.

However, there is no significant change on all the other factors across the four conditions. We can thus conclude that meditation training has helped in reducing the feelings of Social Isolation in the Experimental Group.

**Table 4: Showing Within-Group analysis across conditions for the Wait-listed Control Group on the 5 factors**

Conditions	FACTORS				
	Concentration	Social Isolation	Expressed Anger	Disobedience	Relations with parents and teachers
<b>Baseline I</b>	34.25	26.71	12.76	15.55	10.46
<b>Baseline II</b>	33.78	25.86	12.71	15.42	10.55
<b>After Training</b>	32.21	26.28	14.73	11.34	10.36
<b>Follow-up</b>	32.76	25.48	14.73	12.00	10.15
<b>F-ratio</b>	0.84	0.48	6.88 *	25.35 **	0.21

\* Sig. At 0.05 level    \*\* Sig. At 0.01 level

The table shows the within group analysis across the four conditions for the wait-listed control group on the five factors. Duncan's Multiple Range test was used to find out if the wait-listed control group changed significantly on the 5 factors as the conditions progressed.

The results show that expressed anger has increased significantly after the meditation-training programme. This means that the tendency to throw things when angry, arguing with teachers and others when they disagree with the adolescent was gradually on the rise as conditions progressed. This suggests that meditation practice has stirred up feelings of negativities and were being released. However it must be borne in mind that the group is an adolescent group going through their own turmoil and the tendency to express their anger is a characteristic of this age. They are also observed to be less amenable to change.

The groups increase in expressed anger after the meditation training is contrary to earlier research by investigators. Hjelle, L. (1974) and Ferguson, P. and Gowan, J. (1976) found meditators to be less depressed, less anxious, less irritable, more self-actualized and happier. Further, long-term meditators were significantly less anxious than short-term meditators. Longitudinal studies have confirmed a causal relationship by showing decreases in anxiety and neuroticism over time among those learning and regularly practicing meditation (Williams, P., Francis, A. and Durham, R. 1976, Fehr, T. 1977, Delmonte, M. M. 1984b).

Similar differences in long-term and short-term meditators are also reported by Sridevi, K., and Rao, P.V. Krishna (1998) in a study of temporal effects of meditation and personality.

The present group of subjects have just learned the meditation technique, and therefore are not long-term meditators, which could explain the results.

However, the disruptive classroom behaviour, or disobedience, has reduced as seen from the results. That is, behaviour such as teasing other children, jealousy, disturbing other children and talking back to parents has reduced.

Therefore it is observed that although anger has increased, it has not affected interpersonal relationships especially with classmates. However anger is expressed when the adolescents wishes are not fulfilled. It must be noted that increase in expressed anger has not taken place after supervised training (14.73).

It is a general occurrence among meditators that in the initial stages of meditation a lot of negativities are stirred up and released. As one progresses in practice one learns to manage these negativities, understanding their impermanent nature. When anger has

arisen, it is bound to run its course and subside. Thus the meditator realizes that he has to only observe this and not react to the emotion experienced. Practicing in this manner, one eventually discovers that under the mass of such negativities, lays the finer aspects of human nature. Positive qualities like loving kindness, compassion emerges. At this stage anger gets completely transformed.

The wait-listed control group may have been going through such a process.

It is significant that the group has not allowed this to affect their interpersonal relationship and camaraderie with the others in the class. Therefore we may infer that they do not allow their personal battle of transforming their anger to influence their interpersonal relationship among their classmates.

Apart from this, as the class was experiencing a training programme together, social facilitation effect may have also played a role.

Next, between group analysis on each of the variables (concentration, social isolation, expressed anger, disobedience, and relations with teachers and parents) were taken up for analysis.

**Table 5: Showing the Between Group analysis across conditions on Concentration**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	33.80	33.80	34.64	32.76
	<b>SD</b>	8.48	8.48	8.65	7.86
<b>Wait listed Control group N=52</b>	<b>Mean</b>	33.782	32.21	32.76	32.76
	<b>SD</b>	6.69	7.64	7.17	7.17
<b>t-value</b>		0.01	1.05	1.22	0.01

The Experimental Group and the Wait-listed control group were similar at the start of the present study. The only difference was with regard to Social Isolation. The Experimental Group was more isolated in social situations than the Wait-listed control group at the baseline assessment. After the Experimental Group was trained in meditation, assessment was carried out again. Therefore, the table shows the comparison between the mean and SD for the two groups (Experimental and Wait-listed control group) on four conditions on the variable Concentration.

First, the mean score obtained for the Experimental group immediately after training is compared with the mean of baseline assessment II of the Wait-listed control group.

Second, the mean score obtained for the Experimental group immediately after training is compared with the mean score obtained for the Wait-listed control group immediately after training.

Third, the mean score obtained for the Experimental group after the supervised training practice is compared with the mean score obtained by the Wait-listed control

group after their supervised training practice, which also constitutes the follow-up assessment.

Finally, the mean scores obtained by the two groups at the end of the study have been compared.

There has been no significant difference in the concentration level of the two groups at all points of investigation.

**Table 6 : Showing the Between Group analysis across conditions on Social Isolation**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	28.08	28.08	27.68	26.14
	<b>SD</b>	6.48	6.48	6.39	6.80
<b>Wait listed Control group N=52</b>	<b>Mean</b>	25.86	26.28	25.48	25.48
	<b>SD</b>	5.29	5.89	4.98	4.98
<b>t-value</b>		1.91	1.47	1.98 *	0.56

\* Sig. At 0.05 level

In the case of Social Isolation, the table indicates that there is a significant difference in the mean scores of the two groups after the supervised training practice. The Wait-listed control group is less isolated socially when compared with the Experimental Group. This trend is in keeping with the results obtained at the baseline level. The experimental group at the beginning of the training programme was significantly different from the Wait-listed control group on Social Isolation. They were more isolated and gradually have become more participative, whereas in the wait-listed control group, the tendency for social participation is already higher, hence not much change is seen.

**Table 7: Showing the Between Group analysis across conditions on Expressed Anger**

		<b>Immediately after training and Baseline II</b>	<b>Immediatel y After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	13.52	13.52	13.60	13.68
	<b>SD</b>	3.35	3.35	3.05	3.4
<b>Wait listed Control group N=52</b>	<b>Mean</b>	12.71	14.73	14.73	14.73
	<b>SD</b>	3.56	3.25	2.87	2.87
<b>t-value</b>		1.19	1.86	1.98 *	1.69

\* Sig. At 0.05 level

In the case of Expressed anger, the mean score of 13.60 (SD 3.05) for the Experimental group is significantly lower than the mean score of 14.73 (SD 2.87) obtained by the Wait-listed control group. This shows that when a comparison is made of the scores taken after the supervised practice period was completed for the two groups, the Wait-listed control group expressed anger more often than the Experimental group.

**Table 8: Showing the Between Group analysis across conditions on Disobedience**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group N=51</b>	<b>Mean</b>	15.61	15.61	15.70	15.56
	<b>SD</b>	3.26	3.26	3.20	3.33
<b>Wait listed Control group N=52</b>	<b>Mean</b>	15.42	11.35	12	12
	<b>SD</b>	3.43	3.07	2.63	2.63
<b>t-value</b>		0.28	6.87 **	6.49 **	6.03 **

\*\* Sig. At 0.01 level

When the variable Disobedience was considered, the mean of Experimental and Wait-listed control group differed significantly on three occasions.

The Wait-listed control group showed reduced tendency to bully other children in class, speak ill of others and play mischief in the class. This change in the Wait-listed control group was seen soon after the training programme for the group and it was sustained throughout the conditions.

The Experimental group did not show any significant change throughout the investigation on this variable of Disobedience, even though they were identical to the wait-listed control group at the baseline level.

**Table 9: Showing the Between Group analysis across conditions on Relations with parents and teachers**

		<b>Immediately after training and Baseline II</b>	<b>Immediately After training</b>	<b>Supervised training</b>	<b>Follow-up</b>
<b>Exptal Group</b> <b>N=51</b>	<b>Mean</b>	9.84	9.84	9.98	10.45
	<b>SD</b>	2.86	2.86	2.84	2.5
<b>Wait listed</b> <b>Control group N=52</b>	<b>Mean</b>	10.55	10.36	10.15	10.15
	<b>SD</b>	2.57	2.84	2.8	2.8
<b>t-value</b>		1.34	0.92	0.30	0.57

With regard to Relations with parents and teachers there has been no significant difference between the two groups at all points of the investigation.

Thus we see that the Wait-listed control group not only shows a change in Social Isolation, a significant change occurred at their emotional level too. They have scored slightly higher (1.13) than the Experimental group on expressed anger after supervised practice.

The group also became more cooperative with their classmates and tendencies such as teasing other children and bullying reduced significantly after meditation training and this trend sustained till the end of the study.

Therefore, we may conclude that the meditation training had a greater influence on the Wait-listed control group than the Experimental group.

The sample of students taken up for study in this particular school may not have shown significant gains in the factors investigated, especially in the area of concentration.

It is must be borne in mind that the students came from a very high socio-economic class and were less amenable to discipline and control

Perhaps a sample of students from a predominantly middle income school, where parents instilled discipline in their children which were internalized by them, would have shown different results.

### **5.3 GENDER AND CLASS RELATED BEHAVIOUR**

There were no gender differences on all the factors across the treatment conditions.

### **5.4 DIFFERENCES IN CLASS VI AND CLASS VIII ON CLASS RELATED BEHAVIOUR**

The total sample was taken together and analyzed for changes in relation to meditation practice, based on class status.

**Table 10: Showing Class VI and Class VIII scores on the factors across the treatment conditions**

Factors	Class	Baseline			Immediately after training			Supervised Training			Follow-up		
		Mean	SD	t-value	Mean	SD	t-value	Mean	SD	t-value	Mean	SD	t-value
Concentration	VI	32.5	7.8	2.9**	32.26	8.15	2.09*	31.4	7.7	2.58*	31.19	7.36	2.19*
	VIII	36.9	7.4		35.35	6.7		35.47	8.27		34.37	7.33	
Social Isolation	VI	29.36	6.7	1.7	27.7	6.8	1.32	27.21	7.39	0.38	26.19	7.09	0.66
	VIII	27.33	5.29		26.17	4.9		26.74	4.62		25.41	4.51	
Expressed Anger	VI	12.0	2.63	2.62**	12.15	2.77	2.94**	13.59	2.98	1.88	13.86	3.27	1.12
	VII	13.58	3.11		14.0	3.84		14.76	3.30		14.56	3.06	
Disobedience	VI	14.92	3.38	1.68	14.73	3.11	2.46*	12.86	4.16	1.73	13.67	3.85	0.27
	VII	16.07	3.56		16.31	3.39		14.15	3.34		13.86	3.09	
Relations with Parents and Teachers	VI	9.6	2.35	1.69	9.42	2.54	3.04**	9.4	2.62	2.88**	9.71	2.35	2.32*
	VI	10.45	2.63		11.00	2.71		10.96	2.85		10.90	2.81	

\* Sig. at 0.5 level      \*\* Sig. at 0.01 level

As the above table shows, younger group of meditators (Class VI) differed from older adolescents (Class VIII) on the variable concentration behaviour across all the treatment conditions. Class VI showed greater ability to concentrate and this did not vary throughout the treatment conditions. The two groups differed significantly from each other in concentration at the baseline level itself and this trend continued till the final follow-up. Class VIII made a slight improvement in concentration level towards the end of the treatment programme.

There is also a difference in the two groups on expressed anger immediately after the training programme.. There is a slight increase in anger from the baseline for the two groups. The increase in expressed anger is more for older adolescents (Class VIII) when compared to the younger adolescents (Class VI) immediately after the training.

In the case of disobedience, the younger group of meditators (Class VI) differed from older adolescents (Class VIII) immediately after training. The Class VI students were less disobedient than the Class VIII students under this condition.

In the relations with parents and teachers, again it was observed that Class VI students had better relations with parents and teachers than the Class VIII students especially after the training programme, supervised training and follow-up. The improvement in the relations was steadily maintained by both the groups through the conditions.

From the above observations, it is clear that age of the students seem to have an influence in getting the best benefit of meditation. Class VI students who are 11 years of age were more responsive to meditation than the Class VIII students who are of 13 years of age. Keeping the developmental factors in consideration, the younger children are more amenable to training programmes and show less resistance to them.

The above result is contrary to a study by Baruch, Geoffrey et. al. (1998) on adolescents who drop-out of psychotherapy at a community-based psychotherapy center. They found that drop-outs were younger, had greater externalizing problems, school problems and conduct disorder. Continuers were older, had fewer externalizing problems, were self-referred and were likely to be treated by supportive therapists.

### **5.5 ACADEMIC ACHIEVEMENT SCORES BEFORE AND AFTER MEDITATION TRAINING**

Generally, academic performance is a major outcome measure in any training programme. However in this study academic performance was not an outcome measure directly taken into consideration. Therefore no specific hypothesis was set up to test the effect of meditation on academic performance. As an ex-post facto study the academic scores were obtained from school records before the beginning the training programme and after its completion. The academic performance temporarily aligned with the practice of meditation. The data was analyzed using paired t-test. And the results are presented below.

**Table 11: Showing the Academic Achievement Scores of VI A & B and VIII A & B**

<b>Class</b>	<b>Mean</b>	<b>SD</b>	<b>t-ratio</b>	<b>Class</b>	<b>Mean</b>	<b>SD</b>	<b>t-ratio</b>
<b>VIA Baseline</b>	66.17	15.62	0.59	<b>VIB Baseline</b>	65.12	14.86	0.66
<b>VIA Final</b>	68.66	15.22	NS	<b>VIB Final</b>	67.79	14.49	NS
<b>VIIIA Baseline</b>	65.63	14.21	0.25	<b>VIIIB Baseline</b>	58.64	15.33	0.08
<b>VIIIA Final</b>	64.59	15.10	NS	<b>VIIIB Annual</b>	58.27	15.46	NS

From the above table, it is clear that Class VI fared better on the whole. There has been a slight improvement in their academic performance though it is not statistically significant.

Class VIII students did not undergo any change in their performance. However, it has been observed, that the practice of meditation over a long period of time, can help the child to be focused which might in turn enable him to do well academically.

All the statistical analysis was carried out using the SPSS package, sixth version.

## **5.6 CONTENT ANALYSIS**

The students participating in the meditation programme gave a written feedback after they completed the training. The feedback was a semi-structured one. The students were asked to describe

- The aspects of the training they liked
- The aspects of the training they did not like
- The benefits they gained as a result of the training
- Any suggestions for improving the programme
- And would they continue the practice.

### **Aspects of the training liked by students**

The feedback from students was very positive. Irrespective of their own individual personal experiences they said that they liked to meditation programme. The students attending the training programme, liked the calmness and peace they experienced as a result of the meditation practice. At the beginning, a few of the students

were apprehensive and some found it difficult to follow the instructions. As the days progressed, things became clearer to them, they began to understand the procedure and found the practice helpful in many ways. The ability to focus and concentrate was the chief gains. Arjun Amirapu (Class VI) says, “ it helped me to concentrate more” and is echoed by several others in his class.

Most of the students enjoyed the way concepts were presented using videos and charts. The method of presentation appealed to the students

The students also appreciated the stories narrated to them. They illustrated the concepts that were taught to them. For instance, one of the concepts taught was “ As the seed, so the fruit.” When one sows seeds of kindness by performing kind acts, he will get the appropriate fruit; kindness comes back to him. When one sows seeds of hatred and anger, he gets the fruits accordingly; of hatred and anger. To bring home this important aspect, a story was narrated to the students.

The students responded enthusiastically to the video, which reinforced the teaching by highlighting the practical use of meditation. Apart from explaining the technique and the posture to be adopted while meditating, it also illustrated instances when the practice can help to deal with real-life situations.

The students generosity found its expression when some of them said that the training should be shared with others – that they wanted many others to share what they got. This feeling of *ehipassiko* – come have a look at and experience the teaching is a characteristic sentiment experienced by Vipassana meditators. Another characteristic is *ekhaliko* – meaning timeless quality. It is relevant in all times and all ages. According to Buddhist literature *ehipassiko* and *ekhaliko* are the two hallmarks of a pure path.

Saba a class VI student says "I would suggest you to show all these things in your course to other children. I have no dislike as the course was completely useful and very nice and interesting too."

The *Sila* (code of conduct) was also appreciated by students. According to them, it teaches them in a logical manner what is good behaviour and what constitutes undesirable behaviour. Instead of merely instructing them to maintain good behaviour, the *sila* explained to them that good behaviour makes the mind more positive and therefore happier.

As the days progressed, they found it easier to focus and stay concentrated on the breath.

One student wrote- "I was very hot-tempered before. But this course has taught me how to calm down." Another remarked- "Next time we are in trouble we know exactly what to do."

### **Aspects of the training disliked by the students**

The students did not have any dislikes to report but they had difficulties. Although the students acknowledge that it was necessary in order to benefit from the training, they found sitting quiet and still for more than 10 minutes very difficult and painful. In the beginning, some felt it almost impossible, but as training progressed they were able to adapt to it. They also found their tolerance level increasing. Say Saba – "I have experienced aches and pains coming but by doing Anapana Meditation I have experience them going."

### **Benefits gained as a result of the training**

The benefits gained as a result of the training were many. Some felt it improved their concentration and that they scored well in the tests conducted during this period. Many felt that they were able to manage their negative feelings, especially anger. This helped them to calm down more quickly and they were able to avoid fights at home.

One girl of Class VIII wrote that she has learnt to be more patient and not to lose her temper. Another girl said that she was glad that her confused mind learnt to become more focused and positive.

Generally, the comments were as follows:

"feel fresh and calm"

"this help me to concentrate a lot"

"able to concentrate better"

"I have learnt how to be patient and not lose my temper"

Regarding suggestions to improve the programme, some felt that reducing the time of meditation to ten minutes would be preferred. Vijay Karthik of class VIII suggests – "make the course a little longer because it is only now that we have settled. All of them agreed to continue the practice everyday, morning and evening.

To ensure the daily practice, the school management set aside 10 minutes in the morning thus maintaining the continuity of practice.

## 5.7 OVERALL DISCUSSION

The above analysis of the content of the feedback of students seems to differ from the statistical data obtained through the questionnaire.

The questionnaire yielded five factors: Concentration, Social Isolation, Expressed Anger, Disobedience and Relations with parents and teachers. In the Experimental group a significant change was observed in Social Isolation. The students felt they came closer to each other and were seen to be more cooperative with one another. The students in the Wait-listed control group experienced more anger and fewer tendencies towards disobedience.

There were also some differences between the two groups at the beginning of the study. The students of the experimental group were more socially isolated compared to that of the wait-listed control group. However, as training progressed the students of the experimental group became more cooperative with one another and thus their social isolation decreased.

The groups also differed from one another after training, on disobedience. The wait-listed control group showed a reduced tendency to bully others and play mischief in class after the training programme and it was sustained throughout the period of study. This phenomenon was not observed in the experimental group.

These findings were revealed through the use of a questionnaire administered to the students at various planned stages of the study. The content analysis of the feedback from students reveals that the students benefited from the meditation-training programme in a number of important ways. They report that they were able to focus and concentrate

better in their studies. They are able to manage their negative emotions like anger and have become increasingly positive and calmer than they were before the training began.

The results seem to be more prominent in the subjective analysis than the questionnaire. Methodologically the questionnaire might be good, but it fails to be sensitive to the subtle changes in the students' experience, which is revealed in the feedback. In order to observe the changes on the outcome of a questionnaire, one needs to increase the input, namely prolonged practice of the technique. However, subtle changes can be best observed when a qualitative analysis of feedback is made.

Therefore it seems more pertinent to document changes in experience as they happen during a study, rather than choosing a predetermined parameter and expecting changes to match the parameter.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

#### 6.1 SUMMARY

The main objective of the present study was to investigate the efficacy of Vipassana meditation on certain cognitive, social and emotional factors among early adolescents.

In order to meet the objective, directional positive hypotheses was set up. They were as follows:

1. There will be a significant improvement in the level of concentration of adolescents after meditation.
2. There will be a significant reduction in feelings of social isolation after meditation.
3. There will be a significant reduction in expressed anger after meditation.
4. There will be a significant reduction in disruptive classroom behaviour after meditation.
5. There will be a significant improvement in the adolescents' relation with teachers and parents after meditation.
6. There will be a significant gain in the groups that underwent training in meditation on certain cognitive, emotional and social factors when compared to the group that did not undergo training in meditation.
7. As the training period increases there will be a significant gain in cognitive, social and emotional factors in adolescents.

To test the above hypotheses, a Before and After Experimental Two-Arm Cross-Over Design was chosen.

The study was carried out on a sample of adolescents from Lady Andal Higher Secondary and Matriculation School, Harrington Road, Chetput, Chennai. The students were from class six and eight and were of high socio-economic strata.

A need-based questionnaire was constructed and administered on a sample of 297 adolescents and scored on a 4-point scale. (Always, Often, Sometimes, Never). This was subjected to factor analysis, resulting in a reliable and valid tool.

All the adolescents in the study received meditation training for a period of six months. This included supervised and unsupervised training except the control-group who were wait-listed for one month after the baseline assessment.

Periodically, four assessments were carried out, which included baseline, after meditation, after supervised practice and the follow-up phase.

The data thus collected were analyzed using:

- a. Descriptive statistics like frequency, mean and SD.
- b. One-way analysis of variance
- c. Duncan's Multiple Range Tests.

## 6.2 CONCLUSIONS

The following conclusions were drawn from the results.

1. Meditation could be effectively taught to adolescents and it did have an impact on the groups studied.
2. In the within-group analysis across conditions for the experimental group on the 5 factors, the group changed significantly on Social Isolation as the conditions progressed. Towards the end of the six month period, a group that was lonely and less comfortable with each other emerged more comfortable with each other and less distant from one another. They experienced less isolation in social situations.
3. In the within-group analysis across conditions for the wait-listed control group on the 5 factors, expressed anger increased significantly after the meditation programme.
4. Disruptive classroom behaviour, or disobedience reduced in the wait-listed control group.
5. The main finding was that, the effect of meditation was individualized and influenced by the subjects' personality characteristics even though the technique and method was the same for all subjects.
6. Thus, the meditation practice had a different impact on the experimental and wait-listed control group.

7. The content analysis, based on personal feedback, reveal that meditation has helped the adolescents to cope better in their lives. They found that it made them calmer, and more focused in studies, and less violent and angry.

From the above conclusions, the hypothesis that there will be a significant reduction in feelings of social isolation after meditation was partially accepted and retained.

The hypothesis that there will be a significant reduction in disruptive classroom behaviour after meditation was partially accepted and retained.

The hypothesis, as the training period increases there will be a significant gain in cognitive, social and emotional factors in adolescents was partially accepted and restated as following:

As the training period increases there will be a significant gain in social factors in adolescents.

The hypothesis that there will be a significant gain in the groups that underwent training in meditation on certain cognitive, emotional and social factors when compared to the group that did not undergo training in meditation was partially accepted and restated as follows:

There will be a significant gain in the groups that underwent training in meditation on certain social factors when compared to the group that did not undergo training in meditation.

However, the following hypotheses could not be accepted.

1. There will be a significant improvement in the level of concentration of adolescents after meditation.
2. There will be a significant reduction in expressed anger after meditation.
3. There will be a significant improvement in adolescents' relation with teachers and parents after meditation.

### **6.3 LIMITATIONS OF THE STUDY**

The present study was confined to a single school environment, which could have influenced the results. Selecting another school with a different environment would have shown the impact of meditation differently.

There has been no random assignment to treatment conditions. This was not possible as the study was conducted in a school and the management was not in favour of it, as it would cause disturbance in the normal functioning of the school.

Teachers were asked to rate the students, but they did not comply. If they had, it could have further validated the findings. Therefore the researcher had to rely only on content analysis and responses to questionnaire.

The study was confined to six months even though it had supervised and unsupervised practice. More refresher programmes incorporating longitudinal designs could enhance the efficacy of meditation practice.

## **6.4 IMPLICATIONS OF THE RESEARCH**

In our schools, students learn how to categorize and characterize, number and name, measure and manipulate. Rarely do they learn to intuit and integrate, contemplate and create. They need to find a way to direct their thoughts and energies to something constructive and creative.

The present study is a step towards that direction. By introducing early adolescents to the technique of meditation, it is hoped to help them develop good mental habits and strengthen it to assimilate the facts and figures that they will eventually have to learn. Further, it provides for an anchor for children in confusing times when the media constantly bombards them with conflicting messages.

A review of research has revealed studies on adolescents that have sought to intervene when a crisis has already developed. Drug abuse, alcohol abuse and parental separation, to name a few. Hitherto, there have not been many techniques that have taught children to manage and strengthen their inner lives and prevent the need for crisis intervention.

Research reviews on meditation have shown many positive benefits of the practice, however, almost all studies are on an adult population. When the practice of meditation can be seen to have such a positive impact on adults, it was natural for the researcher to investigate the efficacy of the practice in children and early adolescents. Among the various techniques of meditation, the one chosen for this study is Vipassana Meditation.

However, the need for longitudinal designs, where the adolescents can be studied over a period of time is greatly felt. The true benefits of meditation accrue only after persistent and sustained practice and studies focusing on short-term gains do not bring out the efficacy of the practice. Future research can therefore focus on this area.

In addition, in this study meditation was a part of school curriculum. Future studies could focus on meditation courses conducted outside the school environment, in meditation camps. The students could then return to school and maintain the continuity of practice.

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## **APPENDIX II**

### **RESPONSES OF THE STUDENTS AFTER THE MEDITATION TRAINING**

The students gave a semi-structured feedback for the meditation programme they attended.

Kavishta VIII B

The teaching was good and it brought a lot of awareness in us. Things we didn't know. Next time we are in trouble we know exactly what to do.

I didn't have any dislikes about the course. I enjoyed it.

I don't have any suggestions to make.

I had a good experience. At first I was restless and impatient. I could meditate properly only for 5 minutes. On the 5<sup>th</sup> day I did not have much of a problem.

I have learnt how to be patient and not to lose my temper.

I will practice for 20 minutes every day.

Lakshmi VI B

I liked everything about this and I hope that everyone understands and practices meditation. It is quite difficult at first to meditate but after you get used to it, it is nice.

It was very interesting and quite nice. It has certainly been very helpful. At the beginning I didn't take it very seriously but by the end, I found it really captivating and I hope to practice everyday, twice a day.

I find myself remembering things I would have usually missed and a lot more calm. I can concentrate a lot better too.

Karmanya VI A

The first and second day, I thought were very interesting and it was because my mind was calm and I had vibrations. Afterwards, I felt bored sitting straight and concentrating on my breath. Seeing the video and listening to the tapes were interesting. The best thing I like about meditation is keeping quiet. I wish we had meditation class one period every day.

Karishma Menon VI

I liked the peacefulness that comes into our mind and makes you feel good. I would not say I did not like anything, but it was stressful to sit for a long time.

My leg started to pain but slowly the pain went away. The day we started was a little tough but by practice enjoyed it.

Ammar VI

I liked meditation very much, but it was difficult keeping our eyes closed for more than 10 minutes, sometimes 15 minutes and 25 minutes and sometimes for 30 minutes!

I liked meditation because it removed all our worries and when we were very sad, it would change our mood. And mam explained very nicely and she told us stories on that topic and she also told us one point, that nothing is permanent. When we did the 30 minutes meditation, I had a real headache and I felt the world was going round and round.

Vijay Karthik VIII

The course was very good. The things taught and the way of teaching is very good.

Make the course a little longer because we have now only settled.

I liked the course very much. I have tried to increase my concentration and all other positive qualities.

After meditation I feel fresh and peaceful.

I will try and practice daily in the morning after getting up for 10 minutes and in the evening before studying for 10 minutes.

Amita Joy VIII

I like the way they taught us and how kind they were with us and how they taught us the technique or the art of ignoring jealousy egoness etc.

I did not have any dislikes I really enjoyed it.

I experienced the truth about pain that how you can control our anger and I really found out the truth about pain and could control my anger, jealousy and telling lies.

I could see the difference in 5 days.

I could really study faster and sleep well with this daily practice.

Sneha VI

I was very nice to learn how it meditate. It was wonderful. It is a nice method to calm yourself. It was very easy to do. It was not so difficult. Whenever you are upset practice this method and see how you feel and how you change in a second

Thank you Radhi mam for all things you taught us. I really very happy to see you.

S.Vadivukarasi VI

I want the other children to see the T.V. episodes, the charts that Radhi mam and Sabrina man had done, and show them the happy and lovely journey to them. I also like the OHP's pictures.

There is nothing I dislike in my meditation class. I like it very much.

I want the people teaching to take the course for more days, unlike one week.

When I first came here I found myself in many difficulties in doing this Anapana Sati. After learning how to avoid the difficulties and distractions I began to know how to change quickly from unhappiness to happiness.

After I learnt this Anapana I became clam and quite. I learnt how to control things and discover that nothing is permanent.

I am taking a vow that I will avoid wrong actions and always practice Anapana Sati every day two times

Morning – 10 or 20 min

Evening – 10 or 20 min

Saba

My likes were the charts and the television programmes and the OHP. I would suggest you to show all these things in our course to other children. I have no dislike, because the course was completely useful and very nice and interesting too. I would suggest that these pamphlets and other things I learned during the course would be taught to other children to improve their concentration. I also suggest that you can make this course more interesting for other people. I have experienced aches and pains coming but by doing the Anapana Sati. I have experienced them going. This helped me concentrate a lot. I would practice daily for 20 minutes minimum. Thank you Sabrina Aunty for this nice course.

Prateshta VI

I like the sila because along with the Anapana Sati it determines you not to do certain things and do certain things. It has made me a wiser person. I dislike the aches and pains but I try to tolerate as much as I can.

Take this in many other schools. I was difficult as first became easier as time went. I was cheerful the whole. Never go upset for along time.

I determined to do it every day even during the free time.

Aishwarya

Meditation class is that my mind felt calm and the ten or fifteen minutes made me happy. I felt a lot of vibrations and felt as I was flying in thin air. The teacher said some interesting stories nice morals. Like as the seed so the fruit and some more. She put up charts. As the first it was quiet tough and not so easy. The teacher showed videos and she played a tape in which her Guru Sri Sathyanarayan Goenka had taped some interesting things about meditation.

I liked everything. I do not name anything I did not like. Everything I liked except one thing the teacher should not have given as a break but I enjoyed it.

It changed every thing. I would like to tell the teacher something that is thank you.

Rifah VIII

I have learnt meditation for the first time. At first I thought it was such a bore but later after I gave it a try. I liked it a lot.

Anapana Sati has helped me a lot in my mental peace, calmness, etc. I mostly get angry at things when I am not in a mood but this practice has helped me calm down.

There's nothing about this wonderful class I dislike. I like it a lot!

Giving a cushion or a mat would be much much better because the ground gives me aches all over. I also hope you would come to our class every day to meditate. As I have written before I like a lot. I was fun and I learnt a lot.. I am also teaching my cousins.

I get the benefit in my studies, my tension, etc.

I practice Anapana Sati for 10 min every day morning night and evening.

Mansa VI

Meditation was a very nice vibration and I felt calm for the 1<sup>st</sup> 4 days. But the 5<sup>th</sup> day was a very boring. I did not feel the vibration. But it was very nice. The first day my head was paining.

Thank you Radhi mam for all your kindness and helpfulness. I am very thankful to you mam.

Aroona R. VI

I want my schoolmates to watch the T.V. episodes and learn that by meditating you can become more successful in your life.

We didn't have time to read the things which were put up in the wall. May be you can give them 5 minutes to just look around the things in the wall.

It is a great help to those who are a dull student of a class.

You have changed me into a good girl.

I will try my best to do 2 times a day.

Vishag VI

The meditation was very nice. It helped us to master our mind. I liked it very much and it was a little difficult but I could do it. When the teacher told us to do meditation before we studied and I did it and it was helpful. I thank you for helping me to concentrate.

Vishal Abraham VI

The meditation was good for me because it helped me focus on my studies much better. When I meditated before my studies and got very good marks. It was very good because I could focus my mind so well in my studies. I did not have anything else on my mind but studies. My mind was clear.

Varuna VI

I like the way they are punctual.  
I do not like everytime removing my shoes and come into the room.  
At first I like the meditation but now I feel it is a little boring.  
I feel I can concentrate a lot now.  
I am going to practice but only 5 minutes.

Tushar VI

At first I felt that I just couldn't keep my eyes closed for a long time because it was very hard to be tolerant, but gradually it became easier and I accepted the pain and also got rid of it through Anapana Sati. I think that I could have meditated for longer if my eyes had been open. I've become little calmer and left better after this course.

## **APPENDIX V**

The present researcher conducted a workshop that included a one day meditation course.

This was conducted for the Class XII students of Lady Andal Matriculation & Higher Secondary School on the 07.06.1999 and 09.06.1999.

The following pages consists of the feedback from the students who attended the programme.