Chapter-II
Review of Related Literature
CHAPTER-2
REVIEW OF RELATED LITERATURE

2.1.0 INTRODUCTION

The Conceptual Background, Rationale of the present study along with Objectives and Hypotheses have been given in chapter I. The present chapter is devoted to the Review of Related Literature. A large number of studies have been conducted. Majority of them were conducted in foreign countries and in clinical settings. For proper understanding studies have been grouped under five headings, namely, Effectiveness of Relaxation Therapies; Comparison of Relaxation Therapies; Relaxation Therapies and Gender; Pairing of Relaxation Therapies and Effect of Relaxation Therapies on different variables.

2.2.0 EFFECTIVENESS OF RELAXATION THERAPIES


Paul and Shannon (1966) conducted a study with college students suffering from interpersonal Anxiety and Taylor (1971) aimed at reducing Test Anxiety found that Desensitization was effective.

Lazarus and Serber (1968) presented two case histories in which Desensitization was effective. One case involved a male who would either withdraw or become violent in the face of criticism of his wife. Assertive Training proved to be effective. The second case involved a depressed female who improved following Assertive Training (as well as instructions to seek employment).

Gary & Guthrie (1972) found that self-esteem improved along with fitness in a 4 week jogging programme.

Lazar et al. (1972) studied the effect of Transcendental Meditation Programme on Anxiety and found that Anxiety was decreased.

Ballou (1973) studied the effect of Transcendental Meditation in a programme at Still Mater Prison Graduate Department of Social Anthropology and found that the Transcendental Meditation Programme decreased Anxiety.

Palsane and Kohen (1973) found that a short term Yogic Training Proramme of three weeks on 30 school students using both Asana and Pranayama was effective as shown by Psychological tests. Memory was found to increase significantly.

Carter and Synolds (1974) used a series of Progressive Relaxation tapes to decrease Muscle Tension and Pressure with a group of minimally brain injured children. The program was effective in decreasing Muscular Tension and Pressure while writing and enhancing the quality of handwriting in their students as well as an increase in speed. There was a transfer effect to non-experimental situations and changes were stable as time passed.

Shafi et al. (1974) studied the effect of Transcendental Meditation on marijuana users. It was found that only 15 per cent of non-meditating marijuana users had decreased or stopped the drug intake while half to three quarters of the meditation, depending on the length of their meditation, had decreased or
stopped the drug intake during the first three months after the initiation to meditation. Thus longer the period of practice of Meditation, the more likely was the decrease or stopping of marijuana use.

Hopkins and Hopkins (1976) found that a yoga program could benefit children, especially those with psychomotor deficits. They reported that yoga postures promoted body awareness, balance, and laterality. In addition, yoga could produce a calming effect, which helps children to get into a frame of mind conducive to learning. Further children often commented on feelings of well-being after taking part in yoga sessions; they became more aware of their bodies and bodily tensions which the yoga exercises helped to release.

Diskin (1977); Hopkins and Hopkins (1977); and Seiler and Renshow (1978) reported that Yoga as a Relaxation technique was found to reduce and relieve Stress and Tension, dissipate excess energy, relieve tiredness and lethargy, lengthen attention span, improve and maintain general physical health, develop sharper concentration and greater mental clarity and cultivate better interpersonal relationship.

Abrams and Siegel (1978) the effect of Transcendental Meditation Programme on Anxiety and found that Anxiety reduced significantly.

Ferguson (1978) presented a Self-report evaluation of the effect of the Transcendental Meditation Programme at Massachusetts Correctional Institution, Walpole. Transcendental Meditation Programme was found to reduce Stress and Tension.

Hopkins and Hopkins (1979) studied the effect of Yoga on Concentration of children. Participants were 34 children ranging age from six to eleven years of age. The students were not in a regular public school rather, they were from impact centers for children with severe disabilities. The results indicated that both the Yoga and Psychomotor Activities significantly improved concentration of the students, but there was no significant difference between Yoga and Psychomotor interventions.

Carter and Russell (1980) reported that Biofeedback Relaxation Training resulted in more efficient ability to cope in school; improvement in self-control, in finishing seat work, and in attention span, as well as in the academic subjects of reading, spelling, and arithmetic.
Hughes and Davis (1980) studied effective use of Biofeedback with Hyperactive and Cerebral Palsied populations. It was found that Biofeedback was effective in subjects who exhibited autistic behaviors.

Fagen (1982) applied Music Therapy in the Treatment of Anxiety and Fear in Terminal Pediatric Patients. The population examined here was the latency age child and early adolescent at the end stage of life-from time of diagnosis of terminal illness to death. Music Therapy was found to be an effective tool in uncovering and working through Fears and Anxieties related to death and mourning.

Gross and Swartz (1982) studied the effect of Music Therapy on Anxiety in chronically Ill Patients. The result showed that listening to happy, stimulating music elicited higher level of Anxiety than sad, sedate music and was less likely to reduce state Anxiety. Further exciting music produced more Aggression as well as higher level of Anxiety than calm and no music situations.

Omizo, Loffredo & Hammett (1982) reported Biofeedback was found to be effective in improving the Social and Academic Adjustment of learning-disabled children.

Marino (1983) studied the effect of Biofeedback Thermal Training and Relaxation Training on Reading Vocabulary and Comprehension, Locus of Control Orientation, State and Trait Anxiety, EMG readings, and fingertip temperatures of behavior disordered students. A group of 56 behavior disordered 10th, 11th, and 12th grades students from three private day-school summer programs were administered pretests and post-tests utilizing the Gates-MacGinitie Reading Vocabulary and Comprehension Tests, Rotter I-E Scale, Self-Evaluation Questionnaire-Forms X-I and X-2, Cyborg EMG J33 unit, and 3 I/2-inch mercury-type Biofeedback thermometer. The data were analysed with the help of t-test, Product Moment Correlation and Analysis of Variance. Results indicated that Reading Comprehension, Locus of Control Orientation, EMG readings, and fingertip temperatures were related to Biofeedback Thermal Training and Relaxation Training.

Setterlind (1983) found that regular practice of Meditation bring a positive change in well being of subjects.

Delmonte (1987) suggested that Meditation helped in improving Psychological well being.
Jocelyne (1987) conducted a study entitled "Behaviour Therapies for Social Phobia". It was found that Cognitive Behaviour Therapy effectively reduced Social Anxiety.

Vicente Pedro (1987) studied the effect of Yoga and found significant reduction in State and Trait Anxiety of the subjects due to regular practice of Yoga.

D' Zurilla (1990) investigated into the effect of Problem Solving Training for effective Stress Management and Prevention. It was found that (1) Social Problem Solving (i.e. real life problem solving) appeared to be an important general Coping Strategy that can have a significant effect on person's ability to reduce, control and prevent the experience of Stress in everyday living. (2) Problem Solving Training was a viable and promising approach to Stress Management which increased positive psychological resources (Problem Solving Ability, Self-Esteem, Life-Satisfaction) while reducing Stress and its negative effects.

Preedy & Peters (1990) reported significant reductions in Trait Anxiety and Depression during exercise. They also found that people with alcohol misuse problems who undertook aerobic exercise were better able to cope with Life-Stresses after discharge from the alcohol treatment programme. It was also reported that participation in exercise appeared to help reduce levels of alcohol consumption.

Kabat-Zinn (1992) studied the effectiveness of Meditation-Based Stress Reduction Program in the treatment of Anxiety disorders. The objective of the study was to study the effectiveness of a group Stress Reduction Program based on Mindfulness Meditation for patients with Anxiety disorders. The 22 participants were screened with a structured clinical interview and found to meet the DSM-III-R criteria for generalized Anxiety disorder or panic disorder with or without agoraphobia. Assessments including self-ratings and therapists' ratings were obtained weekly before and during the Meditation-based Stress Reduction and Relaxation Program and monthly during the 3-month follow-up period. The results were: Repeated measures Analysis of Variance documented significant reduction in Anxiety and Depression scores after treatment for 20 of the subjects-changes that were maintained at follow-up. The number of subjects experiencing panic symptoms was also substantially reduced. A comparison of
the study subjects with a group of non-study participants in the program who met the initial screening criteria for entry into the study showed that both groups achieved similar reductions in Anxiety scores on the SCL-90-R and on the Medical Symptom Checklist. It was concluded that a group Mindfulness Meditation Training program can effectively reduce symptoms of Anxiety and panic and can help maintain these reductions in patients with generalized Anxiety disorder, panic disorder, or panic disorder with agoraphobia.

Cohen (1994) conducted an experimental study to determine the effect of a Relaxation Treatment on the level of Test Anxiety, the level of Test Performance, and the relationship of Age to these levels. The sample consisted of a total of 126 practical nursing students in a post-secondary vocational-technical center. Subjects were adult students ranging in age from 17 to 58 years of age. The dependent variables were: (a) Test Anxiety as measured by Spielberger's Text Anxiety Inventory (TAI) and (b) test performance as measured by scores on Medical-Surgical Nursing Comprehension tests, each of which consisted of a Medical Surgical theory test and a pharmacology test. The Relaxation Treatment consisted of a composite of several techniques including Muscle Tensing and Relaxing, Imagery, and Softly-played baroque-style music. The results were: (a) subjects reported lower levels of Test Anxiety after the Relaxation Treatment, (b) level of performance on a test was improved after the Relaxation Treatment, (c) there was no relationship between Age and level of Test Anxiety, (d) no significant relationship was seen between Age and achievement in Pharmacology, and (e) a significant relationship was found between Age and Achievement in Theory.

Colwell (1994) examined the effect on Reading accuracy of three methods of shared reading paired with Music. 27 kindergartners participated in a music program, supplementing their whole language curriculum. One class had song rehearsal of their textbook set to music. The 2nd had spoken and song rehearsal. The 3rd had only spoken text song rehearsal. Subjects' subsequent text readings were analysed for word substitutions and omissions. The 1st two classes had greater Reading accuracy than the 3rd, suggesting that song rehearsal facilitated Reading accuracy by serving as a structural prompt.

Elliot (1994) found that individuals in a coronary care center who were not allowed to choose their music by which to relax and listened to light classical music displayed no significant reductions in Anxiety. However, because as pain is a personal experience, Stress was also manifested differently from individual
Mullins (1994) conducted a research to determine if Relaxation training strategies incorporated into a Stress management curriculum would reduce Anxiety levels and enhance Self-Esteem among college students. Some of the findings of the investigation were statistically significant, and verbal feedback from the students exposed to the Relaxation training was encouraging. Students who utilized Autogenic as a Stress Reduction Technique experienced significantly lower levels of Anxiety and enhanced Self-Esteem. Post-testing scores revealed the significant changes.

Adaman and Blaney (1995) studied the effect of Musical Mood Induction on Creativity. The researchers in this study used Musical Mood Induction to induce either elated, depressed, or neutral moods in undergraduate college students. Using three twenty-minute musical induction tapes that had been developed and approved by Pignatiello, et al. induced the mood. The tapes related to elated, depressed, and neutral conditions. Familiarity with the music played, the ability to concentrate during the mood induction, the years of musical training, and the enjoyments of the music presented were all assessed in relation to changes in mood scores. The elated subjects had a significantly higher score than depressed subjects on mood ratings and elated and depressed groups were significantly more Creative than the Neutral group.

Edmund Jacobson (1938, 1987), Carroll & Seers (2001) and Sloman (1995) found that Progressive Musical Relaxation (PMR), a Relaxation technique, was especially effective in Pain and Stress Management.

Cloner et al. (1995) experimented with Complementary Cancer Therapy and found that Complementary Cancer Therapy appeared to have a positive effect on Psychological Distress and Anxiety.

Miller et al. (1995) studied the three-year follow-up and clinical implications of a Mindfulness Meditation-based Stress Reduction Intervention in the treatment of Anxiety disorders. Anxiety disorder showed clinically and statistically significant improvements in subjective and objective symptoms of Anxiety and Panic following an 8-week outpatient physician referred Group Stress Reduction Intervention based on Mindfulness Meditation. Twenty subjects demonstrated significant reductions in Hamilton and Beck Anxiety and
Depression scores post intervention and at 3 month follow up. In this study, 3 year follow up data were obtained and analyzed on 18 of the original 22 subjects to probe long terms effects. It was concluded that an intensive but time limited Group Stress Reduction Intervention based on Mindfulness Meditation had long term beneficial effects in the treatment of people diagnosed with Anxiety disorders.

Byrnes (1996) studied the effect of Audio, Video, and Paired Audio-Video stimuli on the Experience of Stress. In this study the researcher assessed subjects' on-going experienced level of Stress as they received Audio, Video or combined Audio-Video stimuli. For all of the conditions the level of Stress and Anxiety was pretty low and the stimuli usually decreased Stress. The most significant change from before and after Stress levels was when they received the combined Audio-Video condition.

Hammer (1996) studied the effect of Guided Imagery through Music on State and Trait Anxiety. The finding was that there may be some benefit in using Guided Imagery through Music for people who had chronic Anxiety and Stress.

Sheard and Maguire (1996) studied the effect of Psychological interventions on Anxiety and Depression in oncology. Results of two meta-analyses concluded that the mean effect of Psychosocial interventions on Anxiety was taken to be clinically significant regardless of study quality but that for Depression was weaker overall and insignificant for better quality studies.

Wendy (1996) conducted an experimental study to determine the efficacy of a Multi Sensory Relaxation Treatment in achieving a reduction in the potential effects of Stress in health care workers. It was found that the use of Aromatherapy and Massage in combination can reduce levels of Stress and Anxiety and promote Deep Relaxation.

Field et al. (1997) found that Massage Therapy had an immediate effect on reducing cholesterol levels (stress related hormone) in children with Juvenile rheumatoid arthritis.

Brodsky & Sloboda (1997) found that Music was a successful modality in treating Stress.

Strauser (1997) found that Music could reduce Anxiety and Physiological Stress levels.
Shapiro et al. (1998) examined the short-term effects of an 8-week meditation based Stress Reduction Intervention on premedical and medical students using a well controlled statistical design. It was found that Stress Reduction Intervention effectively: (1) reduced self-reported State and Trait Anxiety, (2) reduced reports of overall Psychological distress including depression, (3) increased scores on overall empathy levels, and (4) increased scores on a measure of Spiritual experiences assessed at termination of intervention.

Katula et al. (1999) conducted a study with the purpose of examining the effects of varying exercise intensities and changes in Self-efficacy on Anxiety reduction in a sample of healthy older adults. Eighty older adults from a randomized controlled exercise trial participated in this study and completed measures of self-efficacy and the State Anxiety Inventory (SAI) prior to and following light, moderate, and high-intensity exercise. Latent growth curve modeling analysis revealed that although Anxiety was reduced following the light-intensity condition, no significant changes in Anxiety occurred following the moderate-intensity condition, and Anxiety increased following the high-intensity condition. In addition, changes in Self-efficacy were related to Anxiety responses only in the moderate-intensity condition. An analysis of SAI items indicated that although the light-intensity condition resulted in decreased arousal and anxiousness, the high-intensity condition resulted in increased arousal and decreased anxiousness.

McCraty, Atkinson, Rein, & Watkins (1999) examined the effect of Music on Emotional state and found that individuals who listened to certain types of Music in conjunction with a Self-induced positive Emotion were related to the immune system.

Tranel (1999) found that clients with Alzheimer’s who learned PMR showed significant decrease in psychotic and behavioural disturbances that were common to the disease.

Malathi et al. (2000) observed a significant improvement in 9 of the 11 factors of subjective well being in healthy volunteers at the end of 4 months of Yoga practice.

Kim et al. (2001) studied the effects of Hand Massage on Anxiety in cataract surgery using local anesthesia. The sample comprised of 59 patients having cataract surgery. The patients were divided into those having a Hand
Massage 5 minutes before surgery and those not receiving a Hand Massage. Patients' Anxiety levels were measured using the Visual Analog Scale and by assessing systolic blood pressure, diastolic blood pressure, and pulse rate before and after the Hand Massage and 5 minutes before the end of surgery. Epinephrine, Non-epinephrine, cholesterol, Blood Sugar levels, Neutrophil, and Lymphocyte percentages in white blood cells were also measured. The results were: After the Hand Massage, the Psychological Anxiety level, Systolic and diastolic blood pressures, and pulse rate were significantly lower than those before the Massage. The Hand Massage significantly decreased epinephrine and non-epinephrine levels in the Experimental Group while epinephrine, non-epinephrine, and cholesterol levels increased in the Control Group.

Knight and Rickard (2001) found that exposure to Music reduced Systolic Blood Pressure and heart rate. In this same study, the subjective Stress levels of individuals were also reduced.

Pag & Ruiz (2001) had shown that with deep breathing, the body's overall circulation was improved resulting in the release of Tension as well as increasing levels of blood and oxygen through the entire body, which then affects the central and autonomic nervous systems. Both systems control heartbeat, respiration, and conserve energy. Through breath and Meditation, Yoga produced Calming effects, Emotional balance, and increase Concentration.

Zipkin (2001) found that Relaxation techniques were extremely effective for children with disabilities. Research indicted that Progressive Muscle Relaxation, Isometrics, Yoga, Movement Exercise, Massage, Guided Fantasy, Meditation, Concentration, Music, Breathing control, and Biofeedback training were all successful in decreasing Hyperactivity and Impulsivity. At the same time Academic Achievement, interpersonal relationship, and increased attention span resulted from these techniques. Further Yoga positively affected Mental states. It promoted Self-control, Attention and Concentration through breath control, and Deep Relaxation.

Kumar and Ali (2002) reported that 40 days Meditation practice brought a significant positive change in the subjective well being of students.

Phamdoung (2003) examined the effect of Music on labor pain. The study was conducted on women (N=55) who were exposed to music without lyrics for three hours starting early in the active phase of labor. It displayed significant
relief of severe pain across three hours of labor and delayed the increase of affective pain for one hour.

Harrison, Manocha and Rubia (2004) used Sahaja Meditation for families of children with ADHD and showed positive results with both children with ADHD and their parents. Results indicated significant improvement in children’s Self-esteem, Academic Achievement, Parent-child relationships, and a reduction in several symptoms of ADHD. Further Anxiety, Confidence, Hyperactivity and Impulsivity were significantly reduced over the course of the Meditation.

Kenny & Jensen (2004) conducted a study using Yoga as an intervention with boys with Attention-Deficit Hyperactivity Disorder. Participants were aged 8-13 and all were Caucasian. The Yoga implementation did produce some positive results during evening hours. Parents indicated that children had improved in various areas.

Kumar (2004) noticed remarkable positive change in P.G. Yoga students’ Anxiety and Subjective well being after practice of Yoga Nidra daily half an hour for six months.

Sharma (2004) studied the effect of Stress Reduction Model on Stress and found that it significantly reduced Stress amongst students.

Srivastava et al. (2004) found significant reduction in MBBS student Anxiety level as a result of Yoga practice.

Shannahoff-Khalsa (2004) showed that Kundalini Yoga Meditation could help in the treatment of Psychiatric disorders. Although specific to obsessive-compulsive disorder, the research showed some specific Meditations were beneficial for children who had symptoms of ADHD including symptoms of co-morbid disorders, such as, Oppositional defiant disorder / Conduct disorder (ODD/CD), and Depression / Anxiety. The study included eight participants, five of whom completed the twelve-month trial. Three of the five were completely without the use of Medication. Results indicated an improvement of 55.6% going from a mean score of 19.8 to 8.8.

Kim & Koh (2005) reported that Music can be utilized as a successful treatment modality for pain across various populations, including stoke patients.

Peck, Kehle, Bray and Theodore (2005) used Yoga as an intervention for children with “attention problems.” The research used a multiple baseline design to investigate the effects of Yoga for improving time on task with elementary
school children. Results indicated that the participants improved their time on task during the Yoga implementation. So Yoga could be a promising intervention for students with attention problems and it could be used in conjunction with the curriculum.

Exposure to sedative Music reduced heart rate (Iwanaga, Kobayashi, & Kawasaki, 2004 and Lai & Good, 2005).

Mitchell, Mac Donald, Knussen & Serpell (2007) suggested that active Music listening provided an emotionally engaging distraction capable of reducing both the sensation of pain itself and the accompanying negative affective experience.

2.3.0 COMPARISON OF RELAXATION THERAPIES

Lazarus (1966) compared Behavior Rehearsal with a reflection-interpretation condition and with advice giving. Each patient received no more than a total of four 30 minute sessions. The Behavior Rehearsal condition included modeling by the therapist, Practice by the patient, and Relaxation induction when Anxiety was indicated. A patient was considered improved when evidence was provided for in vivo behavior change. Given the brevity of treatment, it was found that 92% of the Behavior Rehearsal patients showing improvement compared with 44% for the group receiving Advice, and 32% for the Reflection Interpretation group. Since the Researcher served as a therapist for all three conditions, it was possible that his bias as a behavior therapist may have retarded improvement in the control groups.

Paul (1966) demonstrated the effectiveness of Desensitization in the treatment of a widespread and frequently debilitating Fear, the Fear of public speaking and related interpersonal Anxiety. In addition, it was found that Desensitization was superior to Traditional Insight Oriented Therapy when both forms of therapy were conducted for the same length of time (5 weeks, 1 hour per week). The 5-week period was selected because the therapists conducting the insight therapy, each of whom was quite experienced, indicated that this period of time would be sufficient to effect a change in the target problem. The main measures of Speech Anxiety were self-report prior to having to give a speech before a strange audience, objective manifestations of fear while giving the speech, and physiological measures of emotion determined just prior to giving the speech. Although insight subjects showed somewhat greater improvement than control group, they did not differ in performance from an additional group receiving an attention placebo treatment; and again, the Desensitization group was superior to all other groups on all three measures. Six weeks later, follow-up revealed very similar results.

Emery and Krumboltz (1967) and Suinn (1968) studied test anxious individuals receiving Desensitization reported greater reduction in Test Anxiety than non treated control subjects. A study by Johnson (1966), which included a placebo control group, provided additional support for Desensitization as an effective means of dealing with Test Anxiety.

Sanders (1967) worked with subjects who suffered from public speaking Anxiety. He compared the effectiveness of Systematic Desensitization with two forms of Behavior Rehearsal, both involving working through a speech-making hierarchy, graduated with respect to Anxiety. For one of the two groups, the
subjects were told not to imagine an audience, while for the other explicit instructions were given to imagine a critical all groups. Both were given training in Deep Muscle Relaxation. Treatment was given over six relatively brief sessions. The principle response measures were objective performance ratings, as well as self-ratings while the subjects engaged in making a speech. Sanders obtained significant improvement in objectively rated Anxiety for all three Treatment Groups, although for self-rated Anxiety the treatment conditions were not more effective than the Control Condition. Additionally, self-rated confidence was significantly more enhanced for each of the three Treatment Groups than for the Control subjects, and the same was true for self-reported organization. Thus, in general, the three Treatment conditions did not appreciably differ in their ability to enhance subjective and objective aspects of public-speaking behavior, although each was at least somewhat effective in comparison to Control condition.

Friedman (1968) assigned Nonassertive college students to one of six conditions. In one condition, Directed Role Playing, the subjects were given a script defining the role of a student who was attempting to study in the library and was faced with an antagonist attempting to interfere. In the second condition, the subjects were to assume the role of the same student but not given a script to follow. For the third condition, the subjects passively observed two confederates going through the above script. The fourth condition began with the subjects again observing the confederates going through the script, followed by a directed Role Playing, and the fifth treatment condition involved merely presenting the subjects with the script. An additional Control Group was presented with a script unrelated to Assertiveness. Each treatment condition lasted 20 minutes. The main response measures included self-rating and objective ratings of the subject's Assertiveness when another person attempted to interfere with his efforts at putting together a puzzle. The main findings were that subjects who first observed the interaction modeled and then role played it themselves showed the greater improvement. The remaining four treatments did not differ in terms of treatment effectiveness.

Paul (1969a) conducted a comparative study of the Physiological and Subjective effects of Progressive Relaxation and Hypnotic Suggestion. Sixty subjects participated in two 1-hour sessions held 1 week apart. They were randomly assigned to one of three conditions-(a) Brief Progressive Relaxation; (b) Hypnotic Suggestion (of Relaxation); and (c) Self-Relaxation Control.
Forearm EMG, heart rate, skin conductance level and respiration rate were employed as the Physiological dependent measures. To examine Subjective effect subjects were administered the Anxiety Differential (Husek and Alexeander, 1963). The data for each session were separately examined. During session 1, Progressive Relaxation Training produced significant reduction as compared with Control on the Anxiety Differential (AD), EMG, heart rate and respiration rate. Hypnotic Suggestion versus Control produced significant decreases in Anxiety Differential and Respiration rate. Progressive Relaxation produced significantly greater reductions than Hypnosis in heart rate and EMG. Eighty-five percent of the subjects in the Progressive Relaxation Condition demonstrated significant reduction in the relaxed direction on the AD, EMG, heart rate and respiration rate while only 30% of the hypnotic suggestion subjects manifested this change. The results for session 2 again indicated that Progressive Relaxation produced significant reductions as compared with Control on the Anxiety Differential, EMG, heart rate, and respiration rate. When the Hypnosis group was compared with Control, significant reductions were noted on the Anxiety Differential, EMG, heart rate, and respiration rate. Again, Progressive Relaxation was significantly better than Hypnotic Suggestion in reducing heart rate and EMG. On the other hand, the results for the skin conductance measure were all non-significant in both sessions. In session 2, 70% of the Progressive Relaxation subjects evidenced significant reduction in the four measures, while only 25% of the Hypnotic Suggestion subjects evidenced the same degree of change. It can be inferred from the findings of this study that there were components of the relaxation procedure, absent in Hypnotic Suggestion, which were responsible for the superior performance of the former group.

Meichenkaum et al. (1971) found that trained clients in how to manage Anxiety in variety of situations was more effective than traditional Systematic Desensitization.

Boudreau (1972) reported of a case of claustrophobia and another of profuse perspiration who were treated therapeutically successful with T.M. and Yoga while Systematic Desensitization was only a partial success.

Woy and Efran (1972) reported a partial replication of Paul's study in which an additional variable, subject expectancy, was manipulated. One group of speech-anxious subjects was given a drug described as a fast acting tranquilizer and told that this would augment treatment. A second group was told that they would not receive the drug. Subjects in both groups received five 50 minute
Desensitization sessions. A third group served as Control Group. Consistent with Paul's findings, on most measures the Desensitization subjects improved significantly more than did the Control Group. On only one measure, Self-perception of improvement, did the positive-expectancy group show significantly greater change than the neutral-expectancy group.

Hjelle (1974) compared 15 experienced Transcendental Meditators with 21 Novice Meditators on measures obtained on Bendig's Anxiety Scale and Rotter's Locus of Control Scale. It was found that Meditators were significantly less Anxious, more Internally Controlled and more Self-actualised as compared to novice Meditators.

Chinnian et al. (1975) studied the Physiological changes in Progressive Relaxation of 10 patients suffering from Anxiety states. Results indicated significant differences between mean values on pulse pressure, pulse rate, respiration rate before and after the session establishing the superiority of Progressive Relaxation sessions over controlled session.

Patel and North (1975) conducted a randomised controlled trial of Yoga and Bio-Feedback in management of hypertension. 34 hypertensive patients were assigned at random either to six weeks treatment by Yoga Relaxation methods with Bio-Feedback or to Placebo Therapy (general relaxation). Both groups showed a reduction in blood Pressure (from 168/100 to 141/84 mm. Hg in the treated group and from 169/101 to 160/96 mm Hg in the control group). The difference was highly significant. The control group was then trained in Yoga Relaxation, and their blood-pressure fell to that of the other group (now used as controls).

Rao and Murthy (1975) examined the efficacy of Shavasana (Yoga) as compared with Jacobson's Progressive Relaxation on 10 subjects suffering from heightened states of Anxiety. Physiological measures and Psychological indices associated with Anxiety showed significant change for both the techniques. Shavasana was found to relieve Anxiety better.

Beiman, Israel, and Johnsons (1978) and Bernstein and Borkovec (1973) found little success with recorded instructions, and reported that Live Progressive Relaxation Training was superior to Taped Training in reducing Muscle Tension.

Madenlian (1979) compared Martial Arts Training with more Conventional Psychotherapies. Sixty-six boys aged between 12 and 14 who had been referred to a mental health agency for behavioural problems, were assigned
to one of three groups: an Aikido training programme of 16 sessions spanning four months, a traditional therapy group receiving individual, group or family therapy as appropriate from various professionals, or a waiting-list Control group. Self-concept said to have pervasive effects on Personal Adjustment and Academic Achievement was selected as the dependent measure. Gains on the Piers-Harris Self-Concept Scale were greater for Aikido than Psychotherapy, with no change among the controls.

Carter, Lax & Russell (1979) compared the effect of prerecorded Relaxation tapes and Biofeedback Muscles Relaxation exercises and found that the Biofeedback Relaxation resulted in more significant gains in Cognition, Memory and Handwriting in a group of educable retarded boys.

Hershey and Kearns (1979) and Frey (1980) reported that Mental Relaxation includes guided fantasy and imagery, Meditation and Concentration. Guided imagery uses fantasy “trips” in which the children imagine or visualize peaceful and restful places or situations. Auditory and/or visual suggestions were given of a fantasy or passive nature scenes. These experiences focused on Concentration and had a positive effect on Creative Thinking Abilities.

Walker (1979) reported that same relaxation effect can be achieved by Muscle Relaxation exercise alone, without Biofeedback. Thus there can be a great saving in terms of equipment and amount of trained technician time.

Norton and Johnson (1983) compared the effectiveness of two different Relaxation Procedures in treating snake anxious people who expressed Anxiety primarily in a somatic or a cognitive manner. Forty moderately snake phobic subjects were categorized as either "somatically-anxious" or "cognitively-anxious" on the basis of a questionnaire. Half of the subjects in each group were given modified Progressive Relaxation training, and the other half received training in Agni Yoga for four sessions. After completion of training, approach distance, subjective fear and pulse rates were measured during a snake approach test. In addition, a Snake Fear Scale was given to each subject prior to and after approaching the snake. It was found that the two Relaxation procedures produced differential effects according to whether subjects expressed Anxiety somatically or cognitively.

Holmes (1984) compared the effectiveness of Meditation with simple resting, and no significant differences were found. Subjects relaxed (as measured in several ways) equally well using Meditation or Relaxation.
Heinrich and Schag (1985) studied Stress and Activity Management group treatment for cancer patients and spouses. Fifty one ambulatory patients (aged 25-70 years) with commonly occurring cancers and twenty five of their spouses participated in a study to evaluate a Stress and Activity Management Treatment Program (SAM) conducted in a group. Twenty six patients participated in the SAM treatment condition, and twenty five participated in the Current Available Care (CAC) Control condition. SAM patients and spouses were expected to improve more than the CAC patients and spouses in terms of information, Psychosocial Adjustment, and daily activities. Patients and spouses were evaluated at four times: pretreatment, post treatment, two month follow up, and four month follow up. Interviews, questionnaires, and self-monitoring of behaviour were designed to assess outcome variables. Measurement instruments included a Functional Performance Scale, a Cancer Information Test, and a Psychological Adjustment to Illness Scale. Results indicated some support for unique effects of the treatment intervention, but there was also support for improved Psychosocial Adjustment by all patients and spouses with the passage of time. SAM patients and spouses reported high Satisfaction with the group program used the techniques they learned in the group.

Telch and Telch (1986) compared the relative efficacy of Comprehensive Group Coping Skills Training and Supportive Group Therapy for enhancing forty one cancer patients’ (aged 19-64 years) Adjustment to their disease. Support Group sessions were nondirective and emphasised the mutual sharing of feelings and concerns. Group Coping Skills Training included instruction in Relaxation and Stress Management, Assertive Communication, Cognitive restructuring and Problem Solving, Feelings Management, and pleasant activity planning. Results revealed a consistent superiority of the Group Coping Skill intervention over Supportive Group Therapy and a no-treatment Control. Subjects receiving Supportive Group Therapy exhibited little improvement and untreated subjects evidenced a significant deterioration in Psychological Adjustment.

Trulson (1986) evaluated the use of Martial Training to counter juvenile delinquency. Thirty-four youths categorized as juvenile delinquents on the basis of MMPI personality profiles were assigned to three groups matched as far as possible for Age, Socio-economic Status and other psychometric data. The first group received 72 hours of training in traditional Taekwondo (a Korean martial art), the second group underwent a sparring and self-defense version of Taekwondo, while the third group acted as Control and engaged in various sports
under the same instructor. Following the six-month intervention period, MMPI, Jackson Personality Inventories, self-report and projective measures of aggressiveness were re-administered. It was found that the MMPI profiles had substantially normalized in the first group, along with evidence of reduced Anxiety and increased Self-esteem, Social adroitness and Value orthodoxy. The profile of the Second experimental group, however, showed accentuated delinquent tendencies and negative personality shifts including a rise in aggressiveness. The Control group showed few changes apart from trends towards improved Self-esteem and Adroitness.

Frew (1987) studied the Physiological effects of three intervention strategies (Management Skills, Training Exercise, and Meditation) in a longitudinal field experiment. Sixty-two subjects were randomly assigned to four groups (three experimental groups and a control group). Pulse rate, diastolic blood pressure, systolic blood pressure and galvanic skin response were used as physiological stress indicators. Analysis of covariance and multiple comparison tests indicated that each of the strategies led to decreased in pulse rate and systolic blood pressure. Dual combination strategies also showed significant decrease in pulse rate. However, no reliable results were found for combination strategies when examined for ordered effects.

Holland et al. (1987) conducted a study to test over a ten days period the efficacy of (1) a Triazolobenzodiazepine, Alprazolam, 0.5 mg three times a day and; (2) use of a Behavioural Technique in which patients were trained in Progressive Muscle Relaxation at an initial session with a behavioural psychologist and then asked to listen at home to an audiotape of the session three times a day. Of one hundred and forty seven cancer patients who met entry levels of distress and completed the study, uncontrolled for site or disease stage, seventy were randomised to drug, seventy seven to relaxation. Four measures of Anxiety and Depression were used: Covi, Raskin, Affects Balance, and Symptoms ptoms Checklist-90 (SCL-90). Results showed that both treatments resulted in significant decrease in observer and patient-reported Anxious and Depressed mood symptoms. Although both treatments were effective but patients receiving the drug showed a slightly more rapid decrease in Anxiety and greater reduction of Depressive symptoms. These findings confirm efficacy of both Alprazolam and Relaxation to reduce cancer-related Anxiety and Depression.

Murthy and Venkatesha (1987) conducted a study on the effect of Japa Yoga on reactions to Frustration and Personality dimensions. The objective was
to Study if Japa and non-Japa practicing subjects differ in their reactions to Frustration and Group Conformity Rating. The sample consisted of 50 students in experimental group and the same number in the control group. The tools used were Rosenzeig's picture Frustration test-Indian adaptation by Udai Pareek et al., Eysneck's Personality Inventory and personal data sheet. The data were analyzed by employing chi-square technique. The findings were: (i) Japa and non-Japa practicing subjects did not differ significantly in their reactions to Frustration; and (ii) a majority of Japa practicing subjects showed extra-sedative reactions.

Bridge et al. (1988) studied Relaxation and Imagery in the treatment of Breast Cancer. The objective of the study was to see whether Stress could be alleviated in patients being treated for early Breast Cancer. The controlled randomised trial lasting six weeks was used for outpatient radiotherapy department in a teaching hospital. The sample comprised of one hundred and fifty-four women with Breast Cancer stage I or II after first session of six weeks course of radiotherapy, of whom fifteen dropped out before end of study. The patients saw one of two researchers once a week for six weeks. Controls were encouraged to talk about themselves; Relaxation group was taught concentration of individual muscle groups; Relaxation and Imagery group was also taught to imagine peaceful scene of own choice to enhance Relaxation. Relaxation and Relaxation plus Imagery groups were given tape recording repeating instructions and told to practice at least 15 minutes a day. The main results were: initial scores for Profile of Mood States and Leeds general scales for Depression and Anxiety were the same in all groups. At six weeks total mood disturbance score was significantly less in the intervention group, women in the combined intervention group being more relaxed than those receiving relaxation training only; mood in the Control group was worse. Women aged 55 and over benefited most. There was no difference in Leeds scores among the groups. It was concluded that patients with early Breast Cancer benefit from Relaxation training.

Zurilla and Maschka (1988) compared Problem-Solving Therapy with a Control Condition (social-support therapy) for treating Stress in adults, besides assessing therapy and post-therapy Problem-solving skills. This study included self-reported measures of Stress, Health, Self-esteem, and General Life Satisfaction. At the end of treatment, clients in Problem-Solving Therapy showed significantly greater reduction in Stress levels and improved Self-esteem and Life Satisfaction than clients in the Control Group.
Gaylord et al. (1989) studied the effects of the Transcendental Meditation technique and Progressive Muscle Relaxation on EEG coherence, Stress Reactivity, and mental health in black adults. Eighty-three black college students, staff and adults were pretested on EEG coherence, kin potential (SP) habituation to a series of loud tones, psychometric measures of Mental Health (Tennessee Self-Concept Empirical Scales and Spielberger State-Trait Anxiety Inventory) and IQ. They were then randomly assigned one of the three treatment groups: the Transcendental Meditation technique (TM); Progressive Muscle Relaxation (PR); or Cognitive-Behavioral strategies (C). Approximately one year later, they were posttested. TM and PR increased significantly on an overall Mental Health factor and Anxiety. TM showed greater reduction in neuroticism than PR and C. TM also showed global increase in alpha and theta coherence among frontal and central leads during the TM Period compared to eyes closed, whereas PR and C did not show EEG state changes. The coherence increased during TM was most marked in the right hemisphere (F4C4). TM showed faster SP habituation at posttest compared to pretest whereas PR did not. None of the groups showed longitudinal changes in EEG, perhaps due to lack of regularity of participation in the treatment programs.

Sahasi et al. (1989) studied the effectiveness of Yogic Techniques in the management of Anxiety and evaluated the efficacy of selected Yoga practices (Group 1, N = 38) as compared with Drug (diazepam) Therapy (Group 2, N = 53) in Anxiety-Neurotic outpatients (aged 18 - 47 yrs). Subjects were administered a battery of tests at pre and post treatment. The Data indicated a significant rate of improvement in Group 1 subjects who completed the prescribed length (5 days/wk for 3 months) of Yoga practices as compared with Group 2 subjects. At least 7% of Group 1 subjects were reported to be completely asymptomatic as compared with none of the Group 2 subjects.

Weintraub and Hagopian (1990) studied the effect of Nursing Consultation on Anxiety, Side-effects, and Self-care of patients receiving Radiation Therapy. Using an experimental design, fifty-six subjects were randomly assigned to one of three, groups: Control, Health Education, and Nursing Consultation, The Side Effects Profile (SEP) and Spielberger's State-Trait Anxiety Inventory (STAI) were used to collect data. Although the study revealed no significant differences among groups on all variables, an important finding was that mean State-Anxiety scores were consistently lower for the Nursing Consultation Group. This finding suggested that Nurses can have a...
positive impact on patient Anxiety at a time when Anxiety is often known to interfere with patient’s well-being.

Zasa (1991) conducted a study with the purpose to determine the relative efficacy of Attentional Training in reducing Anxiety and Headache activity in Tension Headache individuals prone to relaxation induced Anxiety. Subjects received training in Progressive Muscle Relaxation and Attentional Training. Attentional Training consisted of scripted instructions, which guided the subjects to monitor and focus on specific environmental sounds. The result revealed that Progressive Muscle Relaxation training increased Anxiety and that external attentional focus served to reduce Anxiety below baseline levels. The results also indicated clinically significant reductions in Headache activity associated with Attentional Training.

Edgar (1992) studied Coping with cancer during the first year after diagnosis. The emotional coping of two hundred and five patients newly diagnosed with cancer was evaluated every four months during the one year period. Patients received a Psychosocial Intervention either immediately (early intervention, EI), or after a four month delay (later intervention, LI). No significant differences were found between the two groups, except at eight months, when the LI group was significantly less Depressed, Anxious, and worried and felt more in control than the EI group. The LI group continued to have less worry related to illness at twelve months. Patients with high Ego strength had low levels of Distress at baseline and may not have needed the intervention. The Emotional Coping of patients with breast cancer improved during the year regardless of the intervention timing. Patients with other diagnoses appeared to benefit most from the LI. It was concluded that patients with low Ego strength and diagnoses other than breast cancer might be at higher risk for psychosocial complications and could benefit from the intervention.

Greer et al. (1992) studied the effect of Adjuvant Psychological Therapy on the quality of patients with cancer. Prospective randomised controlled trial comparing the quality of life of patients receiving psychological therapy with that of patients receiving no therapy, measured before therapy, at eight weeks, and at four months of follow up. One hundred and seventy four patients of CRC Psychological Medicine Group of Royal Marsden Hospital, aged 18-74 attending hospital with a confirmed diagnosis of malignant disease, a life expectancy of at least twelve months, or scores on various of psychological morbidity above previously defined cut off points were selected as sample. Hospital Anxiety and
Depression scale, Mental Adjustment to cancer scale, Rotterdam symptom checklist, Psychosocial Adjustment to illness scale were used. Results were: One hundred and fifty six (90%) patients completed the eight week treatment; follow up data at four months were obtained for one hundred and thirty seven patients (79%). At eight weeks, patients receiving therapy had significantly higher scores than control patients on fighting spirit and significantly lower scores on helplessness, anxious preoccupation, and fatalism; anxiety; psychological symptoms; and on attention towards health care. These differences indicated improvement in each case. Four months, patients receiving therapy had significantly lower scores than controls on Psychological symptoms; and Psychological distress. Clinically, the proportion of severely anxious patients dropped from 46% at baseline to 20% at eight weeks and at four months in the therapy group and from 48% to 41 % and to 43% respectively in controls. The proportion of patients with depression was 40% at baseline, 13% at eight weeks, and 18% at four months in the therapy group and 30%, 29%, and 23% respectively in controls. It was concluded that the Adjuvant Psychological Therapy educed significant improvement in various measures of psychological distress among cancer patients.

Plantania-Solazzo et al. (1992) studied the effect of Relaxation Therapy on Anxiety of children and adolescent psychiatric patients. The immediate effects of Relaxation Therapy (RT) were assessed in 40 hospitalized children and adolescents with diagnoses of Adjustment disorder and Depression. These effects were assessed using a within subjects pre-test/post-test design and by comparison with a control group of 20 depressed and adjustment disorder patients who watched an 1-hour relaxing videotape. The 1-hour Relaxation Therapy class consisted of Yoga Exercise, a Brief Massage and Progressive Muscle Relaxation. Decreases were noted in both Self-reported Anxiety and a Anxious behavior and fidgeting as well as increases in positive affect in the Relaxation Therapy, but not the Video Group. In addition, adjustment disorder patients and a third of the depressed patients' showed decreases in cholesterol levels following Relaxation Therapy, while no changes were noted in the Vedio Group. Thus, both diagnostic groups appeared to benefit from the Relaxation Therapy class.

Campo (1993) studied the effects of a Relaxation Program on Reading Achievement, Self-esteem, Anxiety and Depression of sixth graders. Of the total sample (N=133), the experimental group (N=70) Received Relaxation Training approximately five to seven minutes before reading each day for a period of six
weeks. The control group (N=63) did not receive Relaxation Training. In addition to these data, records were kept of the relaxation experience. The teachers rated the class as a whole in three areas: "Preparation, following directions, and concentration level." The students in the experimental group completed a questionnaire midway after the third week and again at the end of the experiment. The Relaxation Program did not significantly affect any of the measured variables of Reading Achievement, Self-esteem, Anxiety, or Depression.

Papanikolau (1993) investigated the effects of Attention and Soccer ability of young male Soccer players at two age levels. The subjects for the study (N=40) were volunteers recruited from a youth Soccer league in Philadelphia, Fall, 1991. The subjects were divided into two age groups (8 to 10 and 11 to 13) and then randomly assigned to one of the two subject groups: (a) Control Group (CG), and (b) Experimental Group (EG). Assignment to the CG or the EG was on a random basis by lot. Coaches subjective assessment determined that the CG and EG were comparable in skill levels. The pre and post-test procedure consisted of completion of the Test of Attention and Interpersonal Style (TAIS), a Soccer measures Test of Attention and Interpersonal Style (S-TAIS), and three Soccer ability tests, (throw-in, dribbling, and place kick). The CG's program consisted of 24 sessions watching films of Soccer games and videotape replays of their actual games. The EG's affirmations, meditation and concentration. It was concluded that the utilization of a specific AFTP as a psychological 'skills training procedure was effective in contributing to the increased positive Attention Traits (BET, BIT, NAR) and to the decreased negative Attention Traits (GET, OIT, RED) of young Soccer players.

Rankin (1993) investigated the effects of Anxiety on the assessment of Memory functioning in the elderly population. The investigation was divided into several parts. Initially it was predicted that Anxiety would affect performance on measures of Attention Concentration, intermediate and delayed Memory for Verbal and Visual-figural information. The second stage of the investigation was designed as a manipulated check on the efficacy of a Progressive Muscle Relaxation Procedure (PMR) administered to high Anxious elderly subjects. The third stage investigated the effects of PMR on Attention capacities and Memory performance in the high anxious elderly subjects. Twenty high anxious and twenty low anxious elderly subjects were randomly selected from a larger group of high and low anxious elderly, and each subject was
randomly assigned to either a PMR group or a Control Group. Each subject was administered a battery of Psychometric tests which included portions of the Wechsler Memory Scale Revised. The results of this study provided partial support for the prediction that high levels of State Anxiety would adversely affect subjects Attention Concentration skills compared to subjects reporting low levels of State Anxiety. Support was not obtained for the hypothesis that Verbal and Visual Figural Memory Skills would be affected by high levels of State Anxiety. In regard to the effects of Progressive Muscle Relaxation (PMR) Attention Concentration and Memory Skills in high anxious elderly subjects, no support was found. In addition, PMR resulted in no enhancing or deleterious effects on Attention Concentration or Memory abilities in those subjects reporting low levels of State Anxiety.

Wheeden et al. (1993) studied effects of Massage on cocaine-exposed preterm neonates. Thirty preterm cocaine-exposed preterm neonates (mean gestational age 30 wks mean birth weight = 1212 g, mean intensive care unit duration = 18 days) were randomly assigned to a Massage Therapy or a Control Group as soon as they were considered medically stable. Group assignment was based on a random stratification of gestational age, birth weight, intensive care unit duration, and entry weight into the study. The treatment group (N=15) received Massages for three 15-minute periods 3 consecutive hours for a 10-day period. Findings revealed that the massaged infants (1) averaged 28% greater weight gain per day (33 vs 26 g) although the groups did not differ in intake (calories or volume), (2) showed significantly fewer postnatal complications and stress behaviors than did control infants, and (3) demonstrated more mature motor behaviors on the Brazelton examination at the end of the 10-day study period.

Moorey et al. (1994) studied Adjuvant Psychological Therapy for patients with Cancer. Patients attending the Royal Marsden Hospital with newly diagnosed Cancers or first recurrence were screened for psychological morbidity. A total of one hundred and seventy four patients who met the inclusion criteria were randomly allocated to either Adjuvant Psychological Therapy, a Brief, Cognitive-Behavioural Treatment specially designed for Cancer patients, or Routine Care Control. A total of one hundred and thirty four patients completed questionnaires. At the end of one year Patients who received therapy showed significantly less Psychological Distress measured on the Psychological Adjustment to Illness Scale. There was a tendency for patients in the therapy
group to show more change on measures of Helplessness and Anxiety. Using the criteria for Psychological Morbidity employed at the time of entry into the study, at one year only 19% of therapy patients were still in the clinical range for Anxiety as compared to 44% of the control patients; 11% of therapy patients were in the clinical range for Depression as compared to 18% of the control patients.

Sun (1994) studied the impact of a Tai Chi Chuan Program on the Health of Hmong Older Adults. The effects of a Tai Chi Chuan fitness program on older adults who migrated to the United States from refugee camps in Thailand. Researcher divided 40 Hmong adults over age 59 between a 20-member experimental group (8 males and 12 females) and a 20-member control group (6 males and 14 females). The experimental group participated in a Tai Chi Chuan program once a week for 12 consecutive weeks, including a pretest week and a posttest week. The program consisted of 10 2-hour sessions, which covered information about human physiology and common related diseases in older adults, Emotional and Mental Health, and Stress Management. The sessions reviewed the Tai Chi Chuan movement from the previous week, taught new movement, and assigned exercises to practice for the next meeting. The Control Group continued its routine physical activities. Researcher compared pretest and posttest scores on (1) Tai Chi Chuan knowledge and attitudes, (2) behavior, (3) general well-being, (4) resting heart rate, (5) resting blood pressure, (6) stress level, and (7) joint flexibility. No significant differences existed between the groups at pretest. At posttest, experimental group subjects had (1) improved their knowledge and attitudes regarding Tai Chi Chuan, (2) exhibited more exercise behavior, (3) decreased their resting blood pressure, (4) improved their stress management skills, (5) felt more relaxed, and (6) improved their joint flexibility.

Winter et al. (1994) studied the effect of Music on Stress and Anxiety of patients in the surgical holding area. In this study, one group of subjects listened to music while the second group did not. Subjects who listened to music while in the Surgical Holding Area had significantly less Stress and Anxiety than those who did not listen to music. Both groups spent similar lengths of time in the Surgical Holding Area. The results strongly suggested that if music were available to all patients in the Surgical Holding Area, most select this option, and they would experience less Anxiety.

Devine and Westlake (1995) studied the effect of Psycho Educational Care provided to adults with Cancer: Meta Analysis of 116 studies. The objective
was to determine how Educational and Psychological care provided to adults with Cancer affects seven outcomes - Anxiety, Depression, Mood, Nausea, Vomiting, Pain and Knowledge. The sample comprised of 116 Intervention studied. A standardised mean difference between a Treatment and Control group (i.e. an effect size value) was calculated for ninety eight studies but for eighteen additional studies, it was only possible to code the direction of Treatment effect (i.e. whether the Treatment or Control group had a higher score). Most of analyses were limited to the ninety-eight studies from which an effect size value was obtainable. These studies were published between 1976 and 1993 and were based on data obtained from 5,326 patients with Cancer. It was concluded that Psycho Educational care was found to benefit adults with Cancer in relation to Anxiety, Depression, Mood, Nausea, Vomiting, Pain and Knowledge.

Evans and Connis (1995) compared brief Group Therapies for Depressed Cancer patients receiving Radiation Therapy. In this research, the effects of Cognitive-Behavioural and Socially Supportive Group Therapy were evaluated. A total of seventy two Depressed Cancer patients were randomly assigned to one of three conditions Cognitive-Behavioural Treatment, Social Support, or a no-Treatment Control Condition. Before and after intervention and at six month follow up, study participants were individually assessed by using measures of symptom distress. Relative to the comparison group, both the Cognitive-Behavioural and Social Support Therapies resulted in less Depression and Hostility. The Social Support intervention also resulted in fewer Psychiatric symptoms and reduced maladaptive interpersonal sensitivity and Anxiety. It was concluded that both group therapies can reduce symptoms of distress for depressed persons undergoing Radiation Treatment for Cancer. Both forms of therapy resulted in improvements in Psychosocial function (compared with no treatment at all), but Social Support Group demonstrated mille changes that were evident at six month follow up.

Panjwani et al. (1995) made an attempt to evaluate the effect of Sahaja Yoga Meditation in Stress management in patients of epilepsy. The study was carried out on 32 patients of epilepsy who were randomly divided into 3 groups: Group I subjects practiced Sahaja Yoga Meditation for 6 months, Group II subjects practiced Postural Exercises mimicking Sahaja Yoga and Group III served as the epileptic Control Group. Galvanic Resistance (GSR), blood lactate and urinary vinyl angelic acid (U- VMA) were recorded at 0, 3 and 6 months. There were significant changes at 3 and 6 months as compared to 0 month values.
in GSR, blood lactate and U-VMA levels in Group I subjects, but not in Group II and Group III subjects. The results indicated that there was a reduction in Stress following Sahaja Yoga practice.

Field et al. (1996a) studied the effect of Massage Therapy on Anxiety and EEG pattern of alertness and Math computations. The sample comprised of twenty-six adults who were given a chair Massage and 24 Control Group adults were asked to relax in the massage chair for 15 minutes, two times per week for five weeks. On the first and last days of the study they were monitored for EEG, before, during and after the sessions. In addition, before and after the sessions they performed math computations, they completed POMS Depression and State Anxiety Scales and they provided a saliva sample for cholesterol. At the beginning of the sessions they completed Life Events, Job Stress and Chronic POMS Depression Scales. Group by repeated measures and post hoc analysis revealed that: (1) Frontal Delta Power increased for both groups, suggesting Relaxation; (2) the Massage Group showed decreased Frontal, Alpha and Beta Power suggesting enhanced Alertness; while the Control Group showed increased Alpha and Beta Power; (3) the Massage Group showed increased speed and accuracy on Math computations while the Control Group did not change; (4) Anxiety levels were lower following the Massage but not the Control Sessions, although Mood State was less depressed following both the Massage and Control Sessions; (5) salivary cholesterol levels were lower following the Massage but not the Control Sessions but only on the first day; and (6) at the end of the 5 week period Depression scores were lower for both groups but Job Stress scores were lower only for the Massage Group.

Field et al. (1996b) evaluated Massage Therapy for the reduction of Anxiety and Depression levels of children as measured by behavioral observations, their drawings, and their cholesterol levels. Sixty 1st-5th graders who showed classroom behavior problems following Hurricane Andrew were randomly assigned to a Massage Therapy or a Video Attention Group. The results were: Scores on the Posttraumatic Stress Disorder Index suggested that the subjects were experiencing severe posttraumatic Stress. Subjects who received Massage were reported to be happier and less Anxious and had lower salivary cholesterol levels after the therapy than the Video subjects. The Massage Group showed more sustained changes, as manifested by lower scores for Anxiety, Depression, and Self-drawings. The Massage Therapy subjects were also observed to be more relaxed.
Hewson-Bower and Drummond (1996) conducted a study examining the effect of Relaxation alone versus Relaxation with immune suggestion on salivary sIgA in children with and without recurrent respiratory infection. It was found that disruptions in mucosal immunity in children with recurrent colds and flu, as illustrated by low salivary sIgA/albumin ratios at baseline, did not hamper the salivary sIgA response during Relaxation and Relaxation/hypnosis with immune suggestion and, thus, that Psychological interventions may have therapeutic value for these children.

Field et al. (1997) studied Job Stress Reduction Therapies in which the immediate effects of brief Massage Therapy, Music Relaxation with Visual Imagery, Muscle Relaxation, and Social Support group sessions were assessed in 100 hospital employees at a major public hospital. The effects of the therapies were assessed using a within subject pretest-posttest design and by comparisons across groups. The results were: Groups reported decrease in Anxiety, Depression, Fatigue, and Confusion, as well as increased vigor following the sessions. It was concluded that the groups did not differ on these variables suggests that these particular therapies, when applied for short periods of time, were equally effective for reducing Stress among hospital employees.

Strauser (1997) studied the effects of Music Versus Silence on measures of State Anxiety, Perceived Relaxation, and Physiological Responses of Patients Receiving Chiropractic Interventions. The study revealed that there weren't any significant differences among the different physiological measurements for the different conditions.

Bera (1998) compared the recovery from induced Physiological Stress in Shavasana (a yogic relaxation posture) and two other postures (resting in chair, resting supine posture). Twenty one males and 6 females (age 21-30 yrs) allowed to take rest in one of the above postures immediately after completing the scheduled treadmill running. The recovery was assessed in terms of Heart Rate (HR) and Blood Pressure (BP). HR and BP were measured before and every two minutes after the treadmill running till they returned to the initial level. The results revealed that the effect of Stress was reversed significantly shorter time in Shavasana as compared to the resting posture in chair and a supine posture.

Craft & Landers (1998) found that more conventional intervention exercise was as beneficial as group or individual Psychotherapy and behavioral interventions. Further exercise as effective as more conventional therapies was
encouraging, especially if consideration is given to the time and costs involved with treatment such as Psychotherapy.

Diego et al. (1998) studied the effect of Aromatherapy on mood, EEG patterns of alertness and Math computations. EEG activity, alertness, and mood were assessed in 40 adults given 3 minutes of Aromatherapy using two Aromas, lavender (considered a relaxing odor) and rosemary (considered a stimulating odor). Participants were also given simple Math computations before and after the therapy. The Lavender group showed increased beta power, suggesting increased drowsiness, less depressed mood (POMS) and reported feeling more relaxed and performed Math computations faster and more accurately following Aromatherapy. The Rosemary group, on the other hand, showed decreased Frontal Alpha and Beta power, suggesting increased alertness. They also had lower State Anxiety scores, reported feeling more relaxed and alert and they were only faster, not more accurate, at completing Math computations after the Aromatherapy session.

Hart et al. (1998) examined the effects of Massage Therapy on the cognitive performance of preschool students. 20 preschool students (aged 3.3 - 5.5 yrs) were rated by their teacher on a temperament checklist. Additionally, subjects completed the Block Design, Animal Pegs, and Mazes subtests of the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) prior to and following some subjects receiving a 15-minute massage. The results were: Subjects scores on the Block Design test of Abstract Reasoning improved following Massage. In contrast, scores of control subjects did not improve. On the Animal Pegs matching task, subjects maintained the levels of accuracy they had shown on the pretest, while control subjects became less accurate. Massage was particularly beneficial to subjects rated as high-strung and anxious. Subjects rated by their teachers as Calm and Easygoing, Anxious showed greater improvements on the Block Design and maintained greater accuracy on Animal Pegs subtests. Cognitive performance of control subjects did not differ by temperament.

Mannix (1998) studied the effect of Guided Imagery on quality of life for patients with chronic tension-type headache. The objective of the study was to determine the effect of adjunct Guided Imagery (GI) on patients with chronic tension-type headache. Patients with chronic tension-type headache (n=129) completed the Headache Disability Inventory (HDI) and the Medical Outcomes Study Short Form (SF-36) at the initial visit to a specialist headache center and at
one month after the visit. In addition to individualized headache therapy, patients listened to a Guided Imagery audiocassette tape daily for a month. Control subjects (n=131) received individualized therapy without guided imagery. The results were: Controls and GI patients improved in headache, headache frequency, headache severity, patient global assessment, quality of life, and disability caused by headache. More GI patients (21.7%) than controlled ones (7.6%) reported that their headaches were much better. GI patients had significantly more improvement in three SF-36 domains: bodily pain, vitality, and mental health. It was concluded that Guided Imagery was an effective adjunct therapy for chronic tension-type headache management.

McCraty et al. (1998) studied the impact of a new Emotional Self-Management program on Stress, Emotions, Heart Rate Variability, DHEA and cholesterol. This study examined the effects on healthy adults of a new Emotional Self-management Program consisting of two key techniques "Cut-Thru" and "Heart Lock-In." These techniques were designed to eliminate negative thought loops and promote sustained positive and emotional states. The hypotheses were that training and practice in these techniques would yield lower level of Stress and negative Emotion, and cholesterol, while resulting in increased positive Emotion and DHEA levels over a one-month period. In addition, it was hypothesized that increased coherence in heart rate variability patterns would be observed during the practice of the techniques. Forty-five healthy adults participated in the study, fifteen of whom acted as a comparison group for the psychological measures. Salivary DHEA/HEAS and cholesterol levels were measured, autonomic nervous system function was assessed by heart rate variability analysis, and Emotions were measured using a psychological questionnaire. Individuals in the experimental group were assessed before and four weeks after receiving training in the Self-management techniques. The experimental group experienced significant increase in the positive affect scales of Caring and Vigor and significant decrease in the negative affect scales of Guilt, Hostility, Burnout, Anxiety and Stress Effects, while no significant changes were seen in Comparison group. There was a mean 23 percent reduction in cholesterol and a 100 Percent increase in DHEA/HEAS in the experimental group. DHEA was significantly and positively related to the affective state, whereas cholesterol was significantly and positively related to Stress Effects. Increased coherence in heart rate variability patterns was measured in 80 percent of the experimental group during the use of the techniques. The results suggested
that techniques designed to eliminate negative thought loops can have important positive effects on Stress, Emotions and key physiological systems.

Scharff et al. (1998) compared Thermal Biofeedback to a credible Biofeedback Attention Control in pediatric migraine patients. Fifteen children (mean age 13.3 years) were randomly assigned to treatment groups. Four sessions of Thermal Biofeedback (TBF, n=6) was compared to four sessions of Hand Cooling Biofeedback (HCB, n=5) and a wait List Control Group (WLCG, n=4). Credibility was assessed at the first and last sessions. Headache ratings from 0 to 4 were made four times daily from 2 weeks before treatment to 2 weeks after treatment. A headache index was calculated from these ratings. It was concluded that nonspecific effects of Biofeedback may be strong.

Borromeo (1999) studied the effects of Aromatherapy on the patient outcomes of Anxiety and Sleep quality in coronary care unit patients. A repeated measures design was used to compare the effects of a passively-diffused 9-hour Lavender Aromatherapy Treatment with a control on Anxiety and Sleep quality in CCU patients. A systematic random sampling technique was used to select 25 subjects admitted to the CCU of a large tertiary care hospital located in Southeast Texas. The State-Trait Anxiety Inventory (STAI), a 20-item instrument, was used to measure Anxiety immediately before treatment, thirty to sixty minutes after treatment start, and upon awakening the next day. The Richards-Campbell Sleep Questionnaire (RCSQ), a 5-item instrument with a visual analogue scale design, was used to measure sleep quality. Investigator-designed instruments were used to record demographic data and medications for Anxiety, Sleep and Pain used during the study. The first three hypotheses, there is a significant difference in Anxiety scores between Treatments, in Anxiety scores over time, and there is a significant difference in treatment and time interaction effect on Anxiety were tested using a multivariate approach to analysis of variance for repeated measures. An analysis of covariance was not performed because there were no significant correlations between variables. The fourth hypothesis, there is a significant difference in Sleep scores between the two treatments (Aromatherapy vs. Control) was examined using a t-test for dependent samples. None of the hypotheses were supported. Passively diffused aromatherapy using lavender on cotton ball did not significantly affect Anxiety levels and Sleep quality in CCU patients.

Hemandez-Reif et al. (1999) studied the effect of Self-Massage on Smoking cravings. Twenty smokers were randomly assigned to a Self-Massage
Treatment or a Control Group. The Treatment Group was taught to conduct a hand or ear Self-massage during three cravings a day for one month. Self-report revealed lower Anxiety, improved mood, and fewer withdrawal symptoms. In addition, the Self-massage group smoked fewer cigarettes per day by the last week of the study. These findings suggested Self-Massage may be an effective adjunct treatment for attempting smoking cessation, to alleviate smoking-related Anxiety, reduce cravings and withdrawal symptoms, improve mood, and reduce the number of cigarettes smoked.

Khasky and Smith (1999) studied Stress, Relaxation States, and Creativity. In their study 114 participants in four groups practiced 25 minutes of Progressive Muscle Relaxation, Yoga Stretching, Imagery, or a Control Task. Before and after training, participants took state versions of the Smith Quick Stress Test (which measures Somatic, Stress, Negative Affect, and Worry) and the Smith R-State Inventory (which measures relaxation-related states Disengagement, Physical Relaxation, Mental Relaxation, Strength and Awareness, Joy, Love and Thankfulness, and Prayerfulness). After training, all took both the Verbal and Figural forms of the Torrance Tests of Creative Thinking. At posttest, groups scores did not differ on Creativity; however, when compared with Yoga stretching Imagery Trainees had lower posttest scores on Negative Affect. Both Yoga Stretching and Imagery Trainees displayed higher scores on self-reported Physical Relaxation than did controls. Progressive Muscle Relaxation Trainees had lower scores on Somatic Stress than controls.

Malathi and Damodarall (1999) studied the role of Yoga for reducing Stress due to exams in medical students. The present study was conducted on first year MBBS students (n = 50) to determine the benefit if any of Yogic practices on Anxiety status during routine activities and prior to examination. Feedback scores were assessed to determine how the students had benefited from the practices. Anxiety status as assessed by Spillberger's Anxiety scale showed significantly reduction following practice. In addition the Anxiety Score which rose prior to exams showed significantly reduction on the day of exam after practice. These results point to the beneficial role of yoga in not causing reduction in basal Anxiety level but also attenuating the increase in Anxiety score in stressful state such as exams. The results of the exam indicated significantly reduction in number of failures in Yoga Group as compared to the Control Group. The improvement in various parameters such as better sense of well being, feeling of relaxation, improved concentration, self-confidence,
improved efficiency, good personal relationship, increased attentiveness, and lowered irritability levels were some of the beneficial effects enjoyed by the Yoga Group as indicated by feedback score.

Murugesan et al. (2000) studied the effect of selected Yogic practices on the management of hypertension. On the basis of medical officers diagnosis, thirty three hypertensive (N=33 hypertensive, aged 35-65 years) from Govt. and General Hospital, Pondicherry were examined with four variables viz, systolic and diastolic blood pressure, pulse rate and weight. The subjects were randomly assigned into three groups. The experimental group-I underwent selected Yoga practices, experimental group-II received medical treatment by the physician of the said hospital and the control group did not participate in the treatment stimuli. Yoga imparted in the morning and in the evening with one session a day for a total period of II-weeks. Medical treatment comprised drug intake every day for the whole experimental period. The result of pretest-posttest with ANCOVA revealed that both the treatment stimuli (i.e., Yoga and Drug) were effective in controlling problems of hypertension.

Whipple (2000) examined the effects of Parent training in Music and Multimodal Stimulation on the quantity and quality of parent-neonate interactions and the weight gain and length of hospitalization of premature and low birth weight (LBW) infants in Neonatal Intensive Care Unit (NICU). Twenty sets of parents and premature LBW infants participated in the study. Parents in the experimental group received approximately one hour of instruction in appropriate uses of music, multimodal stimulation including Massage Techniques, and signs of infant over stimulation and techniques for its avoidance. Parent-neonate interactions, specifically parent actions and infant stress and no stress behaviors were observed for subjects. It was found that Infant Stress behaviors were significantly fewer and appropriateness of parent actions and responses were significantly greater for experimental infants and parents than for control subjects. Parents in the experimental also reported spending significantly more time visiting in the NICU than did of control infants.

Kem-Buell, McGrady, Conran, and Nelson (2000) investigated the impact of Biofeedback-assisted Relaxation on arousal level, asthma symptomatology, pulmonary function, and immunity among 16 subjects with nonsteroid-depended asthma aged 13-30 years (M=20.5 years). Participants were randomly assigned to the Relaxation Treatment Group or a wait-list Control Group. Relaxation training occurred across eight sessions and entailed Autogenic Relaxation, Deep
Breathing Training, and Progressive Muscle Relaxation with four of the sessions involving Biofeedback. Participants in the Relaxation Group were directed to practice Autogenic Relaxation via an audio tape twice daily, although adherence to practice was not monitored. Findings indicated decreased Forehead Muscle Tension, reduced Asthma Severity and rescue medication use, and improved Pulmonary function among Treatment participants relative to Control Group. The intervention group also demonstrated a lower percentage of neutrophils and a higher percentage of basophils than the Control Group, thereby suggesting less inflammation among treatment participants compared to controls.

Gzelier et al. (2001) studied the effects of Self-Hypnosis training on immune and mood in medical students at exam time. Hypnosis involved relaxation and directed at improved immune function and increased energy, alertness and concentration. Eight high and eight low hypnotically susceptible participants were given 10 of hypnosis, one live and nine tape-recorded, and were compared with control group (N=12). CD3, CD4, CD8, CD19 and CD56 NK cells and blood cholesterol were Life-style activated vs. withdrawn temperament; arousal and anxiety questionnaires were administered. Self-hypnosis buffered the decline found in controls in and CD8 cells and CD8/CD4% (45-35% order of differences) while there was an increase in cholesterol. The change in J-counts correlated positively with changes in both CD8 cells and cholesterol. Result pointed out changes in life-style. Energy ratings were higher after hypnosis, and increased calmness with hypnosis correlated with an increase in CD4. The activated temperament, notably the cognitive subscale (speaking quickly) was predictive of exam levels.

Hewson-Bower and Drummond (2001) examined the effect of Stress Management versus Guided Imagery on URTIs, Mucosal Immunity (i.e., salivary sIgA), and Psychological functioning among 45 children aged 8-12 years (M=9.4 years) with 10 or more URTIs over the past year. Participants were randomly assigned to one of two treatment conditions or a wait-list control. Participants in both treatments underwent four training sessions and 13 weekly group therapy sessions, the latter to practice skills. Intervention involved Emotional Expression, Problem Solving, Progressive Muscle Relaxation, and positive nonspecific imagery, whereas the Guided Imagery intervention entailed Imagery with specific suggestion to increase immune proteins and be in control, relaxed breathing, and positive, nonspecific imagery. There were no differences between the Treatment and wait-list control conditions in the number of symptomatic
episodes over a 13 week period; both treatment conditions, however, had shorter episodes than the control condition, with participants in the Stress Management treatment having the shortest episodes of all. Participants in the Stress Management and Guided Imagery Group, but not the control group, also experienced in Psychological functioning (e.g., mood), with Stress Management experiencing the most benefits over the course of Treatment. Furthermore, salivary sIgA levels were bolstered in both Treatment groups with no difference between the Treatment groups when controlling for baseline levels.

Ilmberger et al. (2001) studied the effect of essential oils and components of essential oils peppermint, jasmine, ylang-ylang, 1, 8-cineole (in two different dosages) and menthol on core attention function, which can be experimentally defined as speed of information processing. Substances were administered by inhalation; levels of alertness were assessed by measuring motor and reaction times in a reaction time paradigm. The performances of the six experimental groups receiving substances (n = 20 in four groups, n = 30 in two groups) were compared with those of corresponding Control Group receiving water. Between-group analysis, i.e. comparisons between Experimental Groups and their respective Control Groups, mainly did not reach statistical significance. However, within-group analysis showed complex correlations between subjective evaluations of substances and objective performance, indicating that effects of essentials or their components on basic forms of attention behavior were mainly psychological.

Ray et al. (2001) undertook a study to observe any beneficial effect of Yogic practices during training period on the young trainees. 54 trainees of 20-25 year's age; were divided randomly in two groups i.e. Yoga Group and Control Group. Yoga Group (23 males and 5 females) was administered Yogic practices for the first five months of the course while Control Group (21 males and 5 females) did not perform Yogic exercises during this period. From the 6th to 10th month of training both the groups performed the Yogic practices. Psychological parameters, like, Personality, Learning, Psychomotor Ability, mental well being were also recorded. Various parameters were taken before and during the 5th and 10th month of training period. There was improvement in various Psychological parameters, like, reduction in Anxiety and Depression and a better mental function after Yogic practices.

Diego et al. (2002) studied the effect of Massage Therapy on Depression, functionality and upper body Muscle Strength and range of Motion on spinal
cord injury patients. Twenty spinal cord injury individuals from a medical school outpatient clinic were randomly assigned to a Massage Therapy or a Control Group. Patients in the Massage Therapy Group received two 40-minute Massage Therapy sessions per week for five weeks. Patients in the Control Group practiced a range of motion exercise routine targeting the arms, neck, shoulders and back two times per week for five weeks. The results were: Although both the Massage and Exercise Groups appeared to benefit from treatment, only the Massage Group showed lower Anxiety and Depression scores and significantly increased their Muscle strength and Wrist range of motion.

2.4.0 RELAXATION THERAPIES AND GENDER


Wolpe (1958) described three cases successfully treated with Assertive Training. The first case involved a socially insecure salesman who received treatment relevant to business and social contacts, as well as his wife's infidelity. The second dealt with a female who was overly dependent and submissive, especially with lovers (who ultimately rejected her). The third case was a male stutterer who typically withheld anger until he experienced an emotional outburst. For the second and third cases, follow-ups of 2 and 2 ½ years are reported.

Cautela (1966) described treatment with three cases of pervasive Anxiety. The first case involved a young girl fearful of people; the second, a female doctoral candidate who reported having difficulties with her parents, and who had problems related to criticism and sex. The third case was a middle-aged man dominated by his wife and sexually impotent. Each of the three clients received Assertive Training, as well as other modes of Treatment, and all showed marked and lasting improvement.

Hosford (1969) treated a sixth-grade girl fearful of speaking in a classroom situation. Treatment consisted of her practicing successive approximations to classroom, speaking within the therapist's office as well as in
the classroom itself. By the end of the school year, the client volunteered to give an oral classroom presentation. Varenhorst (1999) reported a rather similar case involving a school girl who was able to achieve her primary goal of participating in an art seminar which had been especially threatening because students regularly criticized each other's work.

McFall and Marston (1970) provided males and females with 4 hours of Treatment. One group was given the opportunity to practice responding assertively to a variety of recorded situation. Subjects in this group were permitted to hear and evaluated their own responses. The second group received the same treatment, but the subjects own responses were not fed back to them. A third placebo group received encouragement in insulating the situational determinants of non-assertiveness as well as behaving in a more assertive manner; and a fourth group served as no-treatment Controls. The main response measures were: objective ratings of Assertiveness, and Self-ratings of Anxiety while responding to recorded situations similar to (but never identical with) those used in training. The findings were that the subjects who had engaged in behavior rehearsal showed somewhat more Assertion and less Anxiety than subjects in the Control Group. However, the effects were weak. This may reflect the fact that an assertive response was modeled only on a portion of the trials, or that the training and test situations were never precisely the same.

Lazarus (1971) described three cases receiving Assertive Training. The first involved a lawyer who was suffering from claustrophobia and who described himself as a failure. The presentation is especially valuable in that a sizable portion of patient therapist dialogue is included. A noteworthy feature was Lazarus's emphasis on his client's being able to communicate that the behavior which was hurtful. That is, the client was not given training in how to "attack," but rather how to share his feelings in an honest and direct fashion. The second case involved the use of what Lazarus has called Rehearsal Desensitization, a technique similar to Systematic Desensitization in that a graduated hierarchy is employed. The client was a chronically depressed housewife, anxious in most interpersonal situation. She was taken through two hierarchies, the first involving progressively more assertion vis a vis one other person. The second similar in nature involved two or more persons. The increased assertiveness and diminished depression persisted through a 6-month follow-up. The third case represents an application of, in Lazarus's term, training in emotional freedom (that is, training in the expression of positive as well as
negative feelings). For the first phase of treatment, the 19-year-old female client was given training in accepting and expressing Anger, which resulted in reduction in her accepting Anger and Depression. Phase two stressed the expression of positive feelings (for example, appreciation and physical affection).

McFall and Lillesand (1971) assigned male and female subjects to two Treatment Groups and a Control Group. The Treatment conditions were similar to those of McFall and Marston (1970), except that Verbal Modeling and Coaching were provided on all trials. One group practiced their responses overtly, and their responses were fed back to them, as in the prior study. The second treatment group practiced their responses covertly. Treatment was conducted over two 20-minute sessions. On an average subjects in the Treatment Groups showed a greater increase in Assertiveness than those in the Control Group, with subjects who were not permitted to practice their responses overtly showing somewhat more improvement than those of the overt Group.

Young, Rimm and Kennedy (1973) assigned female subjects to one of four groups. The first group received two Assertive Training Sessions. Training consisted of having the subject respond to specific situations, followed by an appropriately assertive response modeled by the experimenter, followed in turn by the subject again responding to the same situations. A second group underwent identical training, except that appropriate Assertive Behaviors on the part of the subject received praise from the experimenter. A third group received a Placebo Treatment, and a fourth served as non-treated Control. Both Assertive Groups showed a significantly greater increase in objectively rated Assertiveness than either of the Control Group when tested in situations or identical to those employed in training. Four test effects were found for subjects of the first condition (that is, without reinforcement), with no generalization for subjects in the second condition (with reinforcement). On the other hand, in terms of improvement; measured by an assertive inventory (Lawrence, 1970), only condition two subjects had significant gains, relative to the control. Additionally, subjects in this condition tended to rate their treatment as somewhat more effective. At a subsequent telephone follow-up, this latter effect was marginally significant, with no significant group differences for a self-rating of generalized assertiveness.

Forester et al. (1985) determined the effects of ongoing weekly Psychotherapy on the symptoms of twenty six male and twenty two female 23-78
year old cancer patients undergoing a six week course of radiotherapy, as compared with the symptoms of twenty four males and six females of 25-81 year old cancer patients undergoing the same radiotherapy course without Psychotherapy. Psychotherapy consisted of ten 30-min non-structured sessions in which subjects could discuss whatever they wanted; Therapy was focused on perceived subjects needs rather than on a preconceived approach. Results indicted a statistically significant reduction in both Emotional and Physical distress in subjects receiving Psychotherapy as compared with Control regardless of gender, ward, private-patient status, or knowledge of diagnosis. Gender and knowledge of diagnosis affected the pattern and magnitude of the session of Psychotherapy: males demonstrated a greater therapeutic response to other therapy and suffered more distress during treatment and post treatment periods than females.

Kumar (1988) studied the effect of Yoga on school students. The objective was to study the extent of the main effects of Personality dimensions, sex, SES and participation in games and sports on the mental health of players and non-players. The sample consisted of 500 young adults having equal number of males and females of age ranged 20-26 years. The tools used were: Eysenck's Personality Inventory, Hadley's Mental Health Inventory and Agasha SES Scale. The data were analyzed by employing t-test and product moment correlation. The findings were: (i) players were more healthy than non-players; (ii) participation in physical exercise contributed to positive Mental Health; (iii) SES was very weakly related to Mental Health and (iv) extraversion was positively related to Mental Health.

Mathur (1989) studied the autonomic responses to Musical Stimuli as a function of Sex and Anxiety level. The objective was to study the effect of Sex and Anxiety level on autonomic responses to musical stimuli. Three sets of independent variables used were Musical Stimuli, different Anxiety Groups and Sex. The dependent variables were autonomic responses i.e. GSR, ECG and respiration. The tools used were Sinha's Anxiety test. The findings were: (i) the introduction of R-1 (pure tone) did not produce any significant change in males with respect to autonomic responses where as GSR showed significant increase in middle and high anxiety in females; (ii) introduction of R-2 (Raga Bhairav) produced a significant decrease in ECG and respiration at all Anxiety levels of males and females; (iii) presentation of R-3 (Raga Bhairav) produced a
significant decrease in ECG of low and high Anxiety males and high Anxiety females.

Jain (1990) compared study of Progressive Muscle Relaxation and the Cognitive Method in the treatment of dysmenorrhea and found that all methods (CM and CM+ PMR) produced a significant effect. However Progressive Muscle Relaxation was most effective in reducing the symptoms, and led to the lowest change.

Bindemann et al. (1991) conducted a randomized controlled study of Relaxation Training. In this study lasting 12 weeks, Relaxation Training was evaluated as a coping resource for cancer patients. Eighty patients of both sexes were randomized to Relaxation Training and to a Control Group (forty in each). Scores for Anxiety, Depression and Psychiatric Morbidity were obtained at 0, 6 and 12 weeks with well-known questionnaires and a new Anxiety and Depression scale, the effects of serious illness (ESI) scale. Seventy one patients (thirty one men and thirty nine women) successfully completed the study. Results showed that Relaxation Training and Control Group scores were equal at 0 weeks. Higher Anxiety, Depression and Psychiatric Morbidity scores were reported by all patients at six and, to a lesser extent, at twelve weeks with greater differences in women. Female controls invariably reported significantly higher scores at six and twelve weeks on all indices. Male controls reported significantly higher Anxiety only at six and twelve weeks respectively.

Jin (1992) studied the efficacy of Tai Chi, Brisk Walking, Meditation, and Reading in reducing Mental and Emotional Stress. Forty-eight male and 48 female Tai Chi practitioners were randomly assigned to four treatment groups: Tai Chi, Brisk Walking, Meditation and Neutral Reading. Mental arithmetic and other difficult tests were chosen as mental challenges, and a stressful film was used to produce emotional disturbance. Tai Chi and the other treatments were applied after these stressors. After all treatments, the salivary cholesterol level dropped significantly, and the mood states were also improved. In general the Stress Reduction effect of Tai Chi characterized moderate physical exercise. Heart, blood pressure, and urinary catecholamine changes for Tai Chi were found to be similar to those for Brisk Walking at a speed of 6 km/hr. Although Tai Chi appeared to be superior to Neutral Reading in the reduction of State Anxiety and the enhancement of vigour, this effect could be partially accounted for by the subjects high expectations about gains from Tai Chi. All four treatments, in
general, were equally effective in reducing mood disturbance caused by Mental / Emotional Stressors.

Field et al. (1997) studied the effect of Massage Therapy on Sexual abuse. The sample comprised of Women (mean age = 35 years) who had experienced sexual abuse and were given a 30 minute Massage twice a week for 1 month. The results were: immediately after the Massage the women reported being less Depressed and less Anxious; their salivary cholesterol levels decreased following the session. Over the one month treatment period the Massage Therapy Group experienced a decrease in Depression and in life event Stress. Although the Relaxation Therapy Control Group also reported an ease in Anxiety and Depression, their Stress hormones did not change, and they had an increasingly negative attitude toward touch.

Field et al. (1999) studied the benefit of Massage Therapy on pregnant. Twenty-six pregnant women were assigned to a Massage Therapy or a Relaxation Therapy Group for 5 weeks. The therapies consisted of 20-min sessions twice a week. The results were: Both groups reported feeling less Anxious after the first session and less leg pain after the first and last session. Only the Massage Therapy Group, however, reported reduced Anxiety, improved mood, better sleep and less back pain by the last day of the study. In Addition, urinary stress hormone levels decreased for the Massage Therapy Group, and the women had fewer complications during labor and their infants lid fewer postnatal complications (e.g., less prematurity).

Carlson et al. (2001) conducted a study whose objective was to assess the effects anticipation in a mindfulness meditation-based Stress Reduction Program on mood disturbance and symptoms of stress in cancer outpatients before and after the intervention of 6 months later. A convenience sample of eligible cancer patients were enrolled after they had given informed consent. All patients completed the Profile of Mood States (POMS) and Symptoms of Stress Inventory (SOSI) both before and after the intervention of 6 months. The intervention consisted of a Mindfulness Meditation Group lasting Hours each week for 7 weeks, plus daily home meditation practice. A total of 89 patients, average age 51, provided pre-intervention data. Eighty patients provided post-intervention data, and 54 completed the 6-month follow-up. The participants were erogenous with respect to type and stage of cancer. Patients' scores decreased significantly from before to after the intervention on the POMS and SOSI total scores and subscales, indicating less mood disturbance and fewer
symptoms of Stress, and these Treatments were maintained at the 6-month follow-up. For Female improvements on the SOSI were predicted by more education and greater initial mood disturbance. This program was effective in decreasing mood disturbance and Stress symptoms for up to 6 months in both male and female patients with a wide variety of cancer diagnoses, stages of illness, and educational background, and with disparate ages.

Nakao et al. (2001) studied the effects of gender and marital status on somatic symptoms of patients attending a Mind / Body Medicine Clinic. To clarify the mechanisms; gender-related mind/body relationships, the authors analyzed the characteristics of 132 outpatients (848 women and 284 men) attending a Mind/Body Medicine Clinic. In the program, the patients completed the Medical Symptom Checklist, Symptom checklist-90 revised (SCL-90R), and Stress Perception Scale. Women reported 9 symptoms (fatigue, insomnia, headache, back pain, joint or limb pain, palpitations, potion, nausea, and dizziness) more frequently than the men did. SCL-90R scores were significantly higher in non married women than in married. Perceived Stress ratings of family and health were higher in women than in men. Men perceived lower degree of Stress concerning work. Women, especially non married women, were more likely to report somatic discomfort. Gender appears to be an important factor in relation to the report of somatic symptoms in stress-related conditions.

Blumenthal et al. (2002) examined the effects of Exercise and Stress Management Training on clinical outcomes and medical expenditures over a 5-year follow-up period in male patients with established Coronary Artery Disease (CAD) and evidence of mental stress-induced myocardial ischemia. Patients were randomly assigned to 4 months of aerobic exercise 3 times per week or to a 1.5-hour weekly class stress manage. Patients who lived too far from Duke to participate in the weekly treatments formed the usual care Control Group. Follow-up was performed at the end of Treatment and annually thereafter for 5 years. Stress Management was associated with a significant reduction in clinical CAD events relative to usual care over each of the first 2 years of follow-up and after 5 years. Economic analyses revealed that Stress Management associated with lower medical costs than usual care and exercise in the first 2 years, also the cumulative cost over 5 years was also lower for Stress Management relative, usual care. These results suggest that there may be clinical and economic benefit to offering the type of preventive Stress Management and exercise interventions provided to patients with myocardial ischemia.

2.5.0 PAIRING OF RELAXATION EXERCISE

Researchers have been conducted studies where two Relaxation Exercises/Therapies have been combined and their effectiveness has been studied. Such studies are by various investigators, like, Braud, Lupin & Braud (1975), Hopkins & Hopkins (1976), Lupin et al. (1976), Carter Lax, and Russell (1979), Hershey and Kearns (1979), Frey (1980), Reynolds (1984), Davis (1992), Thaut and Davis (1993), Robb et al. (1995), Colwerll (1997), Strauser, (1997), Robb (2000) and Phamdoung (2003).

Braud, Lupin & Braud (1975) found that Relaxation can dramatically reduce Muscle Tension. Using Biofeedback along with Relaxation tapes, the authors reported a general improvement in the behavior of 6½ year-old hyperactive boy both in class and at home. Results were an elimination of the boy's Psychosomatic Symptoms of headaches, allergies, asthma, and runny nose; an improvement in confidence and self-concept; improvement on achievement tests; and a decrease in Emotionality and Frustration.

Hopkins and Hopkins (1976) compared a Yoga programme with moderately strenuous exercise programme and found that the children who participated in the Yoga program were more relaxed, less active better able to concentrate. Their general performance tended to be better following Yoga compared with the group who exercised.

Lupin et al. (1976) reported Deep Relaxation exercises and stories to reinforce relaxation were used with minimally brain injured subjects, commercially prepared tapes of relaxation exercises and visual imagery were used. Results indicated an improvement in interpersonal relationships, with behaviour improvements generalizing from home practice to the students classroom.

Carter Lax and Russell (1979) reported on studies using a combination of Biofeedback, Muscle Relaxation, and prerecorded home relaxation exercises. They found highly significant gains in basic academic skills and handwriting quality. Parents and teachers reported greater self-control, less impulsivity and distractibility, and greater degree of responsiveness in school.
Hershey and Kearns (1979) and Frey (1980) reported that mental relaxation includes guided fantasy and imagery, and meditation and concentration. Guided imagery uses fantasy “trips” in which the children imagine or visualize peaceful and restful places or situations. Auditory and/or visual suggestions were given of a fantasy or of passive, nature scenes. These experiences focus concentration and had a positive effect on creative thinking abilities.

Reynolds (1984) studied a combination of Biofeedback, Autogenic training phrases and Music and found that Music alone and in combination with the various relaxation techniques produced the greatest difference in arousal level when measured by electromyography.

Thaut and Davis (1993) suggest that many individual automatically Combine physical relaxation techniques and music. In clinical settings, music and relaxation are often utilized as a therapeutic intervention and presented in a systematic and sequential fashion.

Colwell (1997) examined a female who had chronic gynecological pain post operatively resulting from endometriosis scar tissue. After 14 sessions that combined music, singing, creative imagery and PMR, the woman’s self-reported pain and feelings of control over her pain moved from 48 % post-session.

Davis (1992), Robb et al. (1995), and Strauser (1997) reported that although music was a successful modality when used alone, but also indicated that Music paired with PMR was an especially effective tool in reducing Stress, Pain, or both.

Robb (2000) reported a study of 60 university students examined the efficacy of various Relaxation techniques by randomly assigning participants to one of the conditions: Music assisted PMR, PMR alone, Music listening, or silence. Although there was no significant difference among the groups in ANCOVA analysis for the state of the Trait Anxiety Inventory (STAI) or visual Analog Scale, the Music assisted PMR condition yielded the greatest among of change among the conditions in regard to the mean scores.

Phamdoung (2003) examined the effect of Music on Labor Pain. Results of the study indicated that women (N=55) who were exposed to Music without lyrics for three hours starting early in the active phase of labor displayed significant relief of severe pain across three hours of labor and delayed the increase of affective pain for one hour.
2.6.0 EFFECT OF RELAXATION THERAPIES ON DIFFERENT VARIABLES


Jacobson (1938) of the University of Chicago noted that people tense their muscles when they are under Stress, but are often unaware of it. He reasoned that if they would learn to relax these tensions, they could lower the Stress they experienced.

Jacobson's (1938a) Progressive Muscle Relaxation encouraged their clients to establish a daily physical exercise regimen, because a healthy, well developed body helps one to resist more effectively the physical effects of stressful situations. They provided Assertion Training to help their clients manage maladaptive anger. In addition, they used Cognitive Behaviour Modification to alter client verbalization that often produced stressful situations.

Kumaraiah and Murthy (1975) reported the treatment of a medical student with animation phobia through Systematic Desensitization. In 19 sessions he showed improvement and passed his examination with distinction.

Majumdar (1975) reported a case of pedagophobia. For a shift from one vocational institution to the other, some students may develop Anxiety. One 14 year old who was shifted from one school to the other had this type of Anxiety as
well as Animation Anxiety. He was treated with Reciprocal Inhibition. The outcome was reported to be good.

According to Benson and Klipper (1976) Meditation was a form of Relaxation. The sound of mantra focusing attention on one object or thought to the elusion of distracting stimuli, and even breathing slowly and regularly may simply be different ways of reducing Stress through Relaxation. Simple Relaxation Techniques were successful as Meditation in alleviating such symptoms of Stress as H.B.P (Holmes, 1984; Wallace and Benson, 1972).

Keefe (1976) suggested three main behavioural products of Meditation facilitative therapeutic behaviour and interpersonal functioning: (1) Enhanced awareness of one’s feelings. (2) Increased ability to hold complex cognitive processes in abeyance to once perception and (3) Enhanced capacity to maintain a focus of attention and awareness upon present events.

Ferguson (1976) proposed that teaching Transcendental Meditation (TM) to developmentally disabled person could have substantial and significant educational and therapeutic benefits, providing the damaged nervous system with a unique state of rest. He suggested that this procedure be investigated as an adjunct to existing special education programs.

Morris (1976) and Murdock (1979) reported on a group of disadvantaged, urban third graders, who participated in an 18 week course in which by they meditated for 20 to 25 minutes twice a week. The results were a significant lowering of Anxiety and increased articulated thinking in the children.

Alexander and Marks (1982) studied ego development, personality and behavioural changes in prisoners practicing the Transcendental Meditation (TM) technique or participating in other programs. It was found the Rehabilitation of prisoners showed longitudinal increase in development and decrease in Aggression, Anxiety and Schizophrenic symptoms.

Jedrczak et al. (1982) conducted a study entitled "Psychological correlates of experiences of higher states of consciousness in subjects participating the Transcendental Meditation (TM) and TM - Sidhi programs." It was found that experiences of higher states of consciousness were positively correlated with superior performance on test measuring Creativity.

Shafran (1983) investigated the relationship between the use of Biotherapy and the Self-esteem of junior high school students who were enrolled
in remedial reading classes. The relationship between the variables was analyzed by grade level, subject sex, ability level (IQ), reading comprehension level, total reading level, and the presence/absence of a learning disability (LD). The population consisted of ninety-eight boys and girls in the seventh and eighth grades. Fifty-eight subjects comprised the Experimental Group; forty subjects comprised the Control Group. The Reading level of the subjects was measured by the California Test of Basic Skills (CTBS); Ability level was determined by the administration of the McGraw-Hill Short Form Test of Academic ability (SFT-AA). A pretest Cooper and Smith Self-Esteem Inventory (SEI) was administered in the beginning of the school year before the experimental study commenced. A posttest administered at the end of the school year determined change in Self-esteem level.

Werntz, Bickford Bloom and Shannahoff-Khalsa (1983) performed a qualitative research study that examined hemispheric functions after implementing selective nostril breathing. The concept was to see if controlling the breathing of one nostril would impact the cognitive functioning in the brain. The methodology for conducting the experiment was first of measure the airflow of the nostrils through a unit called a thermostat. Airflow was measured in conjunction with an EEG for brain activity to see where the brain activity was occurring. A baseline of activity from the nostrils was measured in order to normalize the current airflow for each individual. Further, it was noted which nostril produced the majority of the airflow, so a more accurate airflow could be determined for the dominant nostril. The baseline was then compared to altering nostril breathing and cerebral hemispheric activity. The results indicated that hemispheric activity was correlated with airflow in the opposite nostril. The significance of this work was that students with ADHD were believed to have specific hemispheric activity on one side of the brain that constantly keeps them active. Thus, depending on which side of the brain was more active, students could be taught to decrease their breathing activity on the controllable nostril and increase their breathing using the other nostril. This would create more of a balance in the two brain hemispheres. As a result of the study, Cognitive processes and behavior may be influenced by regulation in breathing patterns depending on the location of activity in the brain.

Kember (1985) studied the effect of Transcendental Meditation (TM) technique on Academic Performance of Postgraduate students. The TM
technique was found to enhance Academic Performance of Postgraduate Students.

Werntz, Bickford and Shannahoff-Khalsa (1987) found that Cognitive performance was correlated with forced breathing through the controllable nostril. Using the same methodology, they determined that by having a subject breathe through one nostril, it generated more activity on the opposite side of the brain. Thus verbal skills were enhanced while the subjects were breathing primarily out of their right nostril and spatial skills were enhanced during left nostril dominance. Breathing techniques were found to be effective in conducting more activity in the brain, thus increasing Concentration and Academic performance.

Muehlman et al. (1988) studied the effect of Transcendental Meditation technique on Academic Achievement. Increased Academic Achievement and IQ was found of those Practicing the Transcendental Meditation and TM-Sidhi Program in Secondary School Students.

Nidich and Nidich (1988) attempted to improve the Social Climate of a Philippine Secondary school through the practice of the Transcendental Meditation program. Increased Morale, Facilitative Leadership, and influence in Decision Making Concerning Classroom Instruction were found in Teachers Practicing the Transcendental Meditation Program.

Martinsen et al. (1989) investigated hospitalized patients with various DSM-III (American Psychiatric Association, 1980) Anxiety disorders; Somatoform disorders; Conversion somatoforms pain and hypochondrias. Patients participated in an 8 week specialized Aerobic exercise programme (main treatment) and three sessions of group Psychotherapy. Anxiety was assessed using the Symptoms Rating Test (Kellner & Sheffield, 1973). No control group was included. During the study, Anxiety scores fell significantly in most diagnostic groups. However, 1 year after treatment, those patients who experienced panic disorder with agoraphobia had lost their gains, while those with generalized anxiety disorder and agoraphobia without panic attacks remained well. Patients with social phobia were unchanged at discharge as well as 1 year after treatment.

Dixon (1989) conducted a six-month longitudinal study of four-year-olds practicing children's Transcendental Meditation Technique for Consciousness and Cognitive development. It was concluded that Cognitive Development was
accelerated in four-year-old children practicing the Children's Transcendental Meditation Technique.

Nidich and Nidich (1989) conducted a replication study entitled: "Increased Academic Achievement at Maharishi School of the Age of Enlightenment". Improved Scores were found on Social Studies, Literary Materials, Reading, Quantitative Thinking, and General Academic Achievement for Students at Maharishi School of the Age of Enlightenment.

Jin (1992); Field et al. (1997); and Malathi et al. (1999) reported that aside from Meditation and Massage Therapy, listening to Music, Visual Imagery (sitting quietly and imaging peaceful scenes), Muscle Relaxation, Biofeedback, Yoga, Tai Chi (a form of hg meditation), and even Social Support Sessions can all decrease symptoms of Stress and Anxiety.

Kabat-Zinn (1992) showed that a Mindfulness Meditation Program reduced Anxiety and Panic in people with generalized Anxiety disorder, panic disorder, and panic disorder with agoraphobia.

Martinsen (1993) found that exercise can be self-sustaining and it can be maintained by individuals once the basic skills have been learnt. This may well help to make patients feel more empowered about their health and in control of their well-being. Exercise can be used as a recreational activity as a means to reintroduce individuals into the wider community. This is often an important of treatment plans for people who have less severe mental health problems. Exercise has the potential to reach a broad audience who might not be able to access other types of psychological interventions or prefer not to use drug-based treatment. Often there is uncertainty about the best treatment plan for an individual and the form of treatment to which the individual will most likely adhere. This diversity should be matched by offering patients a range of appropriate treatment.

Aromatherapy massage was used to help promote Relaxation and treat Stress and Anxiety. In this context, Stevenson (1994) found that Massages with Neroli had a significant Psychological benefit when used over a 5 day period with post cardiac surgery patients.

Snyder (1995) found that Aromatherapy and Massage can be used to promote Relaxation and lower Anxiety for people suffering from dementia.
Kolnig et al. (1997) showed religious belief system form part of a very powerful Psychosocial support mechanism and was found to reduce Stress and Anxiety of patients facing personal and medical crisis and to immune system.

Stratton and Annette (1997) studied the relationship between Characteristic Moods and most Commonly Listened to Types of Music. The researchers surveyed three samples of participants to find out their typical moods and the type of Music that they usually listen to. The main finding was that negative moods were more likely to lead to Music Listening than for listening to music to induce their negative moods.

Telles and Naveen (1997) studied Yoga for rehabilitation. Yoga practice benefited mentally handicapped subjects by improving their mental ability, also the motor co-ordination and social skills. Physically handicapped subjects had a restoration of some of functional ability after practicing Yoga. Visually impaired children showed decrease in their abnormal Anxiety levels when they practiced Yoga for three, while a program of physical activity had no such effect. Socially disadvantaged (prisoners in a jail) and children in a remand home showed significant increment in sleep, appetite and general well being, as well as a decrease in logical arousal. The practice of meditation was reported to decrease the degree of (marijuana) abuse.

Donaghy (1997) investigated the relationship between exercise participation and levels of drinking by using serum carbohydrate deficient transferring (CDT) as a marker of chronic alcohol consumption. No evidence to support a positive relationship between participation in exercise and maintained abstinence or controlled drinking was reported.

David and Joyce (1998) conducted an experiment utilizing Audio Visual Stimulation Program for Children with Attention Deficit Disorder (ADD) and Reading Difficulties. Disorders of ADD, ADHD, LD, Anxiety, conduct disorder, and Depression interfere with a student's ability to perform. These maladies were reduced and/or eliminated as the child's arousal (brain) level was modulated. Controlling one's brain or level of arousal can be learned through various brain educating activities. Two of the most prominent educational modalities of brain enhancement are EEG neuron feedback (EEG) and Audio-Visual Stimulation. Audio-Visual Stimulation (AVS) was the technology utilized in this investigation. This AVS investigation was implemented to substantiate and improve upon previous research of bringing about neuro-developmental growth and to demonstrate the simplicity and usefulness of providing low cost effective
brain enhancing technology in a school setting. The results warrant serious consideration for utilizing AVS as a viable strategy to address Reading, Attention, Learning, and general over-all Academic, Social, Emotional growth and development of children.

Malathi et al. (1998) conducted a Yoga intervention study on MBBS students and tested them before and after the examination, and found Anxiety reduction in the student at the time of examination.

Field et al. (1998) studied the therapeutic benefits of Massage Therapy or Relaxation Therapy for children with asthma. 32 children (16 children of 4-8 years old and 16 children of 9 – 14 year old) suffering from asthma were randomly assigned to either the Massage or Relaxation Group. The parents of the children were taught to give one therapy or the other 20 minutes prior to bedtime every night for 30 days. The results were: The younger receiving Massage demonstrated an immediate decrease in behavioral Anxiety level following the Massage. Additionally, there was an improvement over the course of the study regarding their Attitude toward Asthma and peak air flow and other secondary functions. The older children receiving Massage reported lower Anxiety during the Massage. Their Attitude toward Asthma also improved over the course of the Massage but there was improvement of only one measure of pulmonary function - forced Tory flow: 25% to 75% improvement. It was concluded that Daily Massage was found to control asthma in children.

Katz et al. (1999) conducted an experimental study whose objectives were (1) to test the feasibility of carrying out a series of eight 15-minute workplace-based Treatments, and (2) to determine whether Massage Therapy reduced pain and experienced by nursing staff at a large teaching hospital. Twelve hospital staff (10 registered nurses and 2 nonmedical ward staff) working in a large tertiary care center volunteered to participate. Participants received up to eight, workplace-based, 15 minute Massage Treatments provided by registered Massage Therapists. Pain, Tension, and the Profile of Mood States were measured before and after each Massage. Results of the study were: Pain intensity and Tension levels were significantly lower after Massage. In addition, Relaxation levels and overall Mood state improved significantly after Treatment.

Castes et al. (1999) examined the effect of a 6 months Psycho-social Intervention (PSI) on immunity and health outcomes among children with Asthma. Relaxation was a prominent component of the intervention. Youth in the Intervention Group showed a greater reduction in IgE responses allergen than
control children as well as other immune changes (e.g., an increase in NK cells) that were not observed in the control group. Furthermore, youth in the Intervention Group had fewer Asthma attacks and improved pulmonary function during the intervention as compared to 6 months prior to it; no such changes occurred in the Control Group.

Sapolsly (1996) and King (2000) found that Transcendental Meditation could significantly reduce Stress and promote the development of the individual.

Field et al. (2002) documented improvement in several medical and psychiatric conditions after Massage Therapy including growth in preterm infants, depression, fictive problems, pain syndromes, immune and autoimmune conditions. Also it decreased Stress, decreased cholesterol, improved sleep patterns, and enhanced immune function.

2.7.0 SUM UP

In respect of effectiveness of different Relaxation Therapies it was found that the Desensitization was effective in reducing Anxiety (Paul and Shannon 1966; Taylor, 1971), Assertive Training helped in reducing Depression (Lazarus and Serber, 1968); Jogging programme helped in improving Self-esteem (Gary & Guthrie, 1972); Autogenic as a Stress Reduction Technique significantly lowered levels of Anxiety and enhanced Self-Esteem (Mullins, 1994); Stress Reduction Intervention effectively reduced State and Trait Anxiety, Psychological distress including depression, and increased Spiritual experiences (Shapiro et al., 1998); and Anxiety was reduced following the light-intensity condition, no significant changes in Anxiety occurred following the moderate-intensity condition, and Anxiety increased following the high-intensity condition (Katula et al., 1999).

Transcendental Meditation Programme helped in decreasing Anxiety (Lazar et al., 1972; Ballou, 1973; Abrams and Siegel, 1978), reduced Stress and Tension (Ferguson, 1978) and drug intake (Shafi et al., 1974), and brought a positive change in well being of subjects (Setterlind, 1983; Delmonte (1987). Meditation-Based Stress Reduction Program reduced Anxiety and Depression (Kabat-Zinn, 1992); Asana and Pranayama improved Memory (Palsane and Kohen, 1973); Mindfulness Meditation reduced Anxiety disorders (Miller et al., 1995); Meditation practice brought positive change in the subjective well being of students (Kumar and Ali, 2002); Sahaja Meditation improved children’s Self-esteem, Academic Achievement, Parent-child relationships and a reduction in several symptoms of ADHD, Anxiety, Hyperactivity and Impulsivity (Harrison,
Manocha and Rubia, 2004); and Stress Reduction Model reduced Stress amongst students (Sharma, 2004).

Progressive Relaxation tapes helped in decreasing Muscle Tension and Pressure (Carter and Synolds, 1974); and Relaxation Treatment consisted of Muscle Tensing and Relaxing, Imagery, and Softly-played baroque-style Music reduced Test Anxiety and improved Academic Achievement (Cohen, 1994).

Massage and Aromatherapy in combination reduced levels of Stress and Anxiety and promote Deep Relaxation (Wendy, 1996); Hand Massage significantly decreased epinephrine and non-epinephrine levels (Kim et al., 2001); and Massage Therapy reduced cholesterol levels (stress related hormone) in children with Juvenile rheumatoid arthritis (Field et al., 1997).

Yoga practice helped in well being (Malathi et al. (2000); promoted body awareness, balance, and laterality (Hopkins and Hopkins, 1976); reduced and relieved Stress and Tension, dissipate excess energy, relieved tiredness and lethargy, lengthen attention span, improved and maintained general physical health, developed sharper concentration and greater mental clarity and cultivated better interpersonal relationship (Diskin, 1977; Hopkins and Hopkins, 1977; and Seiler and Renshow, 1978). Yoga and Psychomotor Activities significantly improved concentration (Hopkins and Hopkins, 1979). Yoga reduced State and Trait Anxiety (Vicente Pedro (1987); produced Calming effects, Emotional balance, and increase Concentration (Pag & Ruiz, 2001); helped in controlling Attention-Deficit Hyperactivity Disorder (Kenny & Jensen, 2004); improved attention (Peck, Kehle, Bray and Theodore, 2005); and reduced Anxiety among MBBS students (Srivastava et al., 2004). After practicing Yoga Nidra daily half an hour for six months, Anxiety decreased (Kumar, 2004); and Kundalini Yoga Meditation could help in the treatment of Psychiatric disorders (Shannahoff-Khalsa, 2004).

Biofeedback Relaxation Training improved self-control, attention span, academic subjects of reading, spelling, and arithmetic (Carter and Russell, 1980); effective in subjects who exhibited autistic behaviors (Hughes and Davis, 1980) and improved Social and Academic Adjustment of learning-disabled children (Omizo, Loffredo & Hammett, 1982). Biofeedback Thermal Training and Relaxation Training improved Reading Comprehension, Locus of Control Orientation (Marino, 1983); and Biofeedback training, Progressive Muscle Relaxation, Isometrics, Yoga, Movement Exercise, Massage, Guided Fantasy, Meditation, Concentration, Music & Breathing control decreased Hyperactivity
and Impulsivity, and promoted Self-control, Attention and Concentration through breath control and Deep Relaxation (Zipkin, 2001).

Music Therapy reduced Anxiety and Fear in Terminal Pediatric Patients (Fagen, 1982); Exciting Music produced more Aggression as well as higher level of Anxiety than Calm and no Music situations (Gross and Swartz, 1982); Song rehearsal facilitated Reading accuracy by serving as a structural prompt (Colwell, 1994); listened to light classical Music displayed no significant reductions in Anxiety (Elliott, 1994); Musical Mood Induction reduced Depression and improved Creativity than the Neutral group (Adaman and Blaney, 1995); Progressive Musical Relaxation was effective in Pain and Stress Management (Edmund Jacobson, 1938, 1987; Carroll & Seers, 2001; and Sloman 1995); Paired Audio-Video stimuli helped in reducing Stress (Byrnes, 1996); and Guided Imagery through Music reduced chronic Anxiety and Stress (Hammer, 1996). Music reduced Stress (Brodsky & Sloboda, 1997), and Stress Anxiety and Physiological Stress levels (Strauser, 1997). Music in conjunction with a Self induced positive Emotion (McCraty, Atkinson, Rein, & Watkins, 1999); reduced Systolic Blood Pressure, heart rate and Stress (Knight and Rickard, 2001); reduced severe pain across three hours of labor and delayed the increase of affective pain for one hour (Phamdoung, 2003); and reduced pain (Kim & Koh, 2005). Exposure to sedative Music reduced heart rate (Iwanaga, Kobayashi, & Kawasaki, 2004 and Lai & Good, 2005). Music listening provided an emotionally engaging distraction capable of reducing both the sensation of pain itself and the accompanying negative affective experience (Mitchell, Mac Donald, Knussen & Serpell, 2007); and Negative moods were more likely to lead to Music Listening than for listening to music to induce their negative moods (Stratton and Annette, 1997).

Cognitive Behaviour Therapy reduced Social Anxiety (Jocelyne 1987); Problem Solving Training helped Stress Management and Prevention (D' Zurilla, 1990); and Aerobic exercise reduced Trait Anxiety and Depression (Preedy & Peters (1990).

Complementary Cancer Therapy had positive effect on Psychological Distress and Anxiety (Cloner et al., 1995) and Alzheimer significantly decreased in Psychotic and behavioural disturbances (Tranel, 1999).

Lazarus (1966) found that 92% of the Behavior Rehearsal patients showed improvement as compared with 44% of receiving Advice, and 32% Reflection Interpretation.
Desensitization was superior to Traditional Insight Oriented Therapy in treating a widespread and frequently debilitating Fear, the Fear of public speaking and related interpersonal Anxiety (Paul, 1966); and reduced Test Anxiety more than non-treated control subjects (Emery and Krumboltz, 1967; Suinn, 1968 and Johnson, 1966). Systematic Desensitization and two forms of Behavior Rehearsal both involving working through a speech-making hierarchy graduated with respect to Anxiety did not appreciably differ in their ability to enhance subjective and objective aspects of public-speaking behavior, although each was at least somewhat effective in comparison to Control condition (Sanders, 1967). Meichenbaum et al. (1971) found that trained clients in how to manage Anxiety in variety of situations was more effective than traditional Systematic Desensitization. Woy and Efran (1972) reported that Desensitization subjects improved Speech Anxiety significantly more than Control Group.

Boudreau (1972) reported that claustrophobia and profuse perspiration were treated successful with Transcendental Meditation and Yoga while Systematic Desensitization was only a partial success. Transcendental Meditators were significantly less Anxious, more Internally Controlled and more Self-actualized as compared to Novice Meditators (Hjelle, 1974). Stress and Activity Management Treatment Program improved Adjustment of patients and spouses (Heinrich and Schag, 1985). Transcendental Meditation showed greater reduction in neuroticism than Progressive Muscle Relaxation and Cognitive-Behavioral strategies (Gaylord et al., 1989).

Friedman (1968) reported that subjects who first observed the interaction modeled and then role played it themselves showed the greater improvement in Assertiveness. Group Coping Skill intervention was superior to Supportive Group Therapy and a no-treatment Control in improving Psychological Adjustment (Telch and Telch, 1986). Tai Chi Chuan fitness Program improved knowledge and attitudes regarding Tai Chi Chuan fitness Program, decreased resting blood pressure, improved Stress Management skills, felt more relaxed, and improved their joint flexibility (Sun, 1994). Guided Imagery was an effective adjunct therapy for chronic Tension type headache management (Mannix, 1998). Systematic Desensitization reduced examination phobia (Kumaraiah and Murthy, 1975).

Paul (1969a) comparing Progressive Relaxation and Hypnotic Suggestion found that Progressive Relaxation produced significant reductions as compared with Control on the Anxiety Differential, EMG, heart rate, and respiration rate.
When the Hypnosis group was compared with Control, significant reductions were noted on the Anxiety Differential, EMG, heart rate, and respiration rate. Again, Progressive Relaxation was significantly better than Hypnotic Suggestion in reducing heart rate and EMG. Progressive Relaxation improved pulse pressure, pulse rate, respiration rate before and after the session (Chinnian et al., 1975). Live Progressive Relaxation Training was superior to Taped Training in reducing Muscle Tension (Beiman, Israel, and Johnsons, 1978; and Bernstein and Borkovec, 1973). Carter, Lax & Russell (1979) compared the effect of prerecorded Relaxation tapes and Biofeedback Muscles Relaxation exercises and found that the Biofeedback Relaxation resulted in more significant gains in Cognition, Memory and Handwriting in a group of educable retarded boys.

Mental Relaxation including guided fantasy and imagery, Meditation and Concentration had a positive effect on Creative Thinking Abilities (Hershey and Kearns, 1979 and Frey, 1980). Muscle Relaxation exercise alone, without Biofeedback helped in Relaxation (Walker, 1979); and Biofeedback assisted Relaxation decreased Forehead Muscle Tension, Asthma Severity and rescue medication use, and improved Pulmonary function among Treatment participants relative to Control Group (Kern-Buell, McGrady, Conran, and Nelson, 2000).

Progressive Relaxation and Agni Yoga produced differential effects according to whether subjects expressed Anxiety somatically or cognitively (Norton and Johnson, 1983). Subjects relaxed equally well using Meditation or Relaxation (Holmes, 1984). Each of Management Skills, Training Exercise, and Meditation strategies led to decrease in pulse rate and Systolic Blood Pressure (Frew, 1987). Meditation helped in reducing Stress (Benson and Klipper, 1976; Holmes, 1984; Wallace and Benson, 1972). Alprazolam and Relaxation could reduce cancer-related Anxiety and Depression (Holland et al., 1987). Japa and non-Japa practicing subjects did not differ in reactions to Frustration; and majority of Japa practicing subjects showed extra-sedative reactions (Murthy and Venkatesha, 1987). Patients with early Breast Cancer benefitted from Relaxation training (Bridge et al., 1988). Relaxing Tensions could lower the Stress (Jacobson, 1938). Progressive Muscle Relaxation training increased Anxiety and that external Attention focus served to reduce Anxiety below baseline levels (Zasa, 1991), helped in managing Maladaptive Anger (Jacobson, 1938a) but did not affect Attention Concentration or Memory abilities in those subjects reporting low levels of State Anxiety (Rankin, 1993). Both Music and Silence Therapies were found to manage State Anxiety and Perceived Relaxation to the same extent (Strauser, 1997). Nonspecific effects of Thermal Biofeedback were strong.
(Scharff et al., 1998). Infant Stress behaviors were significantly fewer and appropriateness of parent actions and responses were significantly greater for Music and Multimodal Stimulation group infants and parents than for control subjects (Whipple, 2000).

Yoga Relaxation with Bio-Feedback and General Relaxation reduced blood Pressure (Patel and North, 1975); Shavasana (Yoga) relieved Anxiety better (Rao and Murthy, 1975); and Stress was reversed significantly shorter time in Shavasana (a Yogic Relaxation Posture) as compared to the resting posture in chair and a supine posture (Bera, 1998). Yogic Techniques were more effective in the management of Anxiety as compared to Drug (diazepam) Therapy (Sahasi et al., 1989); and helped in reducing Anxiety and Depression and a better mental function (Ray et al., 2001); and Sahaja Yoga Meditation reduced Stress (Panjwani et al., 1995). Telles and Naveen (1997) found that Yoga practice benefited mentally handicapped subjects by improving their Mental Ability, also the motor co-ordination and social skills. Physically handicapped subjects had a restoration of some of functional ability after practicing Yoga. Visually impaired children showed decrease in their abnormal Anxiety levels when they practiced Yoga for three months, while a program of physical activity had no such effect. Socially disadvantaged (prisoners in a jail) and children in a remand home showed significant increment in sleep, appetite and general well being, as well as a decrease in logical arousal. Aikido training improved Self-Concept better than Psychotherapy (Madeliian, 1979). The practice of Meditation was reported to decrease the degree of (marijuana) abuse. Relaxation Therapy class consisted of Yoga Exercise, a Brief Massage and Progressive Muscle Relaxation decreased Anxiety and Anxious behavior in comparison to Video Group (Plantania-Solazzo et al., 1992). The Relaxation Program did not significantly affect Reading Achievement, Self-esteem, Anxiety, or Depression (Campo, 1993).

Massage Therapy increased weight, showed significantly fewer postnatal complications, Stress behaviors and demonstrated more mature motor behaviors than did control infants (Wheedeen et al., 1993); and enhanced Alertness; speed and accuracy on Math computations; and lower Anxiety, Depression and salivary cholesterol levels (Field et al., 1996a). Self-Massage may be an effective adjunct treatment for attempting smoking cessation, to alleviate smoking-related Anxiety, reduce cravings and withdrawal symptoms, improve mood, and reduce the number of cigarettes smoked (Hemandez-Reif et al., 1999). Job Stress Reduction Therapies, such as, Massage Therapy, Music Relaxation with Visual
Imagery, Muscle Relaxation, and Social Support group sessions were found to decrease Anxiety, Depression, Fatigue, and Confusion, as well as increased vigor following the sessions (Field et al., 1997). Massage Therapy helped in lowering Pain intensity and Tension levels and improved Relaxation levels and overall Mood state (Katz et al., 1999); decreased Stress, cholesterol, improved sleep patterns, and enhanced immune function (Field et al., 2002); improved Abstract Reasoning, Calmness and Easygoing (Hart et al., 1998); and controlled asthma in children (Field et al., 1998). Massage Group showed lower Anxiety and Depression scores and significantly increased their Muscle strength and Wrist range of motion in comparison to Exercise Group (Diego et al., 2002). Winter et al. (1994) found that Music helped in reducing Stress and Anxiety of patients in the surgical holding area. Aromatherapy Massage lowered State Anxiety, feeling more relaxed and alert and improved Math computations (Diego et al., 1998); and promoted Relaxation and treat Stress and Anxiety (Stevenson; 1994). Passively diffused Aromatherapy using Lavender on cotton ball did not significantly affect Anxiety levels and Sleep quality in Coronary Care Unit patients (Borromeo, 1999) and Aromatherapy and Massage promoted Relaxation and lower Anxiety for people suffering from dementia (Snyder, 1995).

Yoga Stretching and Imagery Trainees displayed higher Physical Relaxation than Control group while Progressive Muscle Relaxation Trainees had lower Somatic Stress than Control group (Khasky and Smith, 1999). The improvement in examination result, better sense of well being, feeling of relaxation, improved concentration, self-confidence, improved efficiency, good personal relationship, increased attentiveness, and lowered irritability levels were seen in Yoga Group as compared to Control Group (Malathi and Damodarall, 1999). Yoga and Drug were effective in controlling problems of hypertension (Murugesan et al., 2000). Yoga intervention reduced Anxiety in the student at the time of examination (Malathi et al., 1998).

Korean Martial Art normalized MMPI profiles substantially along with evidence of reduced Anxiety and increased Self-esteem, Social adroitness and Value orthodoxy. Sparring and Self-defense version of Taekwondo accentuated delinquent tendencies and negative personality shifts including a rise in aggressiveness while Control group showed few changes apart from trends towards improved Self-esteem and Adroitness (Trulson, 1986). Problem-Solving Therapy showed significantly greater reduction in Stress levels and improved Self-esteem and Life Satisfaction than clients in the Control Group (Zurilla and
Maschka, 1988). State Anxiety was consistently lower for the Nursing Consultation Group than Self-care group (Weintraub and Hagopian, 1990).

Later Psychosocial Intervention group was significantly less Depressed, Anxious, and worried and felt more in control than the Early Psychosocial Intervention group (Edgar, 1992). Adjuvant Psychological Therapy significantly reduced helplessness, Anxious preoccupation, and Fatalism; Anxiety; and Psychological Symptoms in comparison to no treatment (Greer et al., 1992; and Moorey et al. 1994). Psychological skills training procedure was effective in contributing to the increased positive Attention Traits (BET, BIT, NAR) and to the decreased negative Attention Traits (GET, OIT, RED) of young Soccer players (Papanikolau, 1993). Psycho Educational care was found to benefit adults with Cancer in relation to Anxiety, Depression, Mood, Nausea, Vomiting, Pain and Knowledge (Devine and Westlake, 1995). Both Cognitive Behavioural and Socially Supportive Group Therapies reduced symptoms of distress improved Psycho-social function (Evans and Connis, 1995). Craft & Landers (1998) found that more conventional intervention exercise was as beneficial as group or individual Psychotherapy and behavioral interventions. After Self-Hypnosis training Energy ratings were higher, and increased Calmness (Gzelier et al., 2001).

Reciprocal Inhibition helped in reducing Anxiety as well as Animation Anxiety (Majumdar, 1975). No relationship was found between exercise participation and levels of drinking (Donaghy, 1997).

Meditation enhanced awareness of one’s feelings and capacity to maintain a focus of attention and awareness; increased ability to hold complex cognitive processes in abeyance to once perception (Keefe, 1976) and significantly lowered Anxiety and increased articulated thinking in the children (Morris, 1976 and Murdock 1979). Transcendental Meditation provided the damaged nervous system with a unique state of rest (Ferguson, 1976); decreased Aggression, Anxiety and Schizophrenic symptoms (Alexander and Marks, 1982); improved Creativity (Jedrezak et al., 1982); enhanced Academic Performance of Postgraduate Students (Kember, 1985); increased Morale, Facilitative Leadership, and influence in Decision Making Concerning Classroom Instruction (Nidich and Nidich, 1988); improved Consciousness and Cognitive development (Dixon, 1989); and reduced Stress and promote the development of the individual (Sapolsly, 1996 and King, 2000). Apart from Meditation and Massage Therapy, listening to Music, Visual Imagery (sitting quietly and imagining...
peaceful scenes), Muscle Relaxation, Biofeedback, Yoga, Tai Chi (a form of meditation), and even Social Support Sessions can all decrease symptoms of Stress and Anxiety (Jin, 1992; Field et al.; 1997; and Malathi et al.; 1999). Practicing the Transcendental Meditation and TM-Sidhi Program improved Academic Achievement (Muehlman et al., 1988). Kabat-Zinn (1992) showed that a Mindfulness Meditation Program reduced Anxiety and Panic in people with generalized Anxiety disorder, panic disorder, and panic disorder with agoraphobia. Aerobic exercise programme decreased Anxiety (Martinsen et al., 1989). Exercises helped patients to feel more empowered about their health and in control of their well-being (Martinsen, 1993).

Biotherapy improved Self-esteem (Shafran, 1983). Age of Enlightenment improved Social Studies Achievement, Literary Materials, Reading, Quantitative Thinking, and General Academic Achievement (Nidich and Nidich, 1989). Very powerful Psychosocial support mechanism reduced Stress and Anxiety of patients facing personal and medical crisis (Kolnig et al., 1997).

Cognitive processes and behavior may be influenced by regulation in breathing patterns depending on the location of activity in the brain and Academic Achievement (Werntz, Bickford Bloom and Shannahoff-Khalsa, 1983; and Werntz, Bickford and Shannahoff-Khalsa, 1987). Audio-Visual Stimulation was not a viable strategy to address Reading, Attention, Learning, and general overall Academic, Social, Emotional growth and development of children (David and Joyce, 1998). Psycho-social Intervention Group had fewer Asthma attacks and improved pulmonary function during the intervention as compared to the Control Group (Castes et al., 1999).

It may, therefore be said that various Relaxation Therapies were tried out at different levels. The dependent variables considered by different researchers were Stress, Anxiety, Tension, Headache, Self Development, Attention, Concentration, Memory, Creativity, Reasoning, Problem Solving Ability, Blood Pressure etc. From here it is evident that there are still large numbers of variables, which need to be studied in the context of Relaxation Therapies. Also, the studies were so diverse in respect of Sample, Design, Treatment and Analysis that no generalization can be made. Further, in Indian context there is a need to undertake researches using different Relaxation Therapies. Also, maximum studies were in clinical settings. Therefore, there is a need to conduct researches using Relaxation Therapies in Educational settings. As Sharma (2004) was a maiden attempt and cannot be taken as conclusive on
this subject. Keep this in view and paucity of researches in this area the present
study was planned with a different angle, to find out the potentiality of Stress
Reduction Model for managing Examination Stress, Anxiety, Self-confidence
and Tension on secondary student.