REVIEW OF RELATED LITERATURE

A review of the literature follows, which will further help us understand the current status better. A large number of studies related to “Effect of Yoga: Pranayama on mood states (Anxiety, Stress & Depression) in the field of yogic Intervention. In this chapter some studies are reviewed below to enable us to clearly view the effect of yogic intervention: Pranayama in the management of mood states – Anxiety, Stress & Depression.

The review of the literature can be divided into five major categories/sections.

They are as follows:-

1. Effect of Yogic Intervention: Pranayama on Anxiety, Stress & Depression : Studies conducted in India
2. Effect of Yoga: Pranayama on other mental and physical diseases : Studies in India
3. Effect of Yogic intervention : Pranayama on Anxiety, Stress & Depression : Studies Abroad
4. Effect of Yoga : Pranayama on other mental and physical diseases : Studies Abroad
5. Impact of Yoga: Pranayama in different mental & physical diseases: The Current Research by Swami Ramdev in “Yog Synergy in Medical Science."

(1) Effect of Yogic Intervention: Pranayama on Anxiety, Stress & Depression : Studies conducted in India

A few studies by psychologists have been conducted in India:

Prem Sahajpal and Rinpari Ralte, (2000) have shown very beneficial effects on quality of sleep, reduction in stress level &
improvement in self concept by IYRT (Induced Yogic Relaxation Training).

Similar beneficial effects of yogic interventions for stressed persons have been found by some other studies also (Udupa, 1985; Nagendra & Nagarathana, 1988; Subrahamanyam, 1988; Sahajpal & Verma, 1993; Sahajpal & Khanna, 1994).

Joshi, Joshi & Gokhala (1992), who reported that Pranayama leads to increase in breathe holding time and decrease respiration rate. It is also believed that practice of Kumbhaka [Breath retention] in the most of Pranayama enhance concentration & reduce anxiety.

Nov Rattan Sharma, Amrita Yadav & Deepti Hooda, have found that the comparison of the pre-post measures of psychological functioning (i.e. state anxiety & concentration) after the short term Yoga training programme showed positive impact of Yoga on state anxiety & concentration. This revealed that ten day Yoga workshop helped in reducing state anxiety i.e. reduction in responsiveness to anxiety. The same type of results were found by Marcus (1974), Berger and Owen (1992) and Shell, Allolio and Schonecks (1994). Further research also indicate that people suffering from gastritis are more prone to anxiety (Chaudhary & Mukhopadhyay, 1998) and proponents of Yoga believe that pawan muktasanas relieves trainee from the gastritis problems.

Yoga therapy group subjects are not only benefited physiologically but their psychological responses are also improved. The findings support the view held by earlier studies on Yoga therapy and its psychological benefits. (Vahia, 1969, Naug, 1975, Datey, 1969)

Naug, 1975 : Karthikeyan, (1979) Researches in Yoga with different psychiatric patients show the possibility of incorporating the Yoga training to achieve mental discipline and to control the specific psychiatric symptoms such as anxiety, depression and insomnia.
Telles, S. Nagarathna, R. Nagendra, H.R. and Desiraju, T. (1993) – This report shows that in a group of 40 physical education teachers who already had an average of 8.9 years physical training, 3 months of yogic training produced significant improvement in general health (in terms of body weight and B.P. reduction and improved lung functions). There was also evidence of decreased autonomic arousal and more of psycho-physiological relaxation (heart rate and respiratory rate reduction) and improved somatic steadiness (decreased errors in the steadiness test).

Udupa (1985) carried out research on patients of stress related disorders like hypertension, cardiovascular disorders, asthma, hypothyroidism and found beneficial effects of some yogic practices taught to these patients. Positive effects of some yogic practices on stress related problems and their reduction has been shown by many other studies too (Vishal & Madhu, 1987; Udupa, 1985; Nagendra, 1988).

Vasudeven, A. Kumariah, V. Misra, H. and Balodhi, J.P. (1994) have found that results indicate no statistically significant reduction in the muscle tension and skin conductance, although clinically there was a decline. Statistically significant reduction in pain perception was observed. Yogic meditation was effective in reducing tension headache.

Latha, D. and kaliappan, K.V.(1987)-In this research the results suggest that they had a significant improvement in coping behavior. It is suggested that YT is superior to drug therapy in controlling headaches.

Assessments of anxiety levels after a brief life style modification education program based on the principle of Yoga have shown reduction in anxiety levels (Sharma, Manjunath & Bijlani, 2004; Gupta, Khera, Vempati, Sharma & Bijlani, 2006). Another study conducted on 38 patients revealed that state anxiety in males
and trait anxiety in females was reduced by intervention i.e. Yoga (Singh, Vempati, Sharma, Yadav & Bijlani, 2003).

Singh & Madhu (1987) proved favorable effects of yogic practices on short term memory and steadiness of the subjects increased after yogic practices and the anxiety and feelings of insecurity decreased.

In an important study by Sahasi, Mohan & Kacker(1989) studied two groups of patients one by yogic practices & the other by drug therapy. In former group (yogic practices) anxiety level decreased & concentration & attention increased. While in the later group (drug therapy) there was no statistically significant difference on other tests except locus of control.

Khumar, S.S. Kaur P. Kaur S. (1993) examined the effectiveness of Shavasana (a type of Yoga exercise) as a therapeutic technique to alleviate depression. 50 female university students were diagnosed with severe depression; 25 were subjected to 30 sessions of Shavasana, and 25 served as controls. Results revealed that (1) Shavasana was an effective technique for alleviating depression and (2) Continuation of the treatment for a longer period resulted in a significantly increases positive change in the Ss.

Panjwani, U., Gupta, H.L., Singh, S.H., Selvamurthy, W., and Rai, U.C. (1995) – In this research an attempt was made 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 practised Sahaja Yoga meditation for 6 months, group II subjects practised postural exercises mimicking Sahaja Yoga and Group III served as the epileptic control group. The results indicate that reduction in stress following Sahaja Yoga practice may be responsible
for clinical improvement which had been earlier reported in patients who practised Sahaja Yoga.

Uma, K., Nagendra, H.R., Nagarathna, R., Vaidehi, S. and Seethlakshmi, R. (1989), concluded the integrated approach of Yoga: a therapeutic tool for mentally retarded children: a one year controlled study. Ninety children with mental retardation of mild, moderate and severe degree were selected from four special schools in Bangalore, India. Forty-five children underwent Yogic training for one academic year (5h. in every week) with an integrated set of yogic practices, including breathing exercises and Pranayama, Sithilikarna, Vyayama (loosening exercises), suryanamaskar, Yogasanas and meditation. They were compared before and after yogic training with a control group of 45 mentally retarded children matched for chronological age, sex, IQ, socio-economic status and socio environmental background who were not exposed to Yoga training but continued their usual school routine during that period. There was highly significant improvement in the IQ and social adaptation parameters in the Yoga group as compared to the control group. This study shows the efficacy of Yoga as an effective therapeutic tool in the management of mentally retarded children.

Ashok Das, the Hindustan Times, (2003) reported that Pranayama better than Jogging. Brisk walking does help, but doing Pranayama (breathing exercises as prescribed in ancient Indian texts) for 30 minutes everyday is more beneficial for heart and lungs. A joint study by top Yoga experts of Hyderabad based Vemana Yoga Research Institute (VYRI) and scientists of the National Institute of Nutrition, a CSIR research lab, showed that those practicing Pranayama reported better fitness levels. Further, the cardio-vascular and cardio-respiratory efficiency of the subjects improved substantially as compared to those doing jogging or walking.
As many as 30 people were studied as part of the project, the first study of its kind. The results were published in the latest issue of US-based Journal of Exercise Physiology.

Practitioners ‘Nadi-Shodhan’ a technique in which deep breathing is done through alternative nostrils while sitting in a meditative posture, reported low fatigue as against other forms of exercises. It was also observed that while the energy output in Pranayama is very high, the energy consumption is minuscule. Exactly the opposite happens in jogging. Similarly, the heart rate and oxygen consumption during nadi Shodhan were significantly lower than during field walking and treadmill walking indicating that energy cost for Pranayama is lower.

The findings have again proved that yogic exercises are the best solution for all physiological problems in these stressful times. Not only does it improve heart and lung function and physical endurance but also significantly lowers the lactate level in blood,“ said M. Venkat Reddy, Director of VYRI. He said nadi shodhan was beneficial for those suffering from diabetes, asthma and hypertension.

Rachna Sirohi, Yoga department, Dev Sanskriti Vishwavidyalaya conducted a study at Brahmavarchas Shodha Sansthan, ShantiKunj Hardwar. It was found that Nadi Shodhan Pranayama significantly improves the vital lung capacity of individuals.

Bhanu Prakash Joshi studied the impact of Kapalbhati, Vaman & Bhramri Pranayama on college going 40 male students (age group 18-25 Yrs.) of J.S. Sanskrit Mahavidyalaya, Saptrishi Ashrama, Hardwar. It was concluded that a significant relationship between the practice of Kapalbhati, Vaman & Bhramri on Hemoglobin, E.S.R., F.V.C., physical & mental health. All the psychological &
physiological tests were measured in **Brahmavarchas research centre, Shantikunj Hardwar.**

**Shirley, Telles, K.V. Naveen and Manoj Dash** In this research **Swami Vivekananda Yoga Research Foundation (A Yoga University), Bangalore, India,** a month after the December 2004 tsunami the effect of a 1 week Yoga program was evaluated on self rated fear, anxiety, sadness and disturbed sleep in 47 survivors in the Andaman Islands. Polygraph recordings of the heart rate, breath rate and skin resistance were also made. Among the 47 people, 31 were settlers from the mainland (i.e. India, ML group) and 16 were endogenous people (EP group). There was a significant decrease in self rated fear, anxiety, sadness and disturbed sleep in both groups and in the heart and breath rate alone in the EP group, following Yoga. This suggests that Yoga practice may be useful in the management of stress following a natural disaster in people with widely differing social, cultural and spiritual beliefs.

**Schulte, H.J., and V.V. Abhyanker (1979)** revealed the study of 35 years old Indian widow with no prior history of depression who entered a yogic Institute because of depressive episode one year following the premature death of her husband. After twelve weeks of a yogic breathing regiment, she had remission of her symptoms. She remained symptom free even up to a two-year follow-up.

**Ray Us, Muckopadhyaya S, Purkayasha SS, Asnani V, Tomer OS, Prashad R, et al.** have developed a study was undertaken to observe any beneficial effect of yogic practices during training period on the young trainees. 54 trainees of 20-25 years age group were divided randomly in two groups i.e. Yoga 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 6\textsuperscript{th} to 10\textsuperscript{th} month of training both the groups performed the yogic practices. Yoga group had relatively lower sympathetic activity than the control group. There was improvement in performance at submaximal level of exercise and in anaerobic threshold in the Yoga group. Shoulder, hip, trunk and neck flexibility improved in the Yoga group. There was improvement in various psychological parameters like reduction in anxiety and depression and a better mental function after yogic practices.

Ray Us, Mukhopadhyaya S, Purkayasha SS, et al. (2001) viewed that although Yoga has been shown to be beneficial in a variety of conditions. However, one of the most important benefit of Yoga is its application in relieving stress, fatigue, invigoration and vitality and its anti-aging properties and its application for relaxation therapy.

Bhargav, Gagot and Mascrenhas (1988) studied the breath holding rate in 20 volunteers. The breath holding time, heart rate, systolic and diastolic blood pressure, and galvanic skin resistance were noted at different levels of respiration. All the 20 volunteers practised Nadi Shodhan pranayama for four weeks in the initial recordings of above-mentioned parameters. The heart rate, and blood pressure (systolic and diastolic) were low and increased considerably after pranayam. Therefore, pranayam changes the automatic process of breath holding. One person who practised Ujjayi and Bhashrika Pranayama was studied to find the mental inactivity during the practice. The study revealed that the NA waves increased widely and the inactivity reduced.

Yoga improves fitness, lowers blood pressure, promotes relaxation and self-confidence and reduces stress and anxiety. People who practice Yoga tend to have good coordination, posture, flexibility, range of motion, concentration, sleep habits and digestion.
Studies show that Yoga may promote heart health in both the young and old. An analysis of scientific studies found that Yoga may help manage heart disease by: decreasing high blood pressure, lowering cholesterol levels, increasing resistance to stress, reducing the frequency and severity of chest pain.

Studies show that increased brain activity is associated with better performance and suggest that Yoga can enhance cognitive performance. For example, a study of 23 men found that breathing through one nostril resulted in better performance of tasks associated with the opposite side of the brain.

A survey conducted by Yoga Biomedical Trust in 1983-84, 3000 individuals with health ailments for which Yoga was prescribed as an alternative therapy were surveyed. The results show that Yoga is very effective for treating alcoholism, back pain, nerve or muscle disease, heart disease management, anxiety, arthritis, ulcers and managing cancer.

Yet another Indian study of 15 people with asthma claims a 93 percent improvement rate over a 9 year period. That study found improvement was linked with improved concentration, and the addition of a meditative procedure made the treatment more effective than simple postures and Pranayama. Yoga practice also resulted in greater reduction in anxiety scores than drug therapy. Its authors believe that Yoga practice helps patients by enabling them to gain access to their own internal experience and increased self awareness.

Verma (1996) reported that Yoga practice was as effective as drug therapy in treating psychological disturbance. The effect of Yoga practice lasted for over two years with signs of continuing improvement and in addition to alleviation of ill health, there was also a positive sense of well being which was not observed in drug therapy.
P.S. Maju Lakshmi & P. Mahendran (2002) revealed the effectiveness of the Yoga programme “Art of living” which comprises basic methods of breathing, asanas and an effortless living technique, has been seen on the subjective well-being of the general population. A sample of 30 subjects who were undergoing the training were approached individually and assessed for their well-being. The results indicate that the Yoga programme induced the practitioners to enhance their Transcendence feeling and Expectation Achievement congruence, improve the feeling of family group support and social support. There was also an increase of confidence in coping and improvement in primary group concern, decrease in inadequate mental mastery and expectation achievement discrepancy.

N.K. Manjunath & Shirley Telles (2002) found that Insomnia and depression are two significant health problems associated with advancing age in the elderly. Sleep disorders have been shown to be related to depressive symptoms, poor physical activity, medication and bad self-rated health. The conventional treatment for geriatric depression and insomnia were found to cause undesirable side effects in older persons, such as states of confusion, psychomotor performance deficit, nocturnal falls, dysphoric mood, impaired intellectual functioning and daytime sleepiness. Hence, there has been increasing use and satisfaction with herbal/homeopathic remedies, acupuncture and relaxation techniques for the elderly with self perceived psychological symptomatology and particularly with depressive disorders. With the increasing interest in complementary treatments, randomized trial was conducted to evaluate the effects of two allied ancient Indian disciplines (Yoga, Ayurveda) in comparison with a control group on depression symptom scores and self rated sleep in a geriatric population. 69 person aged over 60 years, selected based on set criteria out of 120 inmates of a residential home for the
aged, were stratified by age and gender and randomly allocated to three groups, i.e. Yoga, Ayurveda and control. All three groups were evaluated for geriatric depression symptom scores and self-assessment of sleep at baseline, and after three years and six months. The Yoga program (75 minutes per day, 6 days a week) included physical postures, relaxation techniques, voluntarily regulated breathing and lectures on philosophical aspects of Yoga. The Ayurveda groups were given a herbal tonic (Rasayana Kalpa) twice a day, 7 days per week. The control group carried on with their routine activities. The Yoga group (one way ANOVA and Tukey Test) showed a significant reduction in the depression symptom scores at both three and six months. Also, there was a significant reduction in the time taken to fall asleep (average 10.47 minutes), an increase in the total number of hours slept (average 1.1 hours) and in the feeling of being rested in the morning (15.4%) after six months. The other group showed no change. Hence an integrated approach of Yoga including the mental and philosophical aspects in addition to the physical was an especially useful addition to the program of institutionalized older persons, as it reduced depressive symptoms and improved certain aspects of sleep.

Gyandeep Mishra (2007) concluded in his study that it has been acknowledged that religious and complementary therapies are commonly used in community settings in India. The human magnet through its vital energy can be affected and get affected by others. Noted Psychologist Prof. Victor E. Kromar has investigated the role of mental power (will power) in controlling and utilizing the biomagnetic power of the human body. Their aim was to explore the influences of pranic healing (Prana therapy) on the blood pressure and alpha EEG waves in human volunteers. They have taken 25 subjects, selected by incidental sampling that were the visitors, and came to
Shantikunj and Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand, India during March, 2006. One session of pranic healing for 20 minutes was done and pre & post test of Alpha EEG and blood pressure was conducted. Result shows systolic & diastolic B.P. was reduced by the session of pranic healing. & finally we found in the study that there were some significant relationship between pranic healing and blood pressure and alpha waves. It can be studied further and be useful as a new and non-pharmacological approach to the healthy life.

M.R. Panwar, Vimla Asnani & W. Selvamurthy (2002) in their study examines the practice of yogic exercises prior to altitude induction as well as during stay at high attitude (HA) will be useful in improving the health and operational efficiency of troops posted at HA.

Ranjana Sharma & G.P. Prakash (2002) examined the effect of Yoga on the moods and blood pressures of the Grassland Scientists of Jhansi. The moods and blood pressure were studied in three consecutive sessions, i.e. with medicine, without medicine and with Yoga. The results reveal the fact that there is no significant difference in the moods of Grassland Scientists in all the three sessions. Instead, they revealed different sets of moods in different conditions. Yoga proved to be a very powerful technique in reducing and controlling the blood pressure of the scientists.

N. Jhansi Rani (2002) investigated the practice of a specific yogic procedure that enhances oxygen supply to the head will improve one’s performance on a cognitive task.

M. Gunase Karan (2002) found that Yoga affects the cognitive development in children with learning disabilities. A sample of 10 children with L.D. (learning disability) with the age group 8-9 years of age was selected. Significant differences in the cognitive ability of
the children were noted and the training resulted in improvement over male and female children alike. Overall improvement in the learning behavior was also noted in all areas of learning during the post-training period.

Sudha, P., Jyotsna, G.N., Sumita, K. and Nalini, B. (2007) Yoga is beginning to be recognized for its therapeutic implications. Rao (1998) Yoga gained prominence as a psycho-physiological system of self-regulation with therapeutic implications. The humanistic and transpersonal approaches in contemporary psychology facilitated the recognition of relevance of Yoga for health, well being and enhancement of human potential, meditation, which is very much a part of Yoga, has come to be recognized as a self regulation strategy (Shapira, 1980) and as an adjunct to psychotherapy (Goleman, 1971; Deatherage, 1975; Engler; 1984).

Clinical observation on yogic practices indicates that several yogic methods are useful in the management of asthma, palpitation and arrhythmia, hypertension, tension headaches, arthritis, insomnia and diabetes.

A brief review of literature on the psychotherapeutic effects of Yoga revealed that Yoga has proved effective as a mode of treatment for psychological distress. It was shown that long-term practitioners of Yoga have a remarkable voluntary control over their autonomic processes, which helps them in coping with psychological stress (Rao, 1995). A significantly lower level of neuroticism was found in Yoga practitioners as compared to non-practitioners (Triveni & Aminabhavi, 1999). Yoga practitioners also differed significantly on state and trait anxiety and perceived stressful life events. Yoga practitioners had significantly high mean scores on social desirability when compared with non-practitioners of Yoga (Venkatesh, Pal & Verma, 1994; Latha & Kaliappan, 1992). A training course in Yoga
was found to have led to highly significant improvement in the subjects’ mental health (Aminabhavi, 1996).

A study comparing the efficacy of Yoga therapy, drug treatment and relaxation therapy in psychoneurotics showed that Yoga practice was not only as effective as drug therapy in treating psychological disturbances, but also left a positive sense of well-being (Verma, 1997).

Some forms of Yoga were found to have significant antidepressant effects (Murthy et al. 1998). Yogic meditation was also effective in reducing tension headache (Vasudevan, Mishra & Balodi, 1994). It was also found that distressing physiological and psychological changes during the course of menstrual cycle could also be reduced with the help of Yoga practice (Sridevi & Rao, 1996). Yoga, including Yama and sometimes also religion or philosophy may help people at risk for drug dependence and certain types of neurosis due to anomic, to perceive their lives as more meaningful. Physical exercise, relaxation and prolonged exhalation also relieve anxiety. Many yogic practices like proper life style, physical exercises, some calming Pranayama, open-ended shavasana or Yoga nidra before sleep is very effective for insomnia (Nespor, 2001).

Meditation research shows that practitioners have lower metabolic rate and triglyceride levels, achieve a lower and stable heart rate, have lower blood pressure, have a slower and more stable respiratory rate, have a more stable galvanic skin response, report fewer psychosomatic symptoms and lower levels of anxiety and fear and score higher on perceptual cognitive tasks and self-actualization inventories (Nurenberger, 1986).

Psychologists and other professionals in the areas of mental health and hygiene may adapt Yoga as a psychotherapeutic system and as a general conceptual framework like other schools of
psychotherapy such as psychoanalysis or rational emotive therapy (Rao, 1998). We seem to be very close to a behavior technology and self reliance in the domain of Yoga (Rao, 1995).

Manjunath, N.K. and Shirley Telles viewed that Yoga is an ancient Indian Science and a way of living. Yoga training for 6 months in 20 school children in the age group of 12 to 15 years has been shown to improve the maximum expiratory pressure, maximum inspiratory pressure, forced expiratory volume, forced inspiratory volume in first second and peak expiratory flow rate (Madan Mohan, Jatiya, Udupa & Bhavanani, 2003). Another study suggested that 12 weeks of Yoga practices can improve forced vital capacity and PEFR in young females (age group 17-28) (Yadav & Das, 2001).

Investigations on nostril dominance in breathing, brain function and autonomic activity seem to indicate that excessive activity of the left brain and right nostril dominance underlie sympathetic arousal which characterizes stress whereas right brain, left nostril dominance underlies parasympathetic dominance which characterize rest and relaxation (Shanahoff-Khalso, 1991). Studies have also shown that the nostril dominance could be altered by exerting pressure on the axilla and by varying body position.

There are several ways in which Yoga may bring about a decrease in anxiety. One of the ways in which Yoga practice may reduce anxiety is by regulation of breathing as this has been shown to be associated with a decrease in sympathetic activity and muscle tension (Grazzi, 1993).

All these investigations reported that meditators changes more than non-meditators controls in the direction of positive mental health, positive personality dimensions and self-actualization.

A personality study by Ahmed et al. (1988) of individuals regularly practicing transcendental meditation techniques involved
testing 50 meditators and 50 non-meditators (20-25 years age) with 16 P.F. Questionnaire. Meditators were from Maharshi School (New Delhi, India). The meditators, non-meditators differed significantly on 12 out of 16 personality factors. Meditators showed over all better adjustment and personality organization.

Brown and Robinson (1993) to examine the relationship between regular meditation and/or physical exercises and three dimensions of self-actualization in 103 graduate students (aged 23-32 years). The three dimensions of self-actualization were inner directedness, living in present and lowered anxiety. Subjects who meditated or who both meditated and exercise had significantly greater inner directedness. Subjects who both meditated and exercised were found to be significantly less anxious as well.

Rao (1995) reported that it is beyond reasonable doubt that long-term practitioners of yogic techniques have a remarkable voluntary control over their psycho-physiological problems. The studies on asanas indicate that the muscles are stretched and pressure is exerted selectively on certain external body parts and internal organs and organ system. As a result, body become flexible and gets strong. As the practitioners of yogic techniques are advised to pay attention to the sensations associated with the movements, stretch and holding of limbs, it may enhance their sensitivity to bodily processes. Studies on breath regulation techniques indicate that (a) the vital capacity increasing as a result of practicing some varieties of Pranayama in combination with asana as they provide some exercise to the musculature involving breathing; (b) diaphragmatic breathing, even breathing, produce relaxation and reduce the arousal level and anxiety of the individuals. It appears that autonomic balance is achieved through some breathing techniques. Clinical observations on yogic practices indicate that several yogic methods are useful in the
management of asthma, hypertension, tension, headaches, arthritis, insomnia and diabetics. Thus it may be said that the aim of Yoga practicing is the welfare of the individual as well as society.

(2) Effect of Yoga: Pranayama on Other Mental and Physical Diseases: Studies in India

Nagendra, H.R. and Nagarathna, R. (1986) concluded an integrated approach of Yoga therapy for bronchial asthma: a 3 – 54 month perspective study, after an initial integrated Yoga training program of 2 to 4 weeks, 570 bronchial asthmatics were followed up for 3 to 54 months. The training consisted of Yoga practices, Yogasanas, Pranayama, meditation and kriyas – and theory of Yoga. Results show highly significant improvement in most of the specific parameters. The regular practitioners showed the greatest improvement. These results establish the long-term efficacy of the integrated approach of Yoga therapy in the management of bronchial asthma.

Vijayalakshmi, S., Satyanarayana, M., Krishna-Rao, P.V., and Prakash, V. (1988) Combined effect of Yoga and psychotherapy on management of asthma: a preliminary study, Yoga and psychotherapy may be useful in the management of asthma and may, infact, be superior to conventional medical treatment. 34 asthma patients (aged 14-65 yrs.). Composed the experimental group, and 14 male asthma patients (aged 30-45 yrs.) served as controls in a 2*2 factorial design. Data on peak expiratory flow rate were collected from the experimental Ss before and after a 10-day asthma camp and counterchecked with the control Ss who attended medical clinics. The experimental group had significant higher scores as compared the control group.
Jain, S.C., Raj, L., Valecha, A., Jha, U.K., Bhatnagar, S.O., and Ram, K. (1991) evaluated the effect of Yoga training on exercise tolerance in adolescents with childhood asthma. Forty six young asthmatics with a history of childhood asthma were admitted for Yoga training. Effects of training on resting pulmonary functions, exercise capacity, and exercise induced bronchial labile index were measured. Yoga training resulted in a significant increase in pulmonary function and exercise capacity. A follow-up study spanning two years showed a good response with reduced symptom score and drug requirements in these subjects. It is concluded that Yoga training is beneficial for young asthmatics.

Jain, S.C. and Talukdar, B. (1993) evaluation of Yoga therapy programme for patients of bronchial asthma, a study of the effect of Yoga therapy programme on 46 indoor patients of chronic bronchial asthma on exercise capacity, pulmonary functions & blood gases was conducted. Exercise capacity was measured by 3 tests. Yoga therapy programme resulted in a significant increase in the pulmonary functions and exercise tolerance. A one-year follow-up study showed a good to fair response with reduced symptoms score and drug requirements in these subjects. It is concluded that Yoga therapy is beneficial for bronchial asthma.

Khanan, A.A., Sachdeva, U., Guleria, R., and Deepak, K.K. (1996) studied the pulmonary and autonomic functions of asthma patients after Yoga training. “The concept of Yoga is helpful for the treatment of bronchial asthma” has created a great interest in the medical research field. In order to investigate whether autonomic functions and pulmonary functions are improved in asthma patients after short term Yoga training, a study was conducted with nine diagnosed bronchial asthma patients. Yoga training was given for seven days in a camp in Adhyatma Sadhna Kendra, New Delhi. The
results closely indicated the reduction in sympathetic reactivity and improvement in the pulmonary ventilation by way of relaxation of voluntary inspiratory and expiratory muscles. The “comprehensive yogic life style change programme for patients of Bronchial asthma” has shown significant benefit even within a short period.

Vahia (1982) discusses how the concept of body awareness helps to properly apply different relaxation techniques, focusing on myocardial patients. Proper application of relaxation may well be a treatment in its own right. Techniques for multiple relaxation training are described which emphasize both physical rest and immobility and physical movement and mobility. These elements form a meaningful whole through the role of respiration and the concept of body awareness during active and passive relaxation.

Other important studies (Wallace, Beason & Wilson 1971; Delmont, 1984; Sudsuang, chentenez & veluvan, 1991; Telles, Nagarathan & Nagendra, 1995) have shown decrease in heart rate and blood pressure of the subjects of experimental group significantly. Number of other studies on Yoga (Yoga sana, Pranayama and meditation) have shown the significant reduction in Heart rate (HR), Blood pressure (BP) and Cardiac profile (Bharshankar, Bharshankar & Deshpande, Kaora & Gosavi, 2003; Vyas & Dikshit, 2002; Harinath, Malhotra, Pal, Prasad, Kumar, Kain & Sawhney, 2003) and also produce remarkable physiological effects on oxygen metabolism, tissue metabolism, blood flow, autonomic functions, neuroactivities etc. (Farrow & Hebort, 1982, Solberg & Halversen 2000, Jevning & Wallace 1992, Sarang & Telles 2006).

Meditation and other forms of yogic practices have clinical and psychotherapeutic significance (Bushman, 1994, 1998; Bhushan & Sinha 2000; Freedman, 1978; Shankar devananda, 1984). They
increase learning, retention and memory capacity and promote concentration, creative thinking, positive self-image, self confidence and self discipline in children (Kumar, 2000). A number of research investigators reported improvements in cognitive functioning as a result of meditation training (Pellitier, 1974). Yoga Nidra is a Pratyahara technique, an important type of meditation developed and standardized by Swami Satyanand Saraswati (1972).

Sahaja Yoga meditation involves mental states of internalized attention and emotionally positive experience of ‘bliss’ (Rai, 1993). In a study of EEG investigation, in which focused internalized attention gives rise to emotionally positive blissful experience significantly showed more intense feelings of bliss, lower thought appearance rates and no reporting of restlessness and uneasiness than the short term meditators (Aftanas & Golocheikine, 2001). A considerable body of research supports the idea that meditative training can mitigate the effects of anxiety and stress on psychological and physiological functioning. Meditation decreases experienced stress load (Carlson, Speca, Patel & Goodney, 2003; Holmes, 1984; Kabat-Zinn, Massion, Kirstller, Peterson, Fletcher, Pbert, Lenderking & Santorelli, 1992).

Meditation is an important technique for enhancing happiness and SWB (carrington, 1983). It also converts tension into tranquility (Dhar, 2002).

Psychological well-being in the Indian context and Indian perception of nature and its relationship with human being were analyzed. (Sinha, 1990). The spiritual self realization makes a person free from all sense pleasure, (Kam) acquisition of wealth (arth), and performing duties appropriately (dharm) (Misra, 1994).

treatment of osteoarthritis of the hands. Yoga and relaxation techniques have traditionally been used by non medical practitioners to help alleviate musculoskeletal symptoms. The objective of this study was to collect controlled observations of the effect of Yoga on the hands of patients with osteoarthritis (OA). The Yoga treated group improved significantly more than the control group in pain during activity, tenderness and finger range of motion. Other trends also favored the Yoga program. The Yoga derived program was effective in providing relief in hand (OA).

Nagarathna, R. and Nagendra, H.R. (1985) concluded Yoga for bronchial asthma : a controlled study-fifty three patients with asthma underwent training for two weeks in an integrated set of Yoga exercises, including breathing exercises, suryanamaskar, Yogasana (physical postures), Pranayama (breathing slowing techniques), dhyana (meditation) and a devotional session, and were told to practice these exercises for 65 minutes daily. They were then compared with a control group of 53 patients with asthma matched for age, sex and type and severity of asthma, who continued to take their usual drugs. There was a significantly greater improvement in the group who practised Yoga in the weekly number of attacks of asthma, scores for drug treatment, and peak flow rate. This study shows the efficacy of Yoga in the long term management of bronchial asthma.

Dhume, R.R. and Dhume, R.A. (1991) revealed a comparative study of the driving effects of dextroamphetamine and yogic meditation on muscle control for the performance of balance on balance board. The work is aimed to compare the relative strength of dextroamphetamine and yogic meditation on the performance of 3 different groups of medical students to concentrate on the task to balance on a balance board. Group A subjects were meditators, group B subjects were given orally 5 and 10 mg. of dextroamphetamine in a
capsule, 1 hr. prior to the test. Group C subjects were given same capsule but with lactose in place of the drug (placebo). This last group served as control for the study. The results were conclusive to confirm earlier reports that amphetamine is not of use for improvement of task rather, it deteriorates the task performance. Contrary to that, yogic meditation is of merit to achieve concentration for mental as well as physical task.

**Chohan, I.S., Nayar, H.S., Thomas, P., and Geetha, N.S.** *(1984)* viewed that Yoga is known to induce beneficial effect on physiological, biochemical and mental functions in man. Its effects on blood coagulation are not known. A study was conducted in seven previously untrained male adults who underwent a combination of yogic exercises, daily for one hour, over a period of four months. These findings suggest that Yoga induces a state of blood hypocoagulability. The impact of Yoga on prevention of cardiovascular and thrombotic disorders is obvious.

**Jain, S.C. Uppal, A., Bhatnagar, S.O. and Talukdar, B.** *(1993)* studied the response pattern of non-insulin dependent diabetic of Yoga therapy changes in blood glucose tolerance by oral glucose tolerance test (OGTT) after 40 days of Yoga therapy in 149 non-insulin dependent diabetics (NIDDM) were investigated. One hundred and four patients showed a fair to good response to the Yoga therapy. It is conclude that Yoga, a simple and economical therapy, may be considered a beneficial adjuvant for NIDDM patients.

**Panjwani, U., Selvamurthy, W., Singh, S.H., Gupta, H.L. Thakur, L., and Rai, U.C.** *(1991)* investigated the effect of Sahaja Yoga meditation on seizure control and electroencephalographic alterations was assessed in 32 patients of idiopathic epilepsy. The subjects were randomly divided into three groups. Group I practised Sahaja Yoga for 6 month, Group II practised exercises mimicking
Sahaja Yoga for 6 months and Group III served as the epileptic control group. Group I subjects reported a 62 percent decrease in seizure frequency at 3 months and a further decrease of 86 percent at 6 months of intervention. No significant changes in any of the parameters were found in Group II and III, indicating that Sahaja Yoga Practice brings about seizure reduction and EEG changes. Sahaja Yoga could prove to be beneficial in the management of patients of epilepsy.

Raju, P.S., Madhavi, S. Prasad, K.V. Reddy, M.V. Reddy, M.E., Sahay, B.K., and Murthy, K.J. (1994) showed in their study the comparison of effects of Yoga & physical exercise in athletes. The effect of Pranayama, a controlled breathing practice, on exercise tests was studied in athletes in two phases; sub maximal and maximal exercises test. The results in both phases showed that the subjects who practised Pranayama could achieve higher work rates with reduced oxygen consumption per unit work and without increase in blood lactate levels.

Sundar, S., Aggarwal, S.K., Singh., V.P., Bhattacharya, S.K., Udupa, K.N., and Vanish, S.K. (1984) found in his study the role of Yoga in management of essential hypertension. Twenty five patients of essential hypertension were studied. Of these, 20 patients were not given any antihypertensive drug treatment (Group A); other 5 had to be put on antihypertensive drugs before including them in the study (Group B). These patients were demonstrated “Shavasana” and trained to perform it correctly. Shavasana therapy was continued for six months. There was a statistically significant fall in both mean systolic and diastolic pressure of both groups.

Pranayama or yogic breathing as a method of re-expansion of lungs in patients with plural effusion was studied. Ten patients with pleural effusion practised alternate nostril breathing for 20 days after aspiration of fluid. An equal number matched for age and smoking habits underwent routine physiotherapy of the hospital for the same period. Lung function was measured: before aspiration; immediately after aspiration; and 5, 10, 15 and 20 days after aspiration. The results revealed that the patients practising Pranayama demonstrated a quicker re-expansion of the lungs in most of the measures of lung function.

Rai, L., Ram, K., Kant, U., Madan, S.K., and Sharma, S.K. (1994) evaluated the energy expenditure and ventilatory responses during Siddhasana – a yogic seated posture. It was observed that sitting in Siddhasana posture was characterized by greater minute ventilation, larger tidal volume, higher oxygen consumption, greater CO₂ elimination, higher heart frequency greater oxygen pulse and lesser as compared with other two postures. These observations suggest that Siddhasana is a mild type of exercise and may have its application in conditions of low cardio-respiratory reserves especially in individuals in whom heavy exercises are contra-indicated.

Researchers have also evaluated effects of Yoga on healthy adults and in athletes and compared the effects of Yoga to the effects of other forms of physical exercise. One study conducted at the Government Vemana Yoga Research Institute in Secunderabad, India, focused specifically on athletes practicing Pranayama techniques. After two years of observation and testing, according to the report published in the Indian Journal of Medical Research in 1944, “The results...... showed that the subjects who practiced Pranayama could achieve higher work rates with reduced oxygen consumption...... and without increase in blood Lactate levels”
According to Mary Pullig Schatz, M.D., author of Back care Basics: A Doctor’s Gentle Yoga Program for back and neck pain relief (Rodmell, 1995), the study results indicate that in the Pranayama subjects, the body is using oxygen” more efficiently (aerobically) rather than shifting to less-efficient an aerobic (lactate-producing) metabolism.”

Another clinical trial by the Yoga Research Institute in Hyderabad, India followed the effects of intensive Yoga training on physiological changes in six healthy adult females. Though the study group was small, the intensive Yoga training resulted in participants’ ability to exercise more comfortably, with a significantly lower heart rate, and with increased breathing efficiency, according to an abstract published in the Journal of Alternative and complementary medicine in 1997.

MS Chaya, AV Kurpad, HR Nagendra and R Nagarathna examined different procedure practices in Yoga have stimulatory or inhibitory effects on the basal metabolic rate when studied acutely. In daily life however, these procedures are usually practiced in combination. The purpose of the present study was to investigate the net change in the basal metabolic rate (BMR) of individuals actively engaging in a combination of Yoga practices (asana or yogic postures, meditation and Pranayama or breathing exercises) for a minimum period of six months, at a residential Yoga education and research center at Bangalore.

Manchanda and Colleagues proposed that Yoga has potential for benefit for patients with CAD. In this prospective controlled clinical trial, 42 men with angiographically proven CAD were randomized to control or Yoga intervention and were followed for 1 year. At 1 year, the Yoga group showed significant reduction in number of anginal episodes per week, improved exercise capacity and
decrease in body weight. Serum total cholesterol, LDL cholesterol and triglyceride levels also showed greater reductions in comparison with the control group. No side effects were reported.

The essential features of Yoga training include asanas, Pranayama, bandhas, kriyas and meditation. Past research has shown the physiological effects of various Yoga practices on the human body. The positive changes that occur in the cardiovascular, respiratory, skeletal and other organic systems during and after the Yoga practice have been documented e.g. Kuvalayananda, 1926, 1963; Bhole, 1972; Udupa, Singh & Yadav, 1973 & Arpita, 1982 relatively greater emphasis appears to have been put on the physiological effects of these practices.

Manjari Saxena (2007) revealed a comparative study of various breathing exercises (Pranayama) and meditation to assess the effects (subjective and objective) in cases of bronchial asthma with mild to moderate severity. So cases of bronchial asthma were studied for 12 weeks. The subjective symptoms, objective assessment in the form of chest X-ray PA view, spirometry and PEFR was done in each case at the beginning and after 12 weeks. Patients were randomly divided into 2 groups, Group A and B. Group A was treated with breathing exercises (Pranayama) (Omkar Chanting, Bhramari Chanting, Anulomaviloma, deep inspiratory breathing etc). Patients were asked to perform chanting at high pitch with maximum and prolonged expiratory effort as compared to normal chanting, 15 minutes twice daily for 12 weeks. Group B was treated with meditation 15 minutes twice daily for 12 weeks. After 12 weeks Group A had significant improvement in symptoms, as compared to Group B. Breathing exercises (Pranayama) improves respiratory capacity, decreased sensitivity of lungs to various stimuli and is
helpful as primary therapy/adjuvant in cases of bronchial asthma with mild to moderate severity.

**Tarun Kumar Saxena (2007)** investigated a study of yogic exercises and simple exercise like walking on physical parameters and metabolic control in freshly diagnosed patients of type-2 diabetes mellitus and to see whether response to exercise is affected by serum insulin levels. 110 freshly diagnosed patients of type-2 diabetes mellitus were studied for three months. Each group was sub divided into two groups- A and B. A was treated with yogic exercises and B with brisk walking. After three months group one had significant change in blood glucose, triglyceride & HbA1C values when treated with yogic exercise (Sub group A as compared to Sub group B). Different exercises have different action, walking mainly affects peripheral muscles reduced BM1, W: H ratio and possibly insulin resistance, where as yogic exercises mainly affect abdominal muscles and probably insulin release. Thus assessment of absolute serum insulin and decision of exercise may be helpful in fresh cases of type 2 diabetes.

Yoga has also been shown to improve the pulmonary functions in sport teachers who had been involved in physical training every day for nine years before the three month training in Yoga **(Telles, Nagarathna, Nagendra & Desraju, 1993)**. Apart from the benefits of Yoga training in healthy volunteers, patients of bronchial asthma also benefited by practicing Yoga. The benefits including a decrease in symptoms, need for medication and increased peak expiratory flow rate **(Nagarathna & Nagendra, 1985)**. A spirometric evaluation of persons with bronchial asthma following Yoga showed a significant reduction in the symptom scores and improvement in PEFR and in absolute values of FEV1 and FVC from 15 days of practice onwards in males while female group showed significant changes only after 30
days. Also, the requirement of bronchodilators has reduced significantly in males after 30 days of practice (Murthy et al., 1984). It is evident from the above mentioned studies that Yoga can be used as an effective intervention to improve pulmonary functions in both normal volunteers as well as in patients with bronchial asthma.

The Yoga group also showed an increase in forced vital capacity by 31.8 percent. This suggested that lung volumes and capacities improved in the Yoga group after six months. Yoga training for 6 months has been shown to improve the maximum expiratory pressure, maximum inspiratory pressure, forced expiratory volume, forced expiratory volume, in first second and peak expiratory flow rate in school children (Madam Mohan, Jatiya, Udupa & Bhavanani, 2003). Young females following 12 weeks of Yoga practice showed improvements in forced vital capacity, FEV1 and PEFR (Yadav & Das, 2001). Yoga has also been shown to improve the pulmonary functions in sport teacher who had been involved in physical training everyday for nine years before the three months training in Yoga (Telles, Nagarathna, Nagendra & Desiraju, 1993). Apart from healthy volunteers, patients of bronchial asthma also benefited by practicing Yoga. The benefits included a decrease in symptoms, need for medication and increased peak expiratory flow rate. (Nagarathna & Nagendra, 1985).

Similar benefits may have explained the better joint position sense in Yoga practitioners as compared with the non-Yoga group, considering that (i) Yoga include physical activity (e.g. the practice of Yoga postures), and (ii) the non-Yoga practitioners did not have any form of regular physical activity, which was elicited by specific questions. Joint position sense is known to be influenced by factors other than physical activity (Birmingham, Inglic, Kramer & Vandervoort, 2000).

The decrease in frontalis EMG activity during Yoga relaxation in the present study is in line with previous reported of a decrease in anxiety levels following Yoga practice, in children with impaired vision (Telles, 1999).

This was believed to be rated to the fact that Yoga practice helps in restoring balance and physiological homeostatis (Telles, 1993).

R. Balakrishanan, P. Nachimuthu and R. Varthini many Yoga practitioners as well as Yoga researchers credit Yoga for alleviating back problems, menstrual difficulties, arthritis, chronic and intractable ailments (TKAC, 1999) and even psychoneurosis (Grover, 1986) and improving visual perceptual sensitivity (Manjunath et al., 1999) self-awareness, self management & social awareness (Selven, 2004). Havalappanver (2002) also has argued that Yoga brings about profound changes in physiology as well as psychology of its practitioners.

Several research studies by Indian and other scholars, which as certain the importance of yogic practices in producing a series of significant psychological, physiological, endocrinal and metabolic changes in the body. (Hjelle, 1974; Nidich, Seeman and Dreskin, 1973; Seeman, Nidichi and Banta, 1972; Ferguson and Gowan, 1976; Otis, 1974).
Venkateshi, Pal, Negi, Verma et al. (1994) compared personality difference between 20 adult practitioners of Yoga (20 male and 20 female) and 40 adult controls (40 male and 20 female) who had no interest in Yoga practice. Male Yoga and non Yoga practitioners differed significantly on attitude towards Yoga, neuroticism, state and trait anxiety and stressful life events during the past year. Significant difference among female practitioners and controls were found for three variable; attitude toward Yoga, social desirability and stressful life events scores during the past year. Yoga practitioners had significantly higher mean scores on Yoga attitude and social desirability than did non-Yoga practitioners.

Selvamurthy (1993) highlights the promotive aspect of Yoga. He has shown that six months of yogic practices conducted on junior defence offers produced significant improvement in body flexibility, physical performance and also in cognitive and non-cognitive functions. The health adjustment improves due to positive changes that occur in the cardiovascular, respiratory, skeletal and other organic systems during and after the Yoga practice.
In addition to the studies reported in this review, a few studies by psychologists have been conducted Abroad:

**Bud (1993)** studied the positive and negative mood (condition of mood, emotional stage) and mental & physical energy in 71 normal volunteers in the age group of 21-76. He used three different methods, viz. inactivity, visualization and yogic breathing along with Pranayama. He concluded that Pranayama increases the mental, physical energy and gives a feeling of zeal more than the other two methods. Therefore, 30 minutes of yogic and respiratory practice has a special strengthening effect on mental and physical experience and increases the high positive mood.

**Behanan (1971)** viewed that consumption of oxygen increased by 24.5 and 18.5 percent during Ujjayi and Bhastrika Pranayama respectively. Similarly Miles (1964) measured the consumption of oxygen during Ujjayi, Bhastrika, Kapalbhati and other Pranayama. He concluded that the consumption of oxygen during these three Pranayama increased by 32, 20 and 14 percent respectively. The respiratory rate increased by 3 breaths per minute after Ujjayi and Bhastrika Pranayama, whereas it increased by 4 breaths per minute after Kapalbhati. A person who practised Ujjayi Pranayama at different heights from the sea level found that consumption of oxygen increased by 9 percent at an altitude of 520 meters above mean sea level.

**Jensen and Kenny (2004)** showed significant improvement from pre-test to post-test on Coonrr’s parent Rating scales. The investigators concluded that Yoga is an effective intervention for a broad range of childhood difficulties. **Barnes and Nagarkar (1989)**
children treated by Yoga were found to carry out their duties, being more attentive and remain relaxed. The results show significant difference on test scores of SAT and NVTI during pre and post training period and clearly demonstrating the efficacy of Yoga training. **Manjunath and Telles (2003)** found that Yoga training produced a significant increase in spatial test scores, suggesting that Yoga breathing improves performance in a right hemisphere specific memory test. **Naveen, Nagarathna & Telles (1997)** found that Uni-nostril breathing facilitates the performance on spatial and verbal cognitive tasks, said to be right and left brain functions, respectively.

**Kelly, Judith and Lamar (2002)** examined the effect of Yoga program as an alternative treatment (**Silvestri & Dantonio, 1996; Lohaus & Klein-Hebling, 2000**).

Several researchers in medical field have reported that Pranayama techniques are beneficial in treating a range of stress related disorders, improving autonomic functions, relieving symptoms of asthma, and reducing signs of oxidative stress. Practitioners report that the practice of Pranayama develops a steady mind, strong will-power and sound judgment, and also claim that sustained Pranayama practice extends life and enhances perception.

Simple relaxation tools, such as deep breathing & relaxing imagery, can help calm down angry feelings (**American psychological Association, December 4, 2007**).

Much as with headaches and hypertension, relaxation has generally positive effects on acute and chronic pain, although the results are relatively modest (**Taylor, 1991**). Nonetheless, relaxation and meditation almost always form part of a more comprehensive pain management program.
One of the more successful comprehensive treatments for chronic pain has been originated by Clare Philips (Philips, 1987a, 1987b). This program contains many of the same components found in general stress-reduction programs such as relaxation and cognitive therapy focused on developing new approaches and attitudes toward pain. After a 9-week treatment program for chronic pain, 12.6% of the treatment groups were entirely free of pain, 41.8% were much improved, and 38% were improved. Only 8% were in need of further treatment. Also pain intensity gradually decreased over the 12-month follow-up.

Harvey (1983) revised the importance of breath in relation to achieving physiological self-control in behavioral therapies and its relation to emotional state in Gestalt and Reichain psychology.

Researches have also shown that adults with spiritual practices have positive impact on physical health, coping with stress and mental health (Koenig, 2006).

A spiritually based intervention programme decreased anxiety and depression (Rajagopal, Mackenzie, Bailey & Lavizzo-Mourey, 2002).

Datey (1976) studied relaxation and hierarchy in anxiety reduction. He took a sample of 32 graduates with high Anxiety scores on the fear survey schedule. Each subject was assigned to one of four conditions. Group I had the combination of relaxation with hierarchy while group II was given relaxation but no hierarchy, group III had no relaxation but hierarchy and the IVth group served as the control. Differences in anxiety were observed in four conditions.

Elkins, Anchor and Sandler (1980) compared two styles of prayer and relaxation training according to their tension reducing properties. After a 10-day training period, 42 adults were measured both physiologically (EMG readings) and subjectively (self-reports)
under prayer, relaxation or control conditions. Results show that the prayer group reduced its tension level on both measures, but not significantly. The relaxation training group significantly reduced its muscle tension levels in comparison to control.

**Throll (1981)** studied the psychological effects of transcendental meditation and progressive relaxation. 39 European Subjects were taken between the age group of 18 to 41 years. Eysenck’s personality Inventory, State trait Anxiety Inventory and two questionnaires on health and drug usage were administered on the subjects before they learned transcendental meditation (TM) or Progressive Relaxation (PR). Subjects were tested immediately after they had learned either technique and then retested 5, 10 or 15 weeks later. There were no significant differences between groups for any of the psychological variables at pre-test. However, at post-tests the TM group displayed more significant and comprehensive results than did the PR group. Both groups demonstrated significant decrease in state and trait anxiety.

**Kaye (1985)** describes an 8-week Yoga program conducted to assist depressed 65-92 year old residents of a geriatric nursing home. During the sessions, the residents were instructed in various relaxation techniques progressive and systematic neck rolls, mantra chanting and breathing exercises. Responses of residents to the sessions were highly favorable. The majority felt that their sleep patterns had improved as a result. One subject reported an increase in the mobility in her physical therapy which she attributed to breathing technique. All subjects were disappointed when the sessions ended.

**Janssen and Neutgens (1986)** took 41 patients of headache who were classified into tension-headache, migraine or combined headache groups. After a 2½ week baseline period, they were assigned to either autogenic training (AT) of progressive relaxation (PR).
Treatment was conducted in small groups over 12 sessions. Three months after treatment, the patients returned for follow-up session. Patients charted their headache every 4-hrs throughout the baseline and treatment periods and again 2 weeks prior to the follow-up session. PR was more successful in the treatment of tension headache, whereas for migraine cases, both treatments seemed equally effective. For combined headaches, PR lagged behind AT. Among headache subparameters, the duration and frequency of pain periods were mainly effected, with the exception of tension headache PR condition, in which decreases in duration and intensity of pair occurred jointly.

Woolery A, Myers H, Sternlieb B, Zelter L. (2004) examined the effects of a short-term Iyengar Yoga course on mood in mildly depressed young adults. Twenty-eight volunteers aged 18 to 29. An intake, all participants were experiencing mild levels of depression, but had received no current psychiatric diagnosis or treatments. None had significant Yoga experience. Subjects in the Yoga group attended two 1-hour Iyengar Yoga classes each week for 5 consecutive weeks. The classes emphasized Yoga postures thought to alleviate depression, particularly back bends, standing poses, and inversions. The results show that subjects who participated in the Yoga course demonstrated significant decreases in self-reported symptoms of depression and trait anxiety. These effects emerged by the middle of the Yoga course and were maintained by the end. Changes also were observed in acute mood, with subjects reporting decreased levels of negative mood and fatigue following Yoga classes. Finally, there was a trend for higher morning cortisol levels in the Yoga group by the end of the Yoga course, compared to controls. These findings provide suggestive evidence of the utility of Yoga asanas in improving mood. 

in healthy women. Hatha Yoga has become increasingly popular in western countries as a method for coping with stress. However, little is known about the physiological effects of Yoga practice. We measured heart rate, blood pressure, the hormones cortisol, prolactin and growth hormone and certain psychological parameters in a Yoga practicing group and a control group of young female volunteers reading in a comfortable position during the experimental period. The course of heart rate was significantly different, the Yoga group had a decrease during the Yoga practice. Significant differences between both groups were found in psychological parameters. In the personality inventory the Yoga group showed markedly higher scores in life satisfaction and lower scores in excitability, aggressiveness, openness, emotionality and somatic complaints. Significant differences could also be observed concerning coping with stress and the mood at the end of the experiment. The Yoga group had significant higher scores in high spirits and extraverted ness.

Telles, S., Hanumanthaiah, B., Nagarathna, R., and Nagendra, H.R. (1993) suggested the improvement in static motal performance following yogic training of school children. Two groups of 45 children each, whose ages ranged from 9 to 13 years, were assessed on a steadiness test, at the beginning and again at the end of a 10-day period during which one group received training in Yoga, while the other group did not. During the 10-day period, one group (the ‘Yoga’ group) received training in special physical postures (asanas), voluntary regulation of breathing (Pranayama), maintenance of silence, as well as visual focusing exercises (tratakas) and games to improve the attention span and memory. The other group (control) carried out their usual routine. After 10 days, the ‘Yoga’ group showed a significant (willcoxon’s paired signed-ranks test) decrease in errors, whereas the ‘control’ group showed no change persistent
practice can bring about peace of mind, beauty, motivation, emotional control, intelligence and concentration.

Kjellgren A, Bood SA, Axelsson K, Norlander T, Saatcioght F. viewed that increasing rates of psychosocial disturbances give rise to increased risks and vulnerability for a wide variety of stress-related chronic pain and other illnesses. Relaxation exercises aim at reducing stress and thereby help prevent these unwanted outcomes. Out of the widely used relaxation practices is Yoga and yogic breathing exercises. One specific form of these exercises is Sudarshan Kriya and related practices (SK & P) which are understood to have favorable effects on the mind-body system. The goal of this pilot study was to design a protocol that can investigate whether SK & P can lead to increased feeling of wellness in healthy volunteers. Participants were recruited in a small university city in Sweden and were instructed in a 6-day intensive program of SK & P which they practice daily for 6 weeks. The control group was instructed to relax in an armchair each day during the same period. Subjects included a total of 103 adults, 55 in the intervention (SK & P) group and 48 in the control group. The Data suggest that participants in the SK & P group, but not the control group, lowered their degree of anxiety, depression and stress, and also increased their degree of optimism. The participants in the Yoga group experienced the practices as a positive event that induced beneficial effects. These date indicate that the experimental protocol that is developed here is safe, compliance level is good, and a full scale trial is feasible. The data obtained suggest that adult participants may improve their wellness by learning and applying a program based on Yoga and yogic breathing exercises.

Kirkwood, G1, Rampes, H2, Tuffery, V3: Richardson, J4; Pilkington, K5. Between March and June, 2004, a systematic review was carried out of the research evidence on the effectiveness of Yoga
for the treatment of anxiety and anxiety disorders. Eight studies were reviewed. They reported positive results.

“Yoga For Health”, Yoga tips from Yoga Journal, Yoga Works! Emmanuel Brandeis, M.D. the founder of Yoga Nemo in West Hollywood, California, says, “Insurance companies are recognizing the fact that Yoga is a less expensive and more efficient method of rehabilitation.” Scientists and medical doctors pursuing Yoga-related research are focusing on its ability to help prevent, heal or alleviate specific condition, such as heart disease, high blood pressure, Carpel tunnel syndrome, asthma, diabetes and symptoms of menopause, and its benefits as a technique for reliving stress and coping with chronic conditions or disabilities. In fact, the NCCAM (National Center for complementary and Alternative Medicine) itself, identifying Yoga as a therapy worth pursuing in the research arena, says that “During the past 80 years, health professionals in India and the West have begun to investigate the therapeutic potential of Yoga. To date, thousands of research studies have been undertaken and have shown that with the practice of Yoga a person can indeed, learn to control such physiologic parameters as blood pressure, heart rate, respiratory function, metabolic rate, skin resistance, brain waves, body temperature and many other bodily functions.”

Yoga also alleviates the extraneous mind chatter that can turn chronic pain into misery through relentless anxiety about the condition. “Patients are left with the physical sensation of pain rather than the unnecessary emotional worries that tend to get wrapped around it.” Randolph adds “And that’s the real gift Yoga offers FS patients. It encourages living within the limits imposed by the body. When we yoke the body and the mind together, we train ourselves to find where we truly are and to stay within that boundary.”
James S. Gordon, M.D., director of the center for mind-body medicine in Washington, D.C., also sees energetic changes in Yoga practitioners. Plume (1997), "Yoga is a way to get to the source of ourselves & Yoga as an opportunity to see something deeper in the self."

Cardiologist Dr. Consteniton Butiko viewed that Pranayama is basically an exercise of enhancing an harmonizing the flow of prana (Vital energy) within the body through controlled breathing and concentration. Cleansing that bronchial tube, increasing the lung capacity and balancing the inflow oxygen and outflow of carbon-dioxide are natural offshoots of its practice as per the pace and pattern (of breathing) suitable to the patient.

Dr. Butiko also treated cases of hypertension, epilepsy and heart ailments through this Yoga therapy. Jennifer Chodzinski (2000) examined the effect of Rhythmic breathing on blood pressure in hypertensive adults. The purpose of this study is to explore the effect of a simplified version of Pranayama (rhythmic breathing exercise) on blood pressure. Six white female hypertensive adults were taught a 15-minute breathing technique. The third time subjects performed the breathing technique; they were able to significantly decrease their mean arterial pressure and heart rate. While more research is needed, this stress-reduction technique may help hypertensive person to better control their blood pressure.

Colette M. Herrick, Allan D. Ainsworth- In this research a widening recognition of the mind-body spirit connection in western medicine has resulted in a growing interest in ancient health practices such as Yoga. As complementary therapies enter main stream medical settings, nurses and other health care providers need a fundamental understanding of these modalities to be able to advise patients
effectively. This article provides an overview of Yoga and details the benefits of Yoga practice.

**Dr. Ana Bodnar**, a clinical psychologist and certified Yoga teacher based in Toronto, Canada, believes that Yoga may help in mild cases of stress or depression.

“**Michael Stone**, another Toronto psychotherapist and Yoga teacher, recommends Yoga to his clients. Stone believes that most physical ailments are connected to one’s state of mind.”

With the dual aims of better understanding the contribution of Yoga to positive mental health and exploring links between yogic philosophy and psychological therapy, researchers at **Deakin University in Melbourne, Australia**, conducted a study on Yoga as a preventive and treatment for symptoms of mental illness. The Yoga classes were designed as a six-week program incorporating breathing techniques (Pranayama) exercises for strength, vitality and flexibility (Asanas), guided relaxation (Yoga -nidra) and meditation. The aim of this process was to enhance self awareness, encourage the perspective that emotional states are somewhat transient and encourage a self-accepting and calm attitude through concentrating on synchronizing gentle movements and breathing. By developing calmness, self-acceptance, a balanced perspective, and enhanced concentration it was hypothesized that participants in the six-week Yoga program would strengthen their resistance to emotional distress. In addition, a strong sense of intrinsic spiritual experience has been cited as a possible buffer to stress, anxiety and depression and has been associated with decreased frequency of medical symptoms. At the end of six weeks, the Yoga beginners showed lower average levels of symptoms of depression, anxiety and stress than at commencement. In addition, beginners showed growth in their self reported level of intrinsic spiritual experience.
Stark, John (2002) says, “If we’re having trouble sleeping, concentrating, and making decisions, we may suffer from dysthymia, a.k.a. mild depression. Instead of drug therapy, try Yoga to renew our outlook on life.”

Yardi (2001) viewed that Yoga alleviates stress, induces relaxation and provides multiple health benefits to practitioners. Commonly practised methods include controlled deep breathing, physical postures, meditation and philosophical ideas in varying proportions. The author reviews articles related to Yoga and epilepsy, seizures, electroencephalogram (EEG) recordings, autonomic changes, neuropsychology, the limbic system, arousal, sleep, brain plasticity, motor performance, brain imaging studies and rehabilitation.

Bera, Gore and Oak (1998) - The recovery from induced physiological stress in Shavasana (a yogic relaxation posture) and two other postures (resting in chair and resting supine posture) was compared, twenty one males and 6 females (21-30) years were mentioned in this process. The results revealed that the effects of stress were reversed in significantly shorter time in Shavasana, compared to the resting posture in chair and in a spine posture.

Varying degrees of relaxation of the mind were also observed (Udupa et al. 1973) Clinical researchers involving biofeedback and relaxation procedures on patients suffering from headaches have shown that these techniques are successful in reducing the somatic symptoms related to stress (Blanchard & Andrasik, 1982, 1983, Budzynski, 1978).
4) **Effect of Yoga: Pranayama on Other Mental and Physical Diseases: Studies Abroad**

Halley (1991) placed 30 college students in two relaxation groups or a control group. Relaxation consisted of different combinations of progressive muscle relaxation, focused breathing and imagery depicting powerful, immune function. After a single session, S-lg A (Salivary lg A) was higher in two relaxation groups compared to the control group.

At the consensus development conference of NIM (1996), the panel found strong evidence for the use of relaxation techniques in reducing chronic pain in a variety of medical conditions as well as strong evidence for the use of hypnosis in all existing pain associated with cancer. Regarding insomnia and behavioral techniques, particularly relaxation and biofeedback, some aspects of sleep do show improvement.

Meditation results in improvement in intelligence, school grades learning ability and short term and long-term recall. Meditation seems top be a promising educational tool for enhancing a learner’s ability (Cranson, Orme Johnson, Gackenbach, Dillbeck, Jones & Alexander, 1991; Hall, 1999).

While western theories frequently overlook the importance of the spirit, the soul and transcendent and altered states of consciousness, the peak experience and self realization (Maslow, 1968) are found to be closely connected with common mindful spirituality or sacredness. It can lead to well being and positive behavioral changes in the subtle system chakra (Mooladhara to Sahasrara) (Ferguson, 1981 p.68). The higher level of “experiencing”
which is described as one of full or calm detachment or observing self can be raised by focusing or by meditation. The concept self actualization forms a basis of healthy people who strive growth and development of potentials.

Physical activity has been positively linked to QOL in older adults. It influences self efficacy, physical and mental status and QOL. In some studies, the role of physical fitness on cognitive functions in aging had significant impact. Those who exercises regularly, tend to perform better in cognitive tasks because of increased blood circulation to the brain (Nelson & Luciana, 1999). It is associated with physiological rest and also facilitates heightened alertness (Wallace, 1986). The elderly adults who were taught meditation; also report significant improvement in cognitive flexibility (Alexander Chandler, Daviews, Langer & New Man, 1989). It has been shown to improve brain functioning, making both sides of the brain work with improved memory, intelligence, personality and performance slowing the aging process. It has been observed that optimism, happiness, hope, all were positively related to physical and mental health. Thus, positive psychology was another emerging field, which aimed for holistic development of people.

Lifestyle change programme involving spirituality can bring desires to achieve higher consciousness (Mohan, Prasad & Rao, 2004). There are studies which show that spirituality/religion is positively related to health (Dossey, 1999; Ellison & Levin, 1998; Koenig, Mccoulough, & Larson, 2000a; Levin, 1994). Spirituality is also linked with mental health (George Larson Kenig & Mccullough, 2000: Keinig, 1998; Larson & Milano, 1997).

The result shows that the long term and short term meditators differed significantly in the outcomes. It was found that the long term
Meditators had higher level of subjective well-being. (Travi, Tecce, Arenander, & Wallace, 2002).

Meditative practices using mental role-playing and the generation of specific sustained feelings or intentions of love and compassion have begun to be investigated (Goleman, 2003; Lehmann, Faber, Achermann, Jeanmonod, Gianotti & Pizzagalli, 2001; Lutz, Greischar, Rawlings, Ricard & Davidson, 2004).

At the Northern Colorado Allergy Asthma Clinic in Fort Collins, a controlled clinical study of university students (19 to 52 years old) with asthma concluded that Yoga techniques seem beneficial as an adjunct to the medical management of Asthma, according to the 1998 published abstract. Using a set of Asanas, Pranayama and meditation, the Yoga group practised three times a week for 16 weeks. “Analysis of the data showed that the subjects in the Yoga group reported a significant degree of relaxation, positive attitude and better Yoga exercise tolerance”.

A three month residential study treating patients with Yoga, meditation and a vegetarian diet at Hanover Medical University in Germany found a substantial reduction in risk factors for heart disease (including blood pressure and cholesterol) in participants, according to an abstract published in Acta Physiological Scandinavica Supplementum in 1997.

A randomized, single blind, controlled clinical trial at the University of Pennsylvania School of Medicine in Philadelphia concluded, “In this preliminary study, a Yoga-based regimen was more effective than wrist splinting or no treatment in relieving some symptoms and signs of carpal tunnel syndrome.” The study published in the Journal of the American Medical Association in 1998, also noted that “Subjects in the Yoga groups had significant improvement.
in grip strength and pain reduction, but changes in grip strength and pain reduction were not significant for control subjects”.

Also at the University of Pennsylvania School of Medicine, a Yoga treated group with osteoarthritis of the hands improved significantly more than the control group in “pain during activity, tenderness and finger range of motion” the randomized controlled clinical trial, published in the Journal of Rheumatology in 1994, concluded “This Yoga derived program was effective in providing relief in hand osteoarthritis.”

Many patients with chronic diseases that seem to elude a strict physiological diagnosis and tread the mind-body frontier also respond well to Yoga. Patrick Randolph, Ph.D., director of psychological services at the Pain center of the Texas Tech University Health Sciences Center, has studied the effects of Yoga on Fibromyalgia Syndrome (FS) an often debilitating chronic pain condition affecting up to 6 million Americans with a wide spectrum of symptoms. According to Randolph, Yoga offers FS patients a twofold benefit: The Asanas help increase circulation to the limbs while the resultant relaxation addressed anxiety.

CA Slader, HK Reddel, LM Spencer, EG Belousova, CL Armour, SZ Bosnic-Anticevich, FCK Thien, CR Jenkins investigated a double blind randomized controlled trial of two different breathing techniques in the management of Asthma. Previous studies have shown that breathing techniques reduced short acting B2 agonist use and improve quality of life (QOL) in asthma. The Primary aim of this double blind study was to compare the effects of breathing exercising focusing on shallow nasal breathing with those of non-specific upper body exercises on asthma symptoms, QOL, other measures of disease control, and inhaled corticosteroid (ICS) dose. This study also assessed the effect of peak flow
monitoring on outcomes in patients using breathing techniques. After a two week run in period, 57 subjects were randomized to one of two breathing techniques learned from instructional videos. During the following 30 weeks subjects practised their exercises twice daily and as needed for relief of symptoms. Results indicate that breathing techniques may be useful in the management of patients with mild asthma symptoms.

**Holly Lynton, Benjamin Kligler, Samuel Shiflett** examined the Yoga in stroke rehabilitation: A systematic review and results of a pilot study. In addition, we preset the results of a small pilot study designed to explore the hypothesis that a Kundalini Yoga practice of 12 weeks would lead to an improvement in aphasia as well as in fine motor coordination in stroke patients. The 3 participants attended Yoga classes twice a week for 12 weeks, before and after which they were tested on the O Connor Tweezer Dexterity test”, a timed test where the participant places pins in a Peg-Board with tweezers and the Boston Aphasia Exam for speech. The Result shows that all 3 participants showed improvement on both measures.

A systematic search yielded 32 articles published between 1980 and April 2007. The studies found that Yoga interventions are generally effective in reducing body weight, blood pressure, glucose level and high cholesterol.

**Julie V Bastille and Kathleen M Gill** evaluated a Yoga based exercise program for people with chronic post stroke Hemiparesius. This was a preliminary investigation of the effects of a Yoga -based exercise program on people with chronic (greater than 9 month) post stroke hemisparessis. Many people who have had a stroke report an impaired health status because of a reduced level of activity. Proponents of Yoga contend that it offers a gentle alternative exercise program that can be easily adapted for people who have had a stroke.
Four subjects with chronic post stroke hemisparesis participated in this single-case study. The 8-week intervention phase consisted of 1.5 hour Yoga sessions, 2 times per week, in the subject’s home. The results suggest that Yoga may be beneficial to people who have had a stroke.

Dostaleck (1994) viewed that hatha Yoga can be used for prevention and therapy of psychosomatic diseases, rehabilitation (both orthopedic and visceral) and research of physiological regulations. It includes psychohygienic and auto psychotherapeutic approaches and properly practiced, poses no risk.

**The Medical effects of various yogic practices are illustrated in the following examples** – The results of controlled clinical study on the effects of Bhujanga asana were presented in 1978 during the “First conference on the Application of Yoga in Rehabilitation Therapy” This asana was found to reduce stress and normalize the blood pressure. Cardiologist Dr. Consteniton Butiko from Russia achieved remarkable success in curing hundreds patients of different cardiovascular and chest related problems with the help of yogic asanas and kriyas alone. Dr. Consteniton Butiko successfully healed the patients of asthma by making them practice specific Pranayamas rather than using any medication.

A study of 149 persons with non-insulin dependent diabetes found that 104 had lowered blood sugar and needed less oral anti diabetes medication after regularly practicing Yoga. Because the patients were placed on a vegetarian diet during the study, however, the effect of Yoga practice alone on blood sugar levels cannot be determined.

Thus, it can be concluded that breathing exercises as a therapeutic technique has tremendous role in the management of various physical and mental diseases as well as mood states like
Anxiety, Stress & Depression, which go a long way in improving the overall feelings of well-being.

(5) IMPACT OF YOGA: PRANAYAMA IN DIFFERENT MENTAL & PHYSICAL DISEASES: THE CURRENT RESEARCH BY SWAMI RAMDEV IN “YOG SYNERGY IN MEDICAL SCIENCE”

Swami Ramdev, Yoga Synergy in medical science (2007) clinical trial under the guidance of Swami Ramdev has been initiated in order to establish yog, Pranayama and other ancient Indian medical systems scientifically. The main objective of these studies is to present the authenticity of yog as per the scientific standards. Yog, Pranayama and other traditional medical systems do not need any evidence. But we are living in scientific age and modern science has progressed to a considerable extent in the recent past. Therefore, it is necessary to analyze as to how can we adopt out systems as per modern scientific parameters and establish the same at the international level. The present analysis of medical tests proves that yog and Pranayama are capable of curing normal diseases along with serious and chronic diseases. There is a need to practise yog and Pranayama is a systematic and rhythmic manner. Swamiji made the patients follow all the rules with strictness during the clinical trial. The yog practitioners reap psychological, intellectual and spiritual benefits along with physical benefits. Yog and Pranayama work like medicine. This miracle is hidden in the strength of yog and Pranayama. Swamiji has analyzed the medical gain of yog and Pranayama on large scale with the help of yog camps. Indian medical team of specialist worked on these tests along with modern science scholars.
Benefits of yog-pranayam in different diseases:

**Obesity:**

Nowadays physical work has reduced to a great extent and eating habits are also poor. As a result, overweight problem is increasing. Yog is very effective for reducing weight. After this survey, the conclusion was drawn that yog is most effective for obesity in comparison with its efficacy for all other diseases. Out of the total participants included in the survey suffering from diseases, around 95.43 percent people got total or partial relief from obesity.

**High Blood Pressure:**

Today a large section of the society is suffering from high blood pressure due to severe competition and hectic life schedule. Out of the total participants, 18.46 percent were suffering from high blood pressure. 96.23 percent of participants confirmed positive effect of yog and pranayam in controlling blood pressure.

**Arthritis:**

Irregular eating habits, lack of nutritious food and irregular lifestyle lead to arthritis. 22.46 percent of the participants were suffering with this problem. 92.80 percent confirmed total or partial gain from yog and pranayam. Only 7.20 percent said that there has been no improvement even after practicing pranayam. This proves that yog has played a major role in curing arthritis.

**Diabetes:**

Lack of physical exercise and eating high fat content food are some of the reasons for diabetes. 28.42 percent of the total participants were suffering with this problem. 94.99 percent of participants confirmed partial or total benefit from yog and pranayam. Around 5.01% participants said that there has been no improvement even after practicing pranayam.
Heart Disease:
Stress, hectic schedule and cosmopolitan life style are increasing the number of heart patients. 13.48 percent of the participants were suffering with this problem. 94.36 percent of participants who gave their feedback said that yog and pranayam has given partial or total benefit. Yog has played a major role in improving the health of heart patients.

Asthma:
Pollution, unhealthy working conditions, lack of cleanliness results in asthma. 11.53% of the participants were suffering with this problem. 95.77 percent participants who gave their feedback said that yoga and Pranayama has given partial or total benefit.

Spondylitis:
Sitting in the same position for long hours, sedentary life style, lack of exercise is some of the problems that result in spondylitis. 15.48 percent of the participants were suffering with this problem. 94.91 percent of the participants who gave their feedback said that pranayam has given partial or total benefit. Around 5.09 percent said that there has been no improvement even after practising pranayam. This shows that pranayam improves not only digestion and nervous related problems but also cures bone related diseases.

Skin diseases:-
Pollution cosmetics and lack of cleanliness result in skin diseases. 13.25 percent of the participants were suffering with this problem. 91.17% of participants who gave their feedback said that yog and pranayam has given partial or total benefit. This shows that yog has played a major role in improving skin problems.

Liver and Stomach diseases:-
Consumption of adulterated food, fast food culture, unhygienic life style results in liver and stomach related diseases. 30.80 percent
of the participants were suffering with this problem. 93.67% of the participants who gave their feedback confirmed that pranayam has given partial or total benefit. Yog has played a major role in curing the liver and stomach related diseases and people experience it immediately after beginning the practice.

**Change in Mental Condition with yog and pranayam:-**

(A) **Mental Stress:** The results of the survey revealed that yog and pranayam reduced stress level in 48.07 percent people. Yog and pranayam have proved to be a blessing for the people suffering with mental stress even in the present modern world.

(B) **Memory:** - Yog and Pranayama improve concentration power. As a result the memory power increases. Survey proves that memory power increased in 47.30 percent of the people.

**Change in Family life:-**

Yog and Pranayam inspire us to see good qualities in every human being. It develops mutual love and affection in married life.

(A) **Mutual love:** - 59.54 percent of the participants agreed that yog has changed their family life and increased love in the family.

(B) **Happiness:** Yog and Pranayama help us attain self-realization; it frees us from unknown fear and suffocation. It teaches us the art of living in the present. We feel happier and satisfied, 67.51% percent of the participants said that yog and pranayama increased the level of happiness.

(C) **Respect towards elders:** 61.98 percent of the participants agreed that yog and pranayama increased the level of respect towards elders.

**Change in Social Life:-**

Yog and Pranayama make us sensitive towards social life and increasing awareness. Regular practice helps us in fulfilling the social
responsibilities to a great extent. Along with it we become sensitive towards the welfare of other living creatures. Following changes were seen in social inclinations in the survey:

(A) **Interest in social work:** The result showed that yog increased the interest towards social work among 59.76% participants.

(B) **Feeling of charity for poor and destitute:** The survey showed that 66.29 percent participants showed increase in the feeling of charity and public welfare.

**Changes in addictions and vices:**

Yog and pranayam improve the good qualities within us. The eternal wisdom helps is quitting different kinds of addictions and vices. The survey analyzed the effect of yog and pranayam on different vices.

(A) **Vegetarian/Non Vegetarian:** It is a scientific fact that human being’s anatomy is suitable for vegetarian food. The person consumes non-vegetarian food for the sake of taste. Survey showed that 27.48 percent of participants were non-vegetarians and out of them 72.60 percent quit non-vegetarian food.

(B) **Alcohol:** The survey showed miraculous results in people with alcohol addiction. It showed that 85.22 percent of people quit alcohol after practising Yoga /Pranayama. Regular practice of Pranayama has changed the social economic life of the people after they quit alcohol.

Thus the research observations point out that Yoga and Pranayama could be a valuable tool in establishing and maintaining physical, mental & spiritual health and well being of the individuals.