CHAPTER II

REVIEW OF RELATED LITERATURE

Yoga is an ancient traditional science and it has deep root in Indian culture and traditional education. In recent days, yoga has been accepted as an applied science in maintaining good health, fitness and peaceful life. Such an acceptance of yoga among the people of world wide nations is based on the findings of scientific researches. Many of the recent research findings, which our scientists found true today, are already claimed in many of the Indian Traditional texts. Kaivalyadhama Yoga Institution (Lonavla, India) is the first in the world, which brought traditional yoga in to a scientific laboratory under the guidance of Swami Kavalayananda (the founder Director of Kaivalyadhama) and has been scientifically studying since 1924 its favourable effects for human health, fitness, education, life and living. Today many scientists around the globe are conducting researches and some of the glimpses of research findings have been presented in this Chapter to justify this piece of research.

2.1 Review of Yoga Research on Health and Allied aspects

Although there are many reports available today in this direction, however, the researcher has discriminated the followings as supportive evidence:

Modern science now believes that the cause of health degeneration, decay and premature ageing lies in free radicals in the body. In fact, the products of free radicals are highly reactive called reactive oxygen species (ROS) viz., Superoxide anion radical (O$_2^-$), hydroperoxyl radical (HOO$^.$) etc. In this experiment Superoxide anion radical (O$_2^-$), Glycosylated Haemoglobin and blood glucose levels of 40 clinically confirmed diabetics were assessed (Bera, Mahapure & Shete, 2006)$^1$ and they were then divided into two equal matched groups viz., experimental and control. The experimental subjects underwent a specially designed yoga programme along with regular anti-diabetic medicines, whereas the control group was taking anti-diabetic medicines only. Result of 2 x 2 x 3 Factorial ANOVA followed by Scheffe’s post hoc test revealed that Yoga training for the period of six weeks

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significantly accelerates Super Oxide dismutase, reduced Glycosylated Haemoglobin and Blood glucose levels as compared to the controls. The findings suggest that Yoga helps to enhance antioxidant defense mechanism of the body along with controlling degenerative changes in diabetics.

Dalal (2002) reveals emotion is a motive power, which helps in evolution. In yogic terminology, emotion is a Rajas guna of Prakriti, which exists in everyone. Excitement or upsurge of emotion is responsible for many types of disease. Psychophysiological, emotions act upon our body through hypothalamus, which controls ANS and the endocrine systems. Negative emotions like anger, fear, greed, jealousy give rise to somatic illness where on the other hand positive emotions like love, compassion, friendship, affection etc. give the strength to combat the stress. Illness due to negative emotions includes hyper acidity, hypertension, insomnia, menstrual disturbances, loss of appetite etc. Daily yoga sadhana of eight-fold path with a proper balanced diet helps one to act against stressful threshold situations by increasing the threshold of tolerance. The beauty of yoga therapy is that it treats the individual as a whole. An observation was made on 287 sadhakas (male=133 and female=154). Their financial condition, family background and environment were noted. Different symptoms of the subjects were tabulated and studied for every 2 months with the help of physical check-up and psychological testing with different questionnaires related to anxiety, depression, positive and negative outlook towards life. All the findings were again tabulated in details. The variables stated above were tested before and after the programmes viz., Pratipakshabhavana, Anityabhavana and Sakshibhavana respectively. These practices were done daily for a period of 2 months. The favourable results suggest that Yoga leads to Samadhi, kaivalya, eternal bliss, which aim to maintain physical fitness, mental stability, emotional quietness and spiritual elevation.

Oak et al., (2006) evaluated a 30-day yoga programme, followed by monthly follow-ups for the subsequent six months on obese Indian. Residential Yoga Group (RYG) showing a consistently, though statistically not- significant, decreasing trend in all the four factors of anxiety, enunciated in IPAT’s A.S.Q Test. Non-residential Yoga Group (NRYG), Aerobic Group (AG) and Control Group (CG) have shown consistently high scores denoting the trait of apprehension. All the four groups have shown a normal-range score in factor C (emotional instability), L (suspiciousness) and Q3 (low self control) hinting at absence of neurotic tendencies in Indian obese. The study is indicative of an ample scope for long term interventions of yoga in rehabilitation programmes for the obese, in general & for the Indian obese, in particular.

To test the hypothesis "yogasanas which help in the treatment of diabetes act by releasing insulin from the pancreas," Manjunatha, Vempati, Ghosh and Bijlani (2002) conducted a study on 10 healthy young volunteers (9 male, 1 female; age 19-30 years, mean ± SD, 24.3 ± 4.2 years). Each volunteer performed four sets of asanas in random order for 5 consecutive days each. The four sets of asanas were: (I) dhanurasana + matsyendrasana, (II) halasana + vajrasana, (III) naukasana + bhujangasana, and (IV) setubandhasana + pavanmuktasana. Of these, only the first three sets of asanas have been reported to be specifically effective in reducing fasting and postprandial glucose in previous studies. The volunteer performed a set of asanas from Monday through Friday. After a two-day gap (Saturday and Sunday), s/he started with the next set of asanas. Blood samples were collected on day 4 and 5 (Thursday and Friday) of each set of asanas for measurement of glucose and insulin levels before the asanas, within 10 min after performing the asanas, and 30 min after ingestion of 75 g glucose, which in turn was ingested immediately after the second blood sample. There was a consistent fall in glucose values after the asanas in all the four sets. The fall was significant only in case of set II (p = 0.03) and approached statistical significance in case of set I. The fall is likely to be due to utilisation of glucose during the half hour spent doing asanas. There was no significant difference in the 30-minute postprandial levels between the four sets of asanas. The insulin levels immediately after the asanas were lower than those before the asanas. The difference was statistically significant in all sets except set III, in which case also it was close to the significance level (p = 0.09). The lower glucose levels after the asanas may be responsible for the lower insulin levels. Improvement in insulin sensitivity as a result of physical activity also has contributed to the lower insulin levels after the asanas. The results suggest that, in the fasting state, there is no release of insulin by any of the asanas studied.

**Pranic** Healing is one of the energy-based therapies gaining popularity. Jaisri et al., (2002) compared the effect of **Pranic** Healing on a group of elderly healthy individuals was compared with a group of hypertensive patients already on treatment. The blood pressure and pulse of both the groups were measured before the onset of therapy. **Pranic** Healing was done on alternate days and the blood pressure and pulse were measured at the end. A significant decrease (p<0.05) was found in the systolic blood pressure in both the groups. A significant decrease was seen in the diastolic blood pressure of the hypertensive patients while a trend towards decrease was observed in the elderly normal individuals. It can be concluded that **Pranic** Healing is very effective adjuvant to mainstream therapy in the management of Hypertension.

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To test the hypothesis that pranic Healing can improve the cardiac performance in-patients with IHD. Lung functions and Bioenergy field in all patients, Vrunda, Sundaram, Das, Jaisri and Kanaka (2002) have undertaken this study. First attempt studied the improvement in cardiac, lung functions and human Bio-energy field in Pre and post Healing in patients as documented by cardiovascular Cartography and aura photography. To document the efficacy of Pranic Healing for various specific disorders using cardiovascular Cartography, Heartmath, Lung function tests and Aura photography. Diagnosed patients were studied for the impact of Pranic healing, administered by trained healers in addition to their conventional treatment. Clinical symptoms, ECG, echocardiogram, cardiovascular cartography, PFT and aura photography were documented before and at the end of the course of healing and were compared. We found that Pranic Healing significantly improves cardiac and lung functions in addition to the clinical features. From these, studies we conclude that Pranic Healing has a favourable influence on clinical status, quality of life, cardiovascular and lungs functioning and human bio-energy field.

Kulkarni, Gore, Bhogal, Oak and Bera (2002) derived lipid profile and cardiovascular risk ratio on the subjects of both sexes (Age range 15 to 70 years) followed by the intervention of yoga training to residential (male: 9, female: 28), nonresidential (M=9,FM=19), groups as well as aerobic exercise group (male: 37, female: 44). The intervention of an hour a day, total of 30 days with six months follow-up. The overall trend of results in both groups of yoga showed nonsignificant change in lipid profile. However non-residential group was better in magnitude of change. In aerobic group, lipid profile fluctuation with occasional significant change in both the directions was noticed, particularly in HDL and other lipoproteins. The cardiovascular risk ratio in males of both yoga groups remained moderate in pre, post, I and III follow-up tests. The aerobic group showed normal risk ratio in pre and in all follow-up tests. However a high-risk ratio was seen in posttest. The female residential group had a moderate risk in pre, post, I and II follow-up tests, and remained normal throughout all the follow-up tests. The nonresidential group had moderate risk ratio in pre test and remained normal in post and in all follow-up tests. The reverse was seen in aerobic group, having normal risk ratio in pre and follow-up tests and a high-risk ratio in the posttest. The study concludes that the cumulative effect of yoga practice along with physical activity is more effective in lowering the lipid profile as compared to residential yoga and aerobic exercise groups, apart from the role of diet control towards balanced energy expenditure. This implies that underlying biochemical mechanism of yoga practice is instrumental in lipid profile reduction as against usual fat burning mechanism in exercise mode of intervention.


Hassanagas et al., (2002)\(^8\) aim to evaluate the influence of yoga techniques at the overall respiratory function and to present it as a way of primary prevention of asthma and other lung diseases. The first phase of this research has been based on the data derived from the answers of 341 yoga practitioners who filled our questionnaire before they started and after they completed the course. The questionnaire referred to various aspects of respiratory diseases (frequent colds, breathing difficulties, coughs, bronchitis and other respiratory diseases) and the practitioners had an opportunity to report the subjective improvements they noticed. The subjective improvements described in the first phase of the research necessitated objective spirometric measurements before and after the completion of the courses for basic breathing re-education. This phase was based upon a healthy population of 20 practitioners who took part in a specialised yoga programme for respiratory re-education, prepared by the yoga teacher Pavlos K. Hassanagas in cooperation with yoga instructors, doctors and psychologists. This programme concentrates on an integral re-education of all elements connected with breathing. The course went on for a period of three months. The classes lasted between 60 and 75 minutes and were held twice a week under a professional guidance of a yoga instructor. The practitioners were asked to repeat the same programme daily. The course content comprises of preparatory psychophysical exercises, asanas, pranayamas, bandhas, kriyas, and relaxation. The positive results of this research emphasize the significance and the importance of breathing as a physiological process. The process of prevention is mostly justified if it is applied to a healthy population, and the application of the yoga techniques enables a complete primary prevention. Our experience from working on an individual case of a patient suffering from asthma (1) and another patient with lung fibrosis (2) show that there were significant subjective improvements in both cases. Respiratory re-education does not have a positive effect only on the respiratory diseases, but also on the treatment and prevention of other diseases, such as cardio-vascular, digestive, endocrinal and various psychosomatic conditions. Respiratory re-education proved useful in the regular treatment of these diseases.

Majmundar (2002)\(^9\) explored the value of yoga in promoting postural control in elderly persons. Fall is a major risk factor in aging population. Nearly forty percent of elderly over the age of sixty-five experiences fall, creating serious public health problems. Loss of balance is caused by many disease processes and by physiological changes that occur in ageing. Loss of postural control results in an increased risk of falling. Balance training of elderly is frequently utilised in an attempt to improve day- to- day function and reduce the risk of falling.


Yoga, a traditional Indian practice, consists of postural patterns (Asanas) and voluntary controlled breathing. The yogic postural patterns are initiated, maintained and released in steady and smooth manner against gravity. Voluntarily and controlled breathing promotes rhythmic co-ordination of subtle psycho-physiological processes. I will demonstrate through Accelerometry—a computerized balance testing instrument—recommended Asanas to improve and control balance in the elderly through multi-media presentation. An accelerometer is a small portable, lightweight computer one wears that gathers balance information from the accelerations of a person’s head and trunk. Accelerometry, a balance assessment system developed by Rehabilitation Research and Development center, Department of Veterans affairs Medical Center, Palo Alto was used to assess objective balance testing. The presentation will also explain how these Asanas improves the stability and equilibrium in elderly persons.

Insomnia is a prevalent psychosomatic disorder for which hypnotic medications are commonly prescribed. Accordingly, many patients become dependent upon medications in order to maintain sleep quality. Preliminary results in our laboratory (Khalsa, 2002) have suggested that a regular daily yoga practice can generate improvements in insomnia. In a prospective case study we have evaluated whether yoga would be effective for resolving hypnotic-dependent sleep disorder. We studied a 36-year-old woman who began daily treatment of sleep maintenance insomnia with 50 mg of trazodone about 8 months prior. The subject reported no difficulties maintaining sleep, although prior attempts at medication withdrawal lead to resumption of multiple mid-sleep and terminal awakenings. After a 2-week baseline, the subject began a daily practice of a 30-minute set of Kundalini Yoga exercises (as taught by Yogi Bhajan) consisting of static asanas, pranayama and meditation, which are specifically targeted for sleep. Withdrawal from trazodone began during weeks 5 and 6 of the 8-week treatment phase and the subject was medication-free for the last 2 weeks. At end-treatment, only minimal decrements in sleep characteristics from daily sleep diaries and in scores on 3 insomnia questionnaires were observed. These results suggest that yoga treatment may be effective for hypnotic-dependent sleep disorder.

This Research (Harbans, 2002) was carried out to study the comparison of Yoga Practice and Pharmacological therapy in treatment of Depression & Anxiety. To study the effect of Yoga on a patient suffering from Depressive disorder with Anxiety was the objective. The chief complaints of this patient were decreased self-confidence, hesitation in verbal communication, tension, sadness of mood, decreased interest in routine work from five years, which were increasing gradually. Sereraline 50 mg. for 6 months and Alprazolam 1 mg. for 1

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month was given to patient. Patient recovered fully and left the treatment. After some time the same symptoms reappeared. Patient requested some alternative method to the pharmacological therapy. As an alternative, patient was suggested to carry out Yogasan and Dhyan. Patient performed Yogasan and Dhyan for three months. The patient was found to be as much improved as after the Yogasan and Dhyan. The result of this study indicates that (1) Yoga Practice and Dhyan were as effective as Pharmacological therapy in treating Depression and Anxiety. (2) It was seen that Yoga Practice and Dhyan has the long-lasting effects if it is performed regularly. (3) The patient was saved from the side effects of the drugs.

The work of Hassanagas et al., (2002)\textsuperscript{12} contains results from the application of specialized courses of yoga therapy for the patients with myocardial infarction in the Institute for Cardiovascular Diseases in Ohrid. Application of yoga therapy as a part of integral rehabilitation started in May 1992 and is still going on. 1215 patients attended these courses. 448 of them have successfully finished these courses, and their results are elaborated in this study. The program of the courses contents: Vyayama - preparatory techniques for relieving tension in muscles and joints, Asanas, Pranayama, Kriyas and Relaxation. Lectures and conversations about the way of living, relaxation, stress, diet, walking, etc. are held regularly. Our results show the greatest influence of yoga on eliminating and alleviating of chronic psycho stresses, increasing of self-confidence and self-discipline which improve eliminating of other risk factors, gaining better relaxation and sleeping, decreasing the fear from the illness, improving physical condition and elasticity, decreasing of pain in joints and muscles. These changes and results have great influence to undertake the responsibility for improving of their own health and the quality of living, which provides favourable effects for a longer period in the sense of rehabilitation and secondary prevention of the coronary arterial disease.

Damle (2002)\textsuperscript{13} used yoga for the management of chronic respiratory diseases. It is assumed that the fourth step of astanga yoga namely Pranayama is related to respiratory system. The life "Pran" is indicated by breath in living beings. The technique of controlled breathing is called Pranayama. The yogic techniques known to have effect on respiratory system can be utilized in the therapy of respiratory disorders. As a general rule acute respiratory diseases causing distress make it impossible for the patient to perform any yogic procedures. It is in the management of chronic respiratory diseases that yoga therapy has a great role supporting the medical treatment. Aetiopathology of chronic respiratory diseases like bronchial asthma, bronchiectasis, C.O.P.D.; is discussed in short. The procedures utilized in chest physiotherapy and yoga therapy are as follows: **Chest physiotherapy:** Exercise (2) Postural drainage (3) Autogenic drainage (4) Chest thumping (5) FET (6) Breathing control.


Yoga therapy: Yogic techniques involved in the following parts of yoga are useful: (1) Asana (2) Pranayama (3) Shuddhikriyas (4) Mudra (5) Bandha (6) Dhyan (7) Omkar japa. The yogic techniques and the role played by them in the management of respiratory diseases are discussed in details.

Declined health and fitness status of school children has become a challenging problem of research. Many recent investigations indicate increasing trend of severity in health problems that affect overall work capacity of school children. Govindarajulu, Murugesan and Bera (2002)\textsuperscript{14} studied the status of work capacity of elite school players (n=75), age ranged 13-17 years, from some of the schools of Pondicherry (India), was evaluated. Work capacity of 13 years, 15 years and 17 years boys has been compared. Result of ANOVA and follow-up statistics revealed that work capacity varies as age increases. Regular participation in different exercise-regimes although helped to improve work capacity, however, the players habitually participating in yogic exercises along with exercise-regimes could show higher work capacity. The study suggests benefit in inclusion of yoga in the exercise regimes for exhibiting better performance in school sports.

Bera et al., (2003)\textsuperscript{15} studied 153 obese patients, who were randomly divided into three equal groups. Group-I received Residential Yoga Training (subjects stayed in a hostel), Group-II undergone Non-Residential Yoga Training (subjects stayed in home), and Group-III acted as control (subjects stayed in home with normal day-to-day life). Duration of the experiment was 7 months (i.e., 1-month yoga training and 6 months Follow-Up). Health Related Fitness Factors (cardiovascular endurance, muscular strength, flexibility and body fat \%) and selected morphological variables were measured at pre-test, post-test (after 1 month yoga training), and on completion of every one month for 6 follow-up months. Results on 2 x 3 x 8 Factorial ANOVA followed by Scheffe’s post hoc test revealed that residential-yoga programme is more useful as a significant system of alternative medicine in treating obesity.

Pargaonkar and Bera (2002)\textsuperscript{16} hypothesized that Yoga practices may have positive effects in improving the factors of health related fitness of schoolgirls. A sample of 40 female subjects, age group of 18 to 20 years, was selected from Ramabai Vavarange Adhyapika Vidyalaya, Gamdevi, by considering Fisher’s Random table technique. All subjects were equally divided into two groups, consisting of 20 students each, assigned into experimental and control groups. While the experimental group was practising selected yogic exercises, the control group followed their own regular practice. A set of 12 asanas were practised by the

\textsuperscript{16} G.V. Pargaonkar and T.K. Bera, “Effect of selected yogic practices on health related physical fitness of the girls aged 18 to 20 years.” Paper presented in the International Conference on “Yoga Research and Value Education” held at Kaivalyadhama, Lonavla (India), Dec. 28-31, 2002.
subjects of the experimental group 45 minutes daily for 5 days per week i.e., Monday to Friday, where Saturday and Sundays were observed as holidays. The duration of experiment was for a total period of 6 weeks. The result of 2 x 5 Factorial ANOVA followed by Duncan’s Multiple Range Post Hoc test revealed that: 1) Experimental group showed significant superiority over the control group in 1.5 Mile Run test (LSR =0.08, p<0.05), Sit Up test (LSR =3.90, p<0.01), Sit and Reach Test (LSR =0.36, p<0.05), whereas significant reduction in Triceps skinfold (LSR =0.77, p<0.05) and Subscapular skinfolds (LSR = 0.70, p<0.05). These results inferred that experimental group could exhibit significant gain than the controlled one in Cardiorespiratory endurance, strength and endurance of abdominal muscles, and flexibility, whereas, significant reduction in body fat percentage was seen among the subjects of the experimental group than the controls. It is, therefore, concluded that selected Yogic exercise training was effective in improving overall level of Health-Related Physical Fitness in the Girls.

Ganguly, Bera and Gharote (2003) examined the effects of three-year Yogic exercise programme on health related physical fitness and academic achievements of schoolboys, ages 10-13. Physical fitness variables tested were cardiovascular function, body fat percentage, abdominal muscle strength/endurance and flexibility, whereas the variables of academic achievement were the marks secured in theoretical subjects as per the school examination. The subjects participated in the selected Yogic exercise programme 3 days per week for 45 min. per day for consecutively three years. Results indicate that performance on all variables of physical fitness and academic achievement was improved significantly. A comparison of Yogic exercise subjects with a comparable control group revealed significant interaction between treatment and time on all variables. During three year period of experiment, pretest to posttest scores of the yogic exercise subjects tend to improve progressively with faster rate over the scores of control subjects. The results of Pearson correlation indicate that body fat % is inversely related to all the variables of academic achievement, whereas other attributes of physical fitness indicates a low but positive relationship with academic achievement.

Mishra and Bera (2002) reviewed the concept of health related fitness and proposed yoga for the people of old age. The review estimated that recently there are about more than 50 million people in India above 60 years of age and 4-5 million suffer from dementia. The care of the old has become a challenging and complex task, particularly in a country like India. Ageing is a natural process. Although old age is inevitable, it could be made bearable and pleasurable. Ageing changes are of physical, psycho-physiological and biochemical nature. In ageing all aerobic organisms are exposed to oxidative stress and gradually the functioning abilities of almost all organs are reduced. This in fact leads to reduce one’s immunity power.

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and as a result overall health related fitness declines. Although declined state of ageing related health and fitness is considered as natural process, and since body does not permit for vigorous activities, one can think of yoga - a healthy lifestyle. The claims of traditional Yoga texts and supportive research evidences indicate that Yoga is a powerful way of life not only to improve one's health related fitness but also show path to live healthy in delaying old age.

2.2 Review of Yoga Research on Value Education

Experimental research on value education in relation to yoga is meager. Therefore, literatures related to philosophico-literary concepts available so far, which favours the contribution of Yoga towards enriching one's value education, have been reviewed and summarized below.

Vinod (2002)\textsuperscript{19} stated that there is a gap between what we expect and what we actually get. This gap widens day by day and inner dissatisfaction grows along with it. A dissatisfied and unhappy person likes to bring out his anger, frustration and bitterness. While doing so, he may get into crimes, atrocities, coercion, sexual assaults, frauds, corruption, accidents etc. When this type of people grows in number, such incidents occur more frequently. That is precisely what is happening in modern times. Daily newspapers are flooded with such stories. In modern times, there is abundant material prosperity on one hand and extreme poverty on the other. Understandably, there is a growing dissatisfaction among the poor and underprivileged that they cannot afford such prosperity. Interestingly, those who have every thing in plenty also suffer from dissatisfaction. This is called real spiritual impoverishment. Spiritually poor cannot differentiate between the means and an end. They run after material wealth at the cost of spiritual awakening. Such material wealth is extremely harmful to the person and the society in which he lives. Material wealth without spiritual wealth is the real cause of all human suffering. The Ancient Science and Art of Yoga is the real, time tested, comprehensive, long-term solution to all human problems. The greatest advantage of Yoga lies in the fact that it addresses human problems at individual and collective levels. It helps create harmony within the person and the society in which he lives. It integrates body, mind, intellect, emotions and spirit. Integration brings harmony and harmony brings happiness. Happiness brings peace. A happy and peaceful person knows the real meaning of spiritual wealth. He is naturally moral.

Isave (2002)\textsuperscript{20} identified the main aim of value education is to shape the character of younger generation, who can prove themselves as the best citizen of the nation. Nowadays so


many technological revolutions occur so that rapid changes are seen in society. Direction of social change has both positive as well as negative sides. Technology is helpful for human being and every member of society or every citizen of nation is enjoying the technological appliances and using them. For positive side of social change every member of society should know the proper use of technology. If not, then inculcate those values in the minds of people who shape the character of people and make them high moral and highly spiritual individual.

Gawande and Vidhale (2002)\(^{21}\) reviewed literature and revealed that philosophers and educationists over the ages have identified goodness, truth and beauty as an ultimate value, which do not change fundamentally from generation to generation, society to society and culture to culture. The humane values viz., honesty, tolerance, justice, self-control, compassion, freedom etc enable man for self-control than other animal, so that he cultivates certain ideals, which are available in plenty in our rich cultural heritage. In Indian modern education, number of commissions and committees recommended character formation, religious education, and moral education. However, recent recommendation emphasizes on value based education that covers various factors of environment and nation with reference to international understanding. When human values are inculcated through curriculum to transcend cognitive, conative and psychomotor level for conducive development of individual, social, national and international understanding, it is called value education. This paper explicitly classified the human values according to socio-cultural status, individualistic values and component of value education. Further, they have been logically correlated with Yoga-based value education. The authors conclude that there should be coordination between *Dhyana-yoga* and *Karma-yoga* that lead to wisdom and proper spiritual development makes individuals to understand real pleasure.

Literature reviewed by Waghchoure and Bera (2002)\(^{22}\) indicates that values of "*Karma*" and "*Sanskara*" are carried from one life to another considering "re-birth" cycle, the values regarding ones health and fitness as achieved through systematic physical activities in physical education can readily be experienced in this life. In physical education through movements like running, throwing and jumping alongwith team mates with play equipment like ball, stick, bat or racket, within the boundary of playground, the students achieve important values viz., a sense of disciplined behaviour, obedience of rules, cooperation to team mates, competition within healthy limits, quick decision, respecting decisions of officials, fair play and sportsman spirit, tolerance, sacrifice, faith in coach, which have tremendous impact for peaceful life. These values carry much significance in the later life in the society. However, today it is alleged that the spirit of unhealthy sports competition enters in the physical education.

education. Those professionals of physical education are recognised whose students are bringing more medals by any means. Physical education has become sports-focused competitive activity. In present situation, the real aim of physical education has been diverted from health and fitness of common mass. On the other hand, yoga leads to inculcate the human values viz., aesthetic, religious, social, moral and professional that are the need of the day and inclusion of yoga in physical education may enrich the profession and perhaps help to reinstate the real values of physical education.

Value Education is a comprehensive process as reviewed by Bodhe (2003). Swami Kuvalayananda’s contribution in this direction, towards the materialization and implementation of value education through Yoga has been evinced through his oft-quoted precept viz. Yoga has a complete message for human body, mind and soul. While addressing the issue of Value Education through Yoga, Swamiji has taken into consideration various aspects of Value Education - what does value education of an individual involve, the scope of value education through Yoga, what values should education seek to foster, how and to what extent Yoga can help in materializing the value education programme etc. Swamiji’s contribution in this field is not only theoretical but concrete and practical. He states that Yoga is to be viewed as an attempt in value realization, development and education. He says: “The economic, political and communal conflicts that are today tearing the world to pieces, are mainly due to the fact that unessential parts of culture have become essential and the essential parts unessential. The object of Yoga is to train individuals well grounded in a cultural synthesis, so that in their after-life, they may strive to carry out the ideal of Yoga (Yoga Mimamsa, Vol.VI, No.1, p.88).

In-depth studies by Singh (2002) regarding the views of Patanjali, Gita, Swami Vivekananda, Swami Shivananda revealed that yoga has to be distinguished from physiotherapy as if includes spiritualistic, moralistic and theistic elements along with value oriented education. Literature also indicates that education as such stands not only for physical or intellectual development, but also moral and spiritual upliftment. Inclusion of yoga would naturally facilitate the spiritual dimension of education, which is very much needed in the present age, as it is seen that the modern youth appears to be unconcerned with moral and spiritual value approach to life. If students are encouraged to practice yoga then they are bound to develop not only intellectually, by method of concentration but they are also bound to imbibe moral quality like self control and such other allied virtues. In this content it has been seen that the hundred students on whom the study was conducted were variably controlled. Two groups were formed. The first group was not taught yoga whereas the group of students (2nd group), who were partially or fully practicing yoga like pranayama etc. showed better intellectual caliber as well as better character and respect for value.

According to Gharote (2002), value means a belief about what is desirable or undesirable. Values reflect the culture of society. Education is the manifestation of perfection already in man, says Swami Vivekananda. Perfection in man is the state of harmony and balance between his attitudes, action, behaviour, character and thinking patterns. The genesis of value education lies in exploring and examining each value concept in terms of Satyam, Shivam and Sundaram. Modern educational system seems to fail in the integrated development of the body, mind and spirit. The emphasis is on imparting information and the cultivation of values is neglected. Highest emphasis in our educational system must be laid on cultivation of values appropriate to the modern society. In the New Education Policy (1986) it has been emphasized how the transformation of values based on our traditions is absolutely necessary. Yoga encompasses all the perspectives of value education. Patanjali has presented an excellent scheme for value education through his two-pronged approach, one from psychological side and other from the physiological side by suggesting the practice of Yamas, Niyamas, Asanas and Pranayama. Emotional imbalance is controlled by tackling the autonomic nervous system through Hathayogic practices like Kriyas, Asanas, Pranayamas, Mudras and Bandhas. It is high time to introduce Yoga in the educational system for implementing value education to young student generation.

Five principles of Panchashila – Ahimsa, Alobha, Brahmacharya, Satyavachana, Sura-pan nishedha. “These five principles,” says Dr. S. Radhakrishnan, “are intended to develop in us wisdom, humility and selflessness.” Bhatt, Gandhi and Acharya (2002) interpret these principles with intellectual touch. Obviously acquiring one value adds another value. Conversely, if one value is abandoned another may also be lost. Hence the need for building up a strong chain of values in Teacher as they are the models to the Student and to the Society. Writers found that most of the teachers either do not attend the moral instruction period or prefer to teach the subject they handle. The values can be effectively imparted through lectures, textbooks, epics and several co-curricular and extra-curricular activities and the young mind does catch them. But when they find elders, teachers and leaders in the society going the other way, they suffer from moral conflicts. This attitude among teachers and elders must change.

Mukerji (2002) tried to synthesize the terms yoga with value education. She explained, Value-education is a term, which belongs to Sociology, and Yoga is essentially related to Spiritualism and Philosophy. How can they meet into one point is a question. The

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concept of value refers to different aspects of the society viz., interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, needs, aversions and attractions. To judge the standard and pattern whether it is acceptable or not; is valuation. Learning to evaluate certain behaviour or custom or relation, which would be correct or right, may be called Value Education. In mathematics, Yoga means addition. So by practicing yoga we increase something. What we increase is strength both physical and mental. There are five kinds of Yoga - Jnana Yoga, Bhakti Yoga, Karma Yoga, Raja Yoga and Hatha Yoga. In Sanskrit we say Yogaschittavrittinirodhah – it is also defined as Yogah Karmasu Kausalam. Value is related to utility. What is utility? Galiani in 1750 defined utility as “the capacity of a thing to procure us facility.” The word yoga occurs in Rg Veda in various senses, such as yoking, harnessing, achieving the unachieved, connection and the like. Gradually ideas of asceticism and self control grew. In Paninis time the word yoga had attained its technical meaning and he distinguished this root “Yog Samadhau” (Yog in the sense of concentration) from Yugir Yoga (root yujir) in the sense of connecting. Yug in the first sense is seldom used as a verb. It is more or less an imaginary root for the etymological derivation of yoga. Karma yoga increases alertness, concentration. Bhakti yoga means true love for God. True Bhakti yoga expands our heart. We try to see a mother in all women. And women learn to see son in every man. Our heart aches for the distressed that leads us to selfless service. In this way by practising Karma yoga and Bhakti yoga we can utilize our value education. Above all we know concentration is the source of knowledge, Karma yoga and Bhakti yoga increase our concentration, intelligence and humanity. Jesus Christ is the incarnation of Bhakti. Socrates is the incarnation of knowledge (Jnana). So value education and yoga are interrelated.

Udhaykumar (2002)28 reviewed the concept of yoga, spirituality and values tried to interlink them for better education. Spirituality is not a practice, is not a belief; it has nothing to do with torturing oneself in the name of austerities; it is not a philosophy, has nothing to do with organized religions; it has nothing to do with social morality and ethics; it is not suppression of desires and drives; it has nothing to do with sexual repression; it is not self-hypnotism, nor is it magic; it is neither a gift for the elite nor something that can be got through bargaining; it has nothing to do with ‘self-improvement’; it is not an accumulation of merits; it is not trying to be selfless, which is another form of selfishness; it is not concepts, not ideas; it has nothing to do with change of clothes and costumes and nothing to do with organizations, be it religious, secular or otherwise. Spirituality is an aspiration, an urgency to discover, to know, to realize oneself, one’s true nature. Everything that takes one’s whole being towards this aspiration, this longing to know the truth about oneself is Yoga. Yoga is the key that will open our minds and hearts totally to our own Being, which is the Being of all and everything. Yoga is the awakener. Values are the by-products of this awakening. Values are the efflorescence of the great longing, the yearning to realize, know oneself, as one is, in reality.

Values are the natural, spontaneous outcome of this aspiration to realize oneself. Spirituality is the source, Yoga is the way and Values are the flowers.

Pendse, Malik, Nautiyal and Chauhan (2002) are of opinion that Yoga, along with pranayama, meditation, satvik intellectual teaching, and experiential learning apart from the academic inputs is the approach followed to achieve this goal of value education. The approach here makes sure that the throbbing divinity inside of each one of us gets heard. Only silencing the din of the noises outside through meditation can do this. Yoga gives the students self-discipline, mental focus and integrity. Our studies indicate that yoga practices have brought about a positive change among students.

Bhogal, Oak and Bera (2002) studied the effect of 9 months yoga training programme, on measures of Attitude towards Yoga, Neuroticism and Value system, was studied in 25 healthy student volunteers from G.S. College of Yoga (Kaivalyadhama), Lonavla. 14 students from local degree college acted as controls. The statistically significant changes in scores on Attitude scale (p<0.05) and Neuroticism inventory (p<0.01) indicate respectively, a favorable change in students' attitude towards yoga and a marked reduction in their neurotic tendencies. Responses on a Value test, taken in the beginning, middle and at the end, revealed an enhanced "social value", followed by "religious" and "aesthetic" values, in the order of degree of enhancement.

This chapter agreed that our modern medical science has only two-point programme – 1) to fight with infectious diseases viz., T.B., Malaria, Cholera, Small Pox, Diarrhoea, AIDS etc and 2) to restore good health in preventing health. WHO is worried about the drug resistance in Microbes since problems like viral fever, pneumonia, gonorrhrea, AIDS and other infectious diseases are coming back despite so much use of antibiotics and they are becoming more fatal than before. Similarly, world wide danger of Influenza, Hepatitis-B and Hepatitis-C etc. are jeopardizing the healthy atmosphere. AIDS has become a terror of infectious health hazards. HIV flourishes on toxic matter only. So instead of killing the HIV, it is better to remove the toxic matters or morbid materials from the body. Moreover, toxicity in mind also adds mental health problems, which are also to be eradicated.

Now the question arises – how these toxic matters or morbid materials are to be drained out from the body and mind. The literature as presented above suggests

“Yoga” as the suitable means not only to fight against microbes, but also to prevent them and to restore good health with peaceful living.

People around the globe, nowadays, accept yoga not only as a means to improve health and fitness but also to consider as a system of value education for the school students, who are the future of our human society. In fact, the role of yoga for enhancing value education is a new and challenging concept in global education. Therefore, synthesis of real implication of yoga in favour of value education from traditional texts is the need of the day.

The present investigator, therefore, undertaken this literary research to locate and investigate the real claims and utility of yoga as mentioned in original traditional texts for health, fitness and value education. This study will contribute as a resource material for many researchers to undertaken further experiments for implementing yoga in real sense for enhancing human health, fitness and value education.