CHAPTER- II

Review of Related Literature and Studies
CHAPTER- II

Review of Related Literature and Studies

2.1 Introduction

On the eve of departure in work, one should be aware of his strength and weakness. Strength in this sense that, what he possesses and weakness in the sense that he does not possess. This is also true in the field of knowledge especially on the field of research work, where there is no exception to this. The investigator should know his ability or strength in the field i.e. what has already been done and his weakness in the field i.e. what he has to do. That is why; investigator must go through different literatures such as, research journals, books, dissertations, thesis etc. and research works which are already done in his specific field of work.

To get a proper direction to a particular study one has to review his studies consciously and carefully- (1) which has already been in his field at work and (2) which has already been done conducted in that area.

Research takes the advantage of the knowledge which has accumulated in the past as a result of constant human endeavor. It can never be undertaken in isolation of the work that has already been done on the problems which are directly or indirectly related to a study proposed by a researcher. A careful review is one of the important steps in the planning of any research study. A review of the related literature must precede any well planned research study. So, the researcher should be very systematic in his work to avoid all sorts of irrelevant and inadequate result. One should have clean conception of his problem. So he has listed the following four fold functions of review of literature:-

i) To provide a conceptual frame of reference for the contemplated research;

ii) To provide an understanding of the status on research in problem area;

iii) To give clues to the research approach method instrumentation and data analysis;
iv) To give an estimate of the probability of success of contemplated research and the significance of usefulness of the findings and assuming the decision is made to be continued.

The review of the related literature works as a guideline to the quantum of work done in the field and capable of the investigator to perceive the gap and lacuna in his field of research. It helps the researcher to disclose the facts remained unexplored in the previous studies. To have a distinct and clear concept about the research problem and to gain unclear prospective of the overall field, it is worth while for an investigator to have a comprehensive survey of what had already been disclosed on the problem and its co-related matters.

The review of the related literature provides us with means of getting to the frontier in our specific field of knowledge. Until we have learned what other has done and what remains still to be done in his area. Thus the review of related literature forms foundation upon which all further superstructure will be built.

2.2 Survey of Related Literature

In the age of stress and strain we are always searching for how to keep our health and mind more sound and well. So in these circumstances various studies have been conducted in Yoga and Yoga therapy by numerous thinkers and investigators from time to time. But this is a new venture of our country as well as in the foreign countries. Now in the medical science ‘Yoga’ unfolds a new and prosperous horizon to the world citizen. As the problem is quite new, the related studies are much limited in number. The researcher does not get sufficient research studies directly related to the problem. However, the researcher presents his limited acquaintance with some of the related studies as a review here.

2.3 Review of Related Studies

The present ‘review’ is mainly based on the Internet, International and National Journals and some specific literatures. In this chapter Foreign and Indian studies were treated under separate headings.
2.3.1 National Studies

2.3.1.1 Bhole, M.V. (1983).
Gastric tone as influenced by mental states and meditation.

Yogic relaxation-Cum-meditation for 5 minutes is found to overcome the emotional disturbance like anger, frustration etc.

Body composition, cardiovascular endurance and anaerobic power of yogic practitioner.

The subjects of the above study were high school students. Forty male high school students, age 12-15 yrs, participated in a study on yoga in relation to body composition, cardiovascular endurance and anaerobic power. The Ss (Savasana) were assigned to a yoga group and control group. Body composition, cardiovascular endurance and anaerobic power were measured. The results revealed a significant improvement in ideal body weight, body density, cardiovascular endurance and anaerobic power following yoga.

Therapeutic potential of yoga practices in modifying cardiovascular risk profile in middle aged men and women.

This study was on hypertension. Twenty patients with mild to moderate essential hypertension underwent yogic practices daily for one hour for three months. Results showed decreased blood pressure blood glucose, cholesterol and triglycerides and improved subjective well-being and quality of life.

2.3.1.4 de Vicente, M.P. (1984).
Emotion and heart rhythm as influenced with Yoga.

Improvement in emotional control and overcoming of the imbalanced cardiac rhythm were observed in 15 subjects undergoing yogic training programme for 3 months with the help of 195 electrocardiograms.
A study of response pattern of non-insulin dependent diabetics to yoga therapy.
This study was on patients. Changes in blood glucose and glucose tolerance by oral
glucose tolerance test were investigated after 40 days of yoga in 149 non-insulin-
dependent diabetics. One hundred and four patients showed a fair to good response to
the yoga therapy. There was a significant reduction in hyperglycemia and a decrease in
oral hypoglycemic drugs required for maintenance of normoglycemia.

Effectiveness of yoga therapy in the treatment of migraine without aura: a randomized
controlled trial. In that study seventy-two patients with migraine without aura were
randomly assigned to yoga therapy or self-care group for 3 months. Primary outcomes
were headache frequency (headache diary), severity of migraine, and pain component
(McGill pain questionnaire). Secondary outcomes were anxiety and depression
(Hospital anxiety depression scale), medication score. After adjustment for baseline
values, the subjects' complaints related to headache intensity, frequency, pain rating
index, affective pain rating index, total pain rating index, anxiety and depression scores,
symptomatic medication use were significantly lower in the yoga group compared to
the self-care group.

2.3.1.7 Kocher, H.C. and Pratap, V. (1971).
A free association study before and after Yogic practices.

Decrease of emotional complexes and greater out let of complex indicators were
observed in 22 males and 5 females at the end of 3 weeks of yogic training prorame.

2.3.1.8 Kocher, H.C. and Pratap, V. (1972).
Anxiety level and Yogic practices- A preliminary communication.

A significant reducation in total anxiety score was observed in 43 males and 13
females at the end of 3 weeks of training programme in yogic physical culture.

2.3.1.9 Kocher, H.C. (1976).
Anxiety, general hostility and its direction as a result of yogic practices.
Significant reduction was seen in general hostility and total anxiety score in 40 subjects at the end of 3 weeks of training in yoga, but no significant improvement was noted in the sub-factors of hostility.

Effectiveness of Shavasana on depression among university students.

This study was on depression. The effectiveness of yoga was examined as a therapeutic technique to alleviate depression. 50 female university students were diagnosed with severe depression; 25 experienced 30 Yoga sessions and 25 served as controls. The results revealed that (1) Yoga was an effective technique for alleviating depression and (2) continuation of the treatment for a longer period resulted in a significantly increased positive change in the Ss(Shavasana).

Study of pulmonary and autonomic functions of asthma patients after yoga training.

This study was on bronchial asthma patients. Nine diagnosed bronchial asthma patients were given yoga training for seven days. The autonomic function tests to measure parasympathetic reactivity (Deep Breathing test, Valsalva Manouever), sympathetic reactivity (Hand Grip test, Cold Pressure test), and pulmonary function tests were recorded before and after yoga training. The resting heart rate after yoga training was significantly decreased. The sympathetic reactivity was reduced following yoga training. There was no change in parasympathetic reactivity. The results indicated the reduction in sympathetic reactivity and improvement in pulmonary ventilation by way of relaxation of voluntary inspiratory and expiratory muscles.

2.3.1.12 Manjunath,-N-K; Telles, Shirley (1999).
Improvement in visual perceptual sensitivity in children following yoga training.

This study was on visual perceptual sensitivity in children. 14 children who received 10 days of yoga training and 14 controls who did not receive yoga training were assessed on Day 1 and Day 10 for visual perceptual sensitivity through Critical Flicker Fusion Frequency (CFF) and degree of illusion. Following 10 days of yoga
training, the yoga group showed a significant increase in CFF and a decrease in degree of illusion; the control group showed no change.

2.3.1.13 Murugesan R., Govindarajulu, N., & Bera, TK. (2000).
Effect of selected yogic practices on the management of hypertension.

This study was on hypertension. Thirty three hypertensive, were assessed on systolic and diastolic blood pressure, pulse rate and body weight. The subjects were randomly assigned to three groups: a yoga group, a group who received medical treatment by the physician and a control group. Yoga was offered in the morning and in the evening for 1 hr/session for 11-weeks. Medical treatment comprised drug intake every day for the experimental period. The result of pre-post test revealed that both the treatment stimuli (i.e., yoga and drug) were effective in controlling the measures of hypertension.

Effect of yogic practices on subjective well being.

This study was on subjective feelings of well-being and quality of life. Forty eight healthy volunteers who participated in the practice of yoga over a period of 4 months were assessed on the Subjective Well Being Inventory the SWBI before and after the course in order to evaluate the effect of yoga on subjective feelings of well-being and quality of life. A significant improvement in 9 of the 11 factors of the SWBI was observed at the end of 4 months in these participants.

Retardation of coronary atherosclerosis with yoga lifestyle intervention.

This study was on atherosclerotic disease. Yoga effects were evaluated on retardation of coronary atherosclerotic disease. In this prospective, randomized, controlled trial, 42 men with angiographic ally proven coronary artery disease were randomized to control and yoga intervention groups and were followed for one year. The active group was treated with a user-friendly program consisting of yoga, control
of risk factors, diet control and moderate aerobic exercise. The control group was managed by conventional methods i.e. risk factor control and American Heart Association step I diet. At one year, the yoga group had fewer angina episodes per week, improved exercise capacity and decrease in body weight. Serum total cholesterol, LDL cholesterol and triglyceride levels also decreased as compared with the control group. Revascularization procedures (coronary angioplasty or bypass surgery) were less frequently required in the yoga group. Coronary angiography repeated at one year showed that significantly more lesions regressed (20% versus 2%) and less lesions progressed (5% versus 37%) in the yoga group.

Role of naturopathy and yoga treatment in the management of hypertension.

Conclusion of the above study is: Naturopathy and yoga therapy can be considered as a valuable nonpharmacological approach in treatment of hypertension.

2.3.1.17 Malhotra, V., et al. (2002).
Effect of Yoga asana on nerve conduction in type 2 diabetes.

This study was on diabetic patients. Twenty Type 2 diabetic subjects were studied to see the effect of 40 days of Yoga asana on nerve conduction velocity. The Yoga exercises were performed for 30-40 minutes every day for 40 days in the above sequence. Right hand and left hand median nerve conduction velocity increased. Control group nerve function parameters deteriorated over the period of study.

2.3.1.18 Malhotra, V., et al. (2002).
Study of yoga asana in assessment of pulmonary function in NIDDM patients.

This study was conducted with twenty four type 2 diabetic patients. These middle-aged subjects were type II diabetics on antihyperglycaemic and a dietary regimen. Training in yoga asana occurred 30-40 min/day for 40 days. There was a significant decrease in fasting blood glucose levels. The postprandial blood glucose levels also decreased. The FEV1, FVC, PEFR, MVV increased significantly.

Influence of Yoga and Ayurveda on self-rated sleep in a geriatric population.
Of the 120 residents from a home for the aged, 69 were stratified based on age and randomly allocated to three groups i.e., Yoga (physical postures, relaxation techniques, voluntarily regulated breathing and lectures on yoga philosophy), Ayurveda (a herbal preparation), and Wait-list control (no intervention). The Yoga group showed a significant decrease in the time taken to fall asleep, an increase in the total number of hours slept and in the feeling of being rested in the morning based on a rating scale after six months.

Modulation of cardiovascular response to exercise by yoga training. This study reports the effects of yoga training on cardiovascular response to exercise and the time course of recovery after the exercise. Cardiovascular response to exercise was determined by the Harvard step test using a platform of 45 cm height. The subjects were asked to step up and down the platform at a rate of 30/min for a total duration of 5 min or until fatigue, whichever was earlier. Heart rate (HR) and blood pressure response to exercise were measured in the supine position before exercise and at 1, 2, 3, 4, 5, 7 and 10 minutes after the exercise. Exercise produced a significant increase in HR, systolic pressure and a significant decrease in diastolic pressure. After two months of yoga training, exercise-induced changes in these parameters were significantly reduced.

Yoga therapy: Emotional instability- case report.

A systematic treatment-cum-follow up study of a emotionally unstable girl over a period of 2 years revealed tha training in selected simple asanas, breathing techniques for 3 months, free discussions, guidance and counseling and treating the patient as a ‘individual’, helped her to overcome anxiety, depression, loss of confidence, loss of memory, emotional imbalance so that she could achieve emotional stability to take interest in life and educational studies.

2.3.1.22 Sathyaprabha TN. Murthy H. Murthy BT. (2001).
Efficacy of naturopathy and yoga in bronchial asthma—a self controlled matched scientific study.
This study was aimed at finding the efficacy of a non-pharmacological approach of naturopathy and Yoga in bronchial asthma. 37 patients received treatment including 1. Diet therapy 2. Natures cure treatment and 3. Yoga therapy. The various parameters including lung function test were measured on admission and once a week. The results showed significant improvement in PEFR, VC, FVC, FEV1, FEV/FEC %, MVV, ESR and absolute eosin Phil count. The patients reported a feeling of well being, freshness and comfortable breathing.

2.3.1.23 Singh, S., et al. (2004).
Role of yoga in modifying certain cardiovascular functions in type 2 diabetic patients.

This present study was conducted with twenty-four Type 2 diabetic cases. Patients were trained in yoga asana 30-40 min/day for 40 days. There was a significant decrease in fasting blood glucose levels from basal 190. Blood glucose levels as well as glycosylated hemoglobin levels decreased. The pulse rate, systolic and diastolic blood pressure also decreased.

2.3.1.24 Srivastava, Malini., Talukdar, Uddip. and Lahan, Vivek. (2011).
Meditation for the management of adjustment disorder anxiety and depression.

In this study Experiment Group and control groups were similar at baseline, whereas after concluding the 28th week of meditation practice a significant mean difference (t value: CGI-S 2.47 > .05; CGI-I2.82 > 0.05; BAI 17.58 > 0.05; BDI 10.13 > 0.05; GAF 12.29 > 0.05) was found between both groups. There was an incremental change in selected assessment parameters in both groups. But changes were more significant in pre-and post-assessment of Experiment Group.

Effect of yogic practices performed in a state of meditation on adolescent anxiety and certain personality variables.

After initial medical check up all the participants (N=27, Boys=14, Girls=13, age: 15.63 yrs.) were tested for anxiety and personality variables. Yogic intervention (shavasana-meditation) revealed significant reduction in anxiety and improvement in overall personality. The result indicates that shavasana-meditation produced emotional stability and physical relaxation significantly.
Evaluation of the effect of yoga on anxiety in youth in relation to anxiety-inducing areas of life.

A total number of 356 subjects comprising 243 males and 113 females with an average age of 18.9 years, undergone a comprehensive training programme in yoga for 2 hours everyday for 1 month. The programme comprising of meditation thorough understanding of practical application of the philosophical concepts of yoga through ‘Brain Storming’ sessions along with physical training and relaxation. The study concludes that yoga training can play a significant role in reducing anxiety.

23.2 International Studies

Effects of aerobic exercise training and yoga on the baroreflex in healthy elderly persons.

The effects of aerobic exercise training and yoga, a non-aerobic control intervention, on the baroreflex of elderly persons were determined. Baroreflex sensitivity was quantified by the alpha-index, at high frequency (reflecting parasympathetic activity) and mid-frequency (reflecting sympathetic activity as well), derived from spectral and cross-spectral analysis of spontaneous fluctuations in heart rate and blood pressure. Twenty-six sedentary, healthy, normotensive elderly subjects were studied. Fourteen of the sedentary elderly subjects completed 6 weeks of aerobic training, while the other 12 subjects completed 6 weeks of yoga. Heart rate decreased following yoga but not aerobic training. VO2 max increased by 11% following yoga and by 24% following aerobic training. No significant change in alpha MF or alpha HF occurred after aerobic training. Following yoga, alpha HF but not alpha MF increased.

23.2.2 Baldwin, M. C (1999).
Psychological and physiological influences of Hatha Yoga training on healthy, exercising adults. (yoga, stress, wellness).

The purpose of this study was to explore the psychological and physiological differences between adult exercisers who added a weekly yoga class to their regular
exercise program and those who did not. Subjects were pre tested and post tested for mood state, stress response, recovery heart rate, and spinal/hamstring flexibility. Over a period of eight weeks, subjects in both groups continued their normal exercise habits and maintained exercise logs. Subjects in the Yoga Group added a weekly yoga class. Subjects in the Control Group received a yoga class at a later time. At the end of eight weeks, exercise logs were collected and post tests were conducted. The results suggested: (1) more positive mood change in the Yoga Group over eight weeks, (2) more immediate positive affect from yoga than from cardiovascular or resistance training activities, (3) more compliance with yoga than with cardiovascular or resistance training activities, (4) comparable perceived exertion ratings for ‘moderate’ Hatha Yoga and routine aerobic exercise, (5) an 8% gain in spinal and hamstring flexibility in the Yoga Group over eight weeks, and (6) decreased vulnerability to stress in the Yoga Group, at the same time that sources of stress for that group increased.

23.2.3 Campbell, Dedra Elise, and Kathleen A. Moore. (2004).
Yoga as a preventative and treatment for depression, anxiety and stress.

Researchers conducted a study on yoga as a preventative and treatment for symptoms of mental illness. The Yoga classes were designed as a six-week program. It was hypothesized that participants in the six-week Yoga program would strengthen their resistance to emotional distress. Psychometric testing was carried out to assess symptoms of stress, anxiety and depression across three groups regular Yoga practitioners, beginners entering the program and people who did not practice Yoga and there tests were re-administered after six weeks. At the end of six weeks the Yoga beginners group showed lower average levels of symptoms of depression, anxiety and stress than at commencement, but levels were stable for regular Yoga practitioners and people who did not practice Yoga. In addition, beginners showed growth in their self-reported level of intrinsic spiritual experience.

Yoga in the treatment of mood and anxiety disorders: A review.

In this study it is concluded that reasonable evidence supports the benefit of yoga in specific depressive disorders. The evidence is still preliminary in anxiety
disorders. Given its patient appeal and the promising findings thus far, further research on "yoga" in these conditions are encouraged.


Preliminary findings support the potential of yoga as a complementary treatment of depressed patients who are taking anti-depressant medications but who are only in partial remission. The purpose of this study is to focusing on individual differences in psychological, emotional and biological processes affecting treatment outcome.


23.2.7  Gururaja, D., Harano, K., Toyotake, I., and Kobayashi, H. (2011). Effect of yoga on mental health: Comparative study between young and senior subjects in Japan. Decrease in Salivary amylase activity may be due to reduction in sympathetic response. Reduction in State and Trait anxiety score signifies that yoga has both immediate as well as long-term effect on anxiety reduction. Thus yoga helps to improve the mental health in both the groups (Senior Group and Younger Group).


In this study Yoga was found to be of benefit on three levels: it allowed for greater bonding, mental or psychological flexibility and working out conflicts with less competition. Finally, yoga was found to benefit the organization's health insofar as client confidence grew and better work relationships were developed.
Effects of yoga on depression and anxiety of women. In this study it is concluded that participation in a two-month yoga class can lead to significant reduction in perceived levels of anxiety in women who suffer from anxiety disorders. This study suggests that yoga can be considered as a complementary therapy or an alternative method for medical therapy in the treatment of anxiety disorders.

Yoga practice is associated with attenuated weight gain in healthy, middle-aged men and women.

Yoga practice for four or more years was associated with a 3.1-lb lower weight gain among normal weight participants and an 18.5-lb lower weight gain among overweight participants.

Coping anxiety through the yogic corpse posture – Savasana – A signal detection theory approach.

The study proposes anxiety as the internal noise of the nervous system governed by psychological variables that modulates attention in increasing total noise power. The same could be reduced due to the virtue of Savasana instructional information content that includes detection and rejection characteristics of attention through the filtering mechanisms of Savasana practice effect, may help in coping of anxiety.

Rapid stress reduction and anxiolysis among distressed women as a consequence of a three-month intensive yoga programma.

Above study was conducted on 24 self-referred female subjects who perceived themselves as emotionally distressed. Subjects were offered participation in one of two 3-month yoga programs. Group 1 participated in the first class and group 2 served as a waiting list control. During the yoga course, subjects attended two-weekly 90-min yoga classes. Outcome was assessed on entry and after 3 months by Cohen Perceived Stress Scale, State-Trait Anxiety Inventory, Profile of Mood States, CESD-Depression Scale,
Bf-S/Bf-S' Well-Being Scales, Freiburg Complaint List and ratings of physical well-being. Salivary cortisol levels were measured before and after an evening yoga class in a second sample. Compared to waiting-list, women who participated in the yoga-training demonstrated significant improvements in perceived stress, State and Trait Anxiety, well-being, vigor, fatigue and depression. Physical well-being also increased, and those subjects suffering from headache or back pain reported marked pain relief. Salivary cortisol decreased significantly after participation in a yoga class.

2.3.2.13 Nauert, R. (2010).
Yoga Enhances Mood, Relieves Anxiety.

This is a new research study suggests the performance of yoga provides specific benefits for improving mood and reducing anxiety. The study is the first to demonstrate an association between yoga postures, increased GABA levels and decreased anxiety. The researchers set out to contrast the brain gamma-aminobutyric (GABA) levels of yoga subjects with those of participants who spent time walking. Low GABA levels are associated with depression and other widespread anxiety disorders. Each subject was also asked to assess his or her psychological state at several points throughout the study, and those who practiced yoga reported a more significant decrease in anxiety and greater improvements in mood than those who walked.

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, physical postures, breath slowing techniques, 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 practiced yoga in the weekly number of attacks of asthma, scores for drug treatment, and peak flow rate.

A yoga intervention for young adults with elevated symptoms of depression.
Twenty-eight young adults pre-screened for mild levels of depression were randomly assigned to a yoga course or a wait-list control group. 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. 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.

2.4 Emergence of the problem
There has been change in the last era in all walks of life. This change has brought a total transformation in society. Yoga therapy and yoga exercise has entered into all of our education. In recent decades the largest developments in Yoga therapy and Yoga have pushed with mental health and even a sense of surprise.

Research on Yoga and Yoga therapy spans more than two decades. An increasing number of research findings on the effectiveness of Yoga therapy & Yoga are publishing. Many issues are important: Yoga therapy on mental ill health; Yoga exercise effect on mental health; processes in regards to the uses of Yoga in the school education and other education systems; policy about Yoga in school education and other fields of education etc.

Both of these are taking place in many countries except our India. Instantly in Italy has organized a workshop on Yoga. The topic was in the workshop “The Yoga and the development of the society”(1st.May-14th.May,2009). So the Yoga is now a well known to the people and also the society. But in our global society various harmful aspects are stress and strains of the mental health of the secondary students mainly among the teen-agers students.

At the end of the above discussion the researcher point out the following questions:-

i) Practice of the related Yogic exercise helps the practitioners to increase physical & mental fitness;
ii) In this era Yoga therapy is a very important and modern approach in medical treatment;

iii) In medical science Yoga exercise may be used in parallel to the medicine;

iv) Sound mental health is very important for the development of the child;

v) Mental health of the younger generation and also the old affected by the mental desires which is burning question now;

vi) Intellectual person of all areas of education are seriously worried over this and they are eager to search a suitable path to over come this situation;

vii) The researcher is now interested to search the relation between Yoga and mental health.

2.5 Research question
On the above discussion the researcher focused all the ideas around a basic research question, “Is there any relation between Yoga and mental health?”

2.6 Hypotheses (N/Ho) of the study. Null Hypotheses (N/Ho) are as below:

N/Ho1: In case of the Experiment Group, the Tests (i.e. Pre and Post), Gender (i.e. Boys and Girls) and the Category (i.e. General and SC/ST) of the students do not significantly affect the performance of the mental health test of the school students.

N/Ho2: In case of the Control Group, the Tests (i.e. Pre and Post), Gender (i.e. Boys and Girls) and the Category (i.e. General and SC/ST) of the students do not significantly affect the performance of the mental health test of the school students.

N/Ho3: In case of each dimension of Mental Health Test (separately and jointly) there are no significant differences between the Control Group and Experiment Group of students on the basis of Post Test.

N/Ho4: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Control group and Experiment Group of Boys on the basis of Post test.
N/Ho5: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Control group and Experiment Group of Girls on the basis of Post test.

N/Ho6: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Control group and Experiment Group of General students on the basis of Post test.

N/Ho7: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Control group and Experiment Group of SC/ST students on the basis of Post test.

N/Ho8: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Boys & Girls of Experiment Group on the basis of Post test.

N/Ho9: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the General & SC/ST students of Experiment Group on the basis of Post test.

N/Ho10: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Pre test and Post test of Boys of Experiment Group.

N/Ho11: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Pre test and Post test of Girls of Experiment Group.

N/Ho12: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Pre test and Post test of General students of Experiment Group.

N/Ho13: In case of each dimension of Mental Health Test (Separately and jointly) there is no significant difference between the Pre test and Post test of SC/ST students of Experiment Group.
2.7 Delimitations of the study

i) The study was limited in the three districts in West Bengal (South 24 pgs, East & West Midnapore) and two High Schools from each district for the economy of time & money.

ii) The size of the sample of the experiment was limited in six hundred students.

iii) The experiment was limited in physical and mental exercise and spiritual exercise was avoided.

iv) The experiment was limited in rural area.

v) The length of the time of experiment was one year.
Reference


