Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was undertaken to determine The Effect of Select Yogasanas, Pranayama and Meditation on Biochemical Physiological and Psychological Variables of Male Students.

In the present study, forty male students were selected by random sample from Pope John Pal II College of Education. The subjects chosen for the study were divided randomly into two equal groups called control and experimental groups consisting of twenty boys in each group. They were the students of B.A.B.Ed., B.Sc.B.Ed. and B.com.B.Ed Integrated Course and their age ranged from 18 to 23 years. The investigator explained to them the purpose, importance of the experiment and the procedure to be employed to collect their Blood sample, instrument reliability, physiological tests and psychological questionnaire. Further the role of the subjects during the experimentation and the testing procedure was also explained to them in detail.

Twelve weeks of Yogasana, Pranayama, and mediation trainings were given to the experimental group. The control group was not allowed to participate in any of the training programmes, except in their regular physical education programmes. The experimental group underwent the training programme as per the training schedule prepared by the investigator. The training programme was held five days in a week for 12 weeks, the training was conducted by a yoga trainer and was personally supervised by the investigator.

The Biochemical Variables used in the present study were 1) Blood Glucose, 2) Total cholesterol, 3) Low Density Lipoprotein, and 6) Very Low Density Lipoprotein. The Physiological Variables used were 1) Vital Capacity such as a) Forced Vital Capacity (FVC), b) Forced Expiratory Volume in First Second (FEV₁), c) Peak Expiratory Flow Rate, 2) Systolic Blood Pressure, 3) Diastolic Blood Pressure, 4) Pulse Rate, 5) Rate Pressure
Product, 6) Respiratory Pressure such as a) Maximum Expiratory Pressure b) Maximum Inspiratory Pressure c) and Breath Holding Time.

The tests selected for the study were standardized tests and most suitable for the present study. The investigator was present with the subjects of the control group and the experimental group during the experimentation of the pre test and the post test.

Estimation of biochemical variables and the blood samples were analyzed with the help of lab technicians under the supervision of the biochemist and blood samples were analyzed in the research laboratory of biochemistry, Jipmer, Puducherry, for the blood test standard equipments, reagents and chemicals were used.

The physiological variables were tested in the research laboratory of Department of Physiology, JIPMER, Puducherry. Sophisticated and computerized equipments were used to assess the physiological variables.

The assessment of the psychological variables used in the present study are 1) Mental health, 2) Self-concept and 3) Personality which are the standard tools. All the subjects were motivated to give relevant data and co-operate to complete the psychological questionnaire. All the questionnaires were administered by the researcher in person in a face to face relationship and data were collected as per the programme fixed. The entire filled in questionnaire were collected from the subjects and scored according to the scoring key. The total scores obtained were tabulated and statistically treated to arrive at meaningful conclusion.

**Conclusions**

Based on the research findings the following conclusions were drawn in the present study.

1. The results of the biochemical variables like Blood Glucose, Triglycerides, High Density Lipoprotein and Very Low Density Lipoprotein were not significantly different in the
pre test between the experimental and the control groups. Where as in the total cholesterol and low density lipoprotein there is a significant difference in the pre test control group.

2. The biochemical variables like Blood Glucose, Total Cholesterol, Triglycerides, Low Density Lipoprotein and Very Low Density Lipoprotein have significantly decreased after a period of twelve weeks of yogasanas, pranayama and meditation in the post test experimental group when compared to the pre test control and experimental groups.

3. It is inferred that the yoga practice did not lead to significant changes in the High Density Lipoprotein of the pre test and the post test control and the experimental groups and also the adjusted post test mean.

4. The results of the study have shown that the Physiological Variables like Forced Vital Capacity (FVC); Forced Vital Capacity First Second (FEV₁) and Peak Expiratory Flow Rate, Pulse Rate, Systolic Blood Pressure, Diastolic Blood Pressure and Rate Pressure Product did not show any significant changes in the pre test control and experimental groups. Where as in the Maximum Expiratory Pressure and Maximum Inspiratory Pressure reveal that there existed significant changes in the pre test control and the experimental groups.

5. In the Physiological Variables like Forced Vital Capacity, Forced Vital Capacity First Second and Peak Expiratory Flow Rate, there is no significant increase in the post test experimental group after the twelve weeks of yogasanas, pranayama and meditation practice. But there is a significant change in the Adjusted post test mean.

6. In the Systolic Blood Pressure there is no significant difference in the pre test and post test experimental group but in the Diastolic Blood Pressure there is significant difference in the post test experimental group and the Adjusted post test mean.

7. The result indicates that the Maximum Expiratory Pressure, Maximum Inspiratory Pressure, and Breath Holding Time could significantly increase in the post test
experimental group when compared to the post test control group after the twelve weeks of yogasanas, pranayama and meditation practice.

8. The results of the psychological variables like Mental Health, Personality in Neurosis and Extrovert, there is no significant difference between the pre test control and pre test experimental group. Where as there is significant change is found in the Mental Health of the post experimental and the Adjusted post test mean.

9. The Psychological Variables of Self-Concept the result reveals that there are no significant differences in the pre test control and the experimental groups and also the post test experimental group. But significant difference is seen in the Adjusted post test mean.

10. In the Personality - Neurosis, the result reveals that there are no significant differences in the pre test, post test and the Adjusted post test mean.

11. In the Personality – Extrovert, the result reveals that there is no significant difference in the pre test mean of the control and experimental groups. But the result shows significant difference in the post test and Adjusted post test mean of the control and experimental groups.

**Recommendations**

Based on the results of the study, the following recommendations are made by the present investigator.

1) Similar study is necessary to examine the effect of yogasanas, pranayama and meditation on biochemical, physiological and psychological variables for the different age groups.

2) Further, similar research may be undertaken considering female students.

3) Similar study may also be conducted to find out the effects of yogasana, pranayama and meditation on other variables of biochemical, physiological and psychological studies.
4) Similar study may be replicated with longer durations, different intensities of training other than mentioned in the present study.

5) A continuous and regular yogasanas, pranayama, and meditation programme, in an organized manner, has to be suggested for the occasional participants to obtain desired results in their health related fitness.