Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
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SUMMARY

The life of modern man is heavily dependent upon science and technology. Changing life style and advanced technology have made his life highly mechanical. Due to his busy schedule and preoccupations he doesn’t get enough time for physical activities and recreations, which are essential for good health. The charm of the TV and multimedia’s have lured him to a great extend, and most of the time he sit idly in front of these gadgets for either viewing or interacting. After a day physical activity he thinks that he is relaxing in front of these gadgets. But unfortunately these gadgets are eating his health, makes him obese and cause of physical ailments, what he need is exercise. The absence of exercise results various disorders like diabetes mellitus, obesity, depression, cardiovascular disease and stress etc. Researches have proved that physical activity has an important role in health promotion and disease prevention.

Diabetes mellitus is a major source of mortality and morbidity along with being an economic menace all over the world. It is estimated that in the next 25 years India will have the maximum number of diabetics and this number will be equal to the number of diabetics in the whole World.
The number of diabetics which was 19 million in 1995 would go up to 57 million by 2025, a raise of nearly 300%. A survey depicts that 4% of the adult in India suffered from diabetes in the year 2000, and it is expected to increase 6% by the year 2025.

Cardiovascular disease and type II diabetes are a growing problem for the developed world, putting ever greater strain on healthcare systems.

Heart and vascular disease often go hand-in-hand with diabetes. Persons with diabetes are at much greater risk for heart attacks, strokes, and high blood pressure. Other vascular problems due to diabetes include poor circulation to the legs and feet. Unfortunately, many of the cardiovascular problems can go undetected and can start early in life. Serious cardiovascular disease can begin before the age of 30 in persons with diabetes.

According to the American Diabetes Association, damage to the coronary arteries is two to four times more likely in asymptomatic persons with type I diabetes than in the general population. Because symptoms may be absent at first, the American Diabetes Association recommends early diagnosis, treatment and management on risk factors.

Many studies demonstrate that persons with type II diabetes are at increased risk for heart disease. In fact, one study found that persons with type II diabetes without apparent heart problems can the same risk for heart disease as persons without diabetes who had already suffered one heart attack.
The purpose of the study was to find out the effect of walking and physical exercises on selected physical and physiological variables of cardiovascular and diabetic patients. To achieve the purpose of the study, 40 male patients (20 diabetic and 20 cardiac patients) were selected randomly as subjects. The age ranged from 40 to 50 years. The selected subjects were randomly assigned to four groups of ten each such as four experimental groups.

The variables selected for the study were cardiovascular endurance, abdominal strength, flexibility, balance systolic and diastolic blood pressure, heart rate, total cholesterol and blood sugar. The selected variables for the study were assessed by the standardized tests. The data were collected before and immediately after the experiment on all selected variables in two consecutive days.

The data were collected on selected physical and physiological variables such as cardiovascular endurance was measured by one-mile run/walk abdominal strength was assessed by sit-ups, flexibility was measured by sit and reach test and balance was assessed standing balance test, systolic and diastolic blood pressure measured by using Omron digital blood pressure monitor, and the heart rate measured by using radial artery method, cholesterol was measured by enzymatic calorimetric method before and immediately after the training programme as pre-test and post-test. The blood samples were collected from the subjects in the early morning in fasting condition to assess the physiological variables viz., total cholesterol and blood sugar. The collected blood samples were tested in the medical laboratory at Kottayam, Kerala. The blood samples
were collected from experimental groups prior to and immediately after the training programme.

The collected data were analysed by using dependent ‘t’ test and analysis of covariance (ANCOVA). Whenever ‘F’ ratio was to be found significant for adjusted post test, the Sheffe’s test was used as a post hoc test. In all the cases 0.05 level of significance was fixed to test the hypothesis.

CONCLUSIONS

1. There was significant improvement on selected physical variables such as cardiovascular endurance, abdominal strength, flexibility and balance among diabetic and cardiac patients due to walking and physical exercise programme. However, there was greater improvement in favour of physical exercise than walking programme.

2. There was significant improvement on selected physiological variables such as heart rate, blood pressure, blood sugar and total cholesterol among diabetic and cardiac patients due to walking and physical exercise programme. However, there was greater improvement in favour of physical exercise than walking programme.

3. There was significant difference between the experimental groups on cardio vascular endurance and flexibility of diabetic and cardiac patients. However, there was greater improvement in favour of physical exercise than walking programme.
4. There was no significant difference between the experimental groups on abdominal strength and balance of diabetic and cardiac patients.

5. There was significant difference between the experimental groups of diabetic and cardiac patients on heart rate, blood pressure, blood sugar and total cholesterol. However, there was greater improvement in favour of physical exercise than walking programme.

RECOMMENDATIONS

Based on the results of the study following recommendations were drawn.

1. In the present study, it was concluded that systematic physical exercise and walking would produce positive changes on physical and physiological variables. Hence, it is recommended to the people who suffer diabetes and cardiovascular disease, to adopt these for improve their health.

2. The duration of the training period may be increased six months to one year for better result

3. The present study is mainly focused on men; similar study can be conducted on female subjects also

4. Similar study can be conducted on larger population.

5. The Similar study may be conducted on various age groups.