CHAPTER I

INTRODUCTION

Background of the problem

Therapeutic exercise is generally used for rehabilitation of injury or treatment of some type of chronic disease. Therapeutic exercise is one of the most valuable modalities used in canine physical rehabilitation. Some of the primary objectives of therapeutic exercise is to improve active pain-free range of motion, muscle mass and muscle strength, balance, performance with daily function, aerobic capacity, help prevent further injury, and to reduce weight, and lameness. Common activities include standing exercises, controlled leash activities, stair climbing, treadmill activity, wheelbarrowing (for forelimb activity), and ‘dancing’ (for rear limb activity). Other activities include jogging, sit-to-stand exercises, pulling or carrying weights, walking and trotting across caballetas rails, playing ball, taping a bottle or syringe captors the bottom of an unaffected foot to encourage weight bearing, slinging the contra lateral good limb, and using balance balls or rolls. In addition to being an important method to assist an animal’s return to the best function possible, the equipment needed for therapeutic exercise is relatively inexpensive and similar principles apply to a variety of individuals and conditions. Meanwhile, the importance of Health related physical programmes is linked to a higher quality of life as well as academic achievement. It is well documented that Health related physical fitness in childhood and adolescence improve strength & endurance, health build, healthy bones & muscles, hips control weights, reduce anxiety and stress increases self-esteem and may improve cardio reparatory function. Low Health-related physical fitness may result in high physical strain during the performance of activities (Bruining et. al. 2007). As a consequence, activity levels may decrease due to fatigue and discomfort, exacerbating low physical fitness. The definition of health related fitness is fitness done with balance among the development and improvement of the whole body.
For Health-related fitness, the activity components included are not only for strength, and muscular development and endurance training. The lungs, heart, and circulatory system are also the focal points in health and fitness. The reason for this is to improve stamina, immune system, and maintain good body composition. Health-related fitness reduces the risk of several disease cardiovascular diseases, cancer and arthritis, and may cure respiratory problems like asthma. The exercises are much better when you include another exercise that will focus on improving your strength, muscle development and endurance. It will make you less prone to injuries. When strength training and cardiovascular fitness plans are combined, one will also look and feel younger. This will lead to improved self-esteem. Also, the level of stress and depression will decrease. If you are wondering about the types of activities that will work best for you, visit a professional and consult with him or her. If you have certain health conditions, it is best if you consult with your doctor first. Aside from cardio and body composition, strength and muscular endurance, flexibility is another important thing that you need to consider. Your fitness health training program should be able to let you enhance your flexibility. Keeping in view the fact that student’s physical fitness has important health consequences during adulthood (Sallis et.al. 1999) a large number of studies on physical fitness have been reported from different countries of the world. Data on the physical fitness children from Denmark (Knuttgen, 1961), England (Campbell & Pohnd of, 1961), South Africa (Sloan, 1966), Belgium (Hebbelinck & Borms 1969), Israel (Ruskin, 1978), & Japan (Ishiko, 1978) are available in the literature. All these reports made the health planners realise the importance of the contribution of the health education and physical fitness in the development of total fitness.

The importance of health related physical fitness to health for all individuals has been well documented. Health related Physical fitness is a required element for all the activities in our society. Health related physical fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. Physical fitness is also considered as the degree of ability to execute a physical task under various ambient conditions. (Hulenset.al. 2002).

Healthy body is necessary for increasing the working capacity and maintaining physical fitness of any individual to perform his daily tasks vigorously.
and alertly, with left over energy to enjoy leisure time activities. It also helps to withstand stress and carry on, in circumstances where a physically unfit person could not continue (Patil et.al.2012). The importance of cardiovascular fitness to health for all individuals has been well documented. Physical fitness is a required element for all the activities in our life. Health related fitness of an individual is mainly dependent on lifestyle related factors such as daily physical activity levels. It was believed that the low fitness level of an individual is associated with higher mortality rate. (Jourkhesh et.al.2012).

For Health-related fitness, the activity components included are not only for muscular development and endurance training. The lungs, heart, and circulatory system are also the focal points in health and fitness. The reason for this is to improve stamina, immune system, and maintain good body composition. Health related fitness reduces the risk of cardiovascular diseases and other diseases like hypertension, Diabetes obesity, and may cure respiratory problems like asthma (Amusa, &Goon, 2011).

Health related fitness of our citizens is a vital prerequisite to a country's realization of its full potentials a nation (Lamb et.al. 1988). Good Physiological Efficiency recognized as an important component of health and it may be important for the performance of functional activities and quality of life (Maria et. al., 2003), Low Physiological Efficiency may result in high physical strain during the study period (Pongprapai, et. al. 1994). The primary objective of the study is to give the emphasis on therapeutic exercise and health-related physical fitness programme for improvement of physiological efficiency and health outcomes among young adults.

**STATEMENT OF THE PROBLEM**

In the light of the above, the investigator become interested in determining the effectiveness of the skill engaged in promoting the scientific aspects concerning programme on physiological efficiency and Health outcomes. The problem was stated as “Examining the Effects of Therapeutic exercise and Health-Related Fitness programme on physiological efficiencies and Health outcomes among young adults.” taken up to assess the level of the Effects of Therapeutic exercise and Health-Related Fitness programme on physiological efficiencies and Health outcomes
among young adults. It was further aimed to help sports scientists and administrators to understand Effects of Therapeutic exercise and Health-Related Fitness programme on physiological efficiency and Health outcomes.

**OBJECTIVES OF THE STUDY**

**The objectives of the study are given as under:**

**Primary Objective**

The primary objective of the study is to examine the effects of Health-Related Fitness programme and therapeutic exercise to achieve physiological efficiencies and Health outcomes among young adults.

**Secondary objectives**

1. Study the effect of the Therapeutic exercise and Health-Related Fitness programme on physiological efficiency with respect to RHR among young adults.

2. Study the effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to RR among young adults.

3. Study the effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to BHC (inspiration) among young adults.

4. Study the effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to BHC (Expiration) among young adults.

5. Study the effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to SBP among young adults.

6. Study the effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to DBP among young adults.

7. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to health status among young adults.

8. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to rate health among young adults.
9. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to activities among young adults.

10. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to problem of regular daily physical health among young adults.

11. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to emotional problem among young adults.

12. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to Normal social activities among young adults.

13. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to level of body pain among young adults.

14. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to pain with normal work among young adults.

15. Study the effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to level of feeling among young adults.

16. Study the effect of the Therapeutic exercise and Health-Related Fitness programme on Health outcomes with respect to problem of interfered social activity among young adults.

**RESEARCH QUESTIONS:**

1. What is the morphological characteristic of young adults?
2. Which programme (therapeutic exercise or health related physical fitness) more beneficial for physiological efficiency?
3. Which programme (therapeutic exercise or health related physical fitness) more beneficial for health outcomes?
HYPOTHESES

The following hypotheses formulated for the present study.

1. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to RHR among young adults.

2. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to RR among young adults.

3. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to BHC (inspiration) among young adults.

4. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to BHC (Expiration) among young adults.

5. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to SBP among young adults.

6. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on physiological efficiency with respect to DBP among young adults.

7. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to health status among young adults.

8. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to rate of health among young adults.
9. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to activities among young adults.

10. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to problem of regular daily physical health among young adults.

11. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to emotional problem among young adults.

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14. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to pain with normal work among young adults.

15. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to level of feeling among young adults.

16. There would be significant effect of the Therapeutic exercise and Health-Related fitness programme on Health outcomes with respect to problem of interfered social activity among young adults.
DELIMITATIONS OF THE STUDY

1. The study would be delimited to the young adults of aged between 18 to 35 years.

2. The study would be delimited to only young adults.

3. The geographical area would be delimited to S. R. T. M. University only.

4. The period of training program would be delimited to 6 weeks and 4 days per week.

5. The study would be delimited to following physiological efficiency.
   A. Blood Pressure
   B. Cardio-vascular functions: i.e., Resting heart rate, Respiratory rate, Breath holding capacity.
   C. Body composition.

LIMITATIONS OF THE STUDY

1. Since the trainees belong to deferent level of performance hence the prior Experience of the players may be considered as limitation of the study.

2. Since the trainer belonged to different training this may be also considered as Limitation of the problem.

3. There was no control of research scholar on the diet of the subjects.

4. The effect of weather conditions was considered as limitations.

5. No motivation techniques were used during administrating the test.

DEFINITION & EXPLANATION OF TERMS

Therapeutic exercise:

Therapeutic exercise is defined by De Latter as body movement designed to correct impairment, improve musculoskeletal function, or maintain a state of well-being.
Physiological Efficiency:

Ability to Physiological work capacity of human body system. The some of the physiological efficiency are as:

Cardio vascular:

Relating to the circulatory system, this comprises the heart and blood vessels and carries nutrients and oxygen to the tissues of the body and removes carbon dioxide and other wastes.

Cardio vascular function:

Transport of Nutrients, Oxygen and hormones to cells throughout the body and removal of metabolic wastes, carbon dioxide, nitrogenous wastes.

Body Composition:

Body composition is the proportions of muscle, bone, fat, and other tissue that make up an individual's total body weight. The body weight equals the fat plus the lean tissue (including water). It is usually expressed as a percentage.

Health related physical fitness Programme:

The health related physical fitness programme will be designed by the investigator. The health related physical fitness programme includes exercise aerobic in nature.

Health outcomes:

The term refers to the impact healthcare activities have on people on their symptoms, ability to do what they want to do, and ultimately on whether they live or die. Health outcomes include whether a given disease process gets better or worse, what the costs of care are, and how satisfied patients are with the care they receive. It focuses not on what is done for patients but what results from what is done.

Young adults:

Young adults are defined as people between 18 and 35 years of age. This group includes people who are College students at any institution of higher education.
SIGNIFICANCE OF THE STUDY: -

1. This study would help the physical educator to know the importance of health related fitness programme.

2. The results of present study would help coaches to give an appropriate training to the players.

3. The findings of the study would help coaches, trainers, physical education teachers & players to improve physiological efficiency functions.

4. This study may motivate other investigators to take up similar studies selecting more number of young adults.