CHAPTER 2

OBJECTIVES PLAN AND SCOPE OF THE STUDY

2.1 AIM OF THE STUDY

To investigate the effects of three physiotherapy interventions in delayed onset muscle soreness and the influence of each on, biochemical markers and in reducing the symptoms of muscle soreness in recreational athletes.

2.2 OBJECTIVES OF THE STUDY

1. To investigate the effect of three physiotherapy interventions on biochemical parameters (CK and LDH) as compared to control group of delayed onset of muscle soreness in recreational athletes.

2. To evaluate the effect of three physiotherapy interventions on maximum isometric voluntary contraction (MIVC) in delayed onset muscle soreness and compared with control group.

3. To determine the effect of three physiotherapy interventions on pain parameters using VAS scale and compared with control group.

2.3 HYPOTHESIS OF THE STUDY

Main Hypothesis Ho1: There is no significant difference in biochemical and clinical outcome measures between the groups.

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2.4 RELEVANCE AND SCOPE OF THE STUDY

Delayed onset muscle soreness (DOMS) is a familiar experience for the elite as well as the novice athlete. A wide range of symptoms is possible from muscle tenderness to acute devastating pain. The mechanisms, treatment strategies, and impact on athletic performance remain uncertain, despite the high incidence of DOMS (Cheung, et al., 2003). DOMS mostly occurs when athletes return to intense sporting activity after period of prolonged rest. Although the cause of DOMS has been explained by various theories, none of them have been accepted universally. There are subjective thoughts that the effect of DOMS can be lessened with various treatment modalities. Again no method has any conclusive, empirical support for the prevention of delayed onset muscle soreness. In India, recently increasing numbers are participating in athletic activities and are taking a more active approach to achieve health and wellness. This increase in activity exposes individuals to DOMS and the associated negative effects. It is a well known fact that regular exercises are beneficial but many of us do not do it. A major attributable reason for this can be that discomfort and pain are normally the result of such sudden activities. A good way to turn around this situation is to understand what muscle soreness is and how to solve it. Interventions such as physiotherapy play a major role both in prevention and treatment of the negative effects associated with DOMS. Most individuals and athletes experience muscle soreness after unaccustomed exercises due to lack of training. This demands some effective intervention, but not much research has been done in India to meet these demands. Also, the exact role of a physiotherapist in alleviating the DOMS and providing therapeutic interventions is not well defined in India.
Since DOMS is a global phenomenon, the cultural or social issue will not influence the recover. Therefore, in the current research there is not difference in subjects finding as compared to global finding. However, the data is analyzed as per each objective/hypothesis.