CHAPTER V

SUMMARY,
CONCLUSION AND
RECOMMENDATIONS
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SUMMARY

The aim of the study is to evaluate the efficacy of taping technique, LASER therapy and ultrasound therapy in the management of soft tissue injuries among athletes. Further the purpose of this study is to formulate an effective protocol in order to facilitate good recovery and make the patient back to the field with full fitness and also to find the role of taping, ultrasound therapy and LASER therapy in such good recovery.

The review of related literature by the investigator proved that there are number of studies have contributed to analysis the effect of the selected treatment modalities in management of soft tissue injury on athletes non athletes. Similarly very few research have been done to find out the efficacy of taping in the management of soft tissue injury among athletes and non athletes. The investigator was interested to find out the best modalities to treat the soft tissue injury and also to find out a effective combination treatment protocol have good and early recovery of first degree and second degree soft tissue injury among athletes.

In this study the efficacy of the treatment modality was evaluated by selecting 160 injured athletes. Among them subjects with upper limb injury was 58 and lower limb injury was 102. The selected Subjects were university level players involved in games like foot ball, volley ball, basket ball, tennis, badminton, table tennis, hockey, high jumpers, long jumpers, Kho Kho, Kabadi, shot put, & Runners. Both first & second degree soft tissue injuries were included
in the study. Subjects selected were volunteers, both male & female who were aged between 18 years to 30 years and who were playing not less than 2 year in their relevant sports. Direct as well as referred injured were included in the study.

This study was conducted in outpatient setting the places are as follows
1. Out Patient Department, R.K.Physiotherapy Centre, Bakthi nagar circule, Rajkot, Gujarat. 2. Out Patient Department, R.K.Physiotherapy College Campus, Rajkot, Gujarat. 3. Out Patient Department, Masterskill university, Kuala Lumpur, Malaysia. 4. Out Patient Department, Institute of Physiotherapy, Magadh University, Bodhgaya, Bihar.

The subjects were randomly allotted to five treatment groups as follows: Group A – Ultrasound Therapy, Taping with common protocol, Group B – Ultrasound Therapy with common protocol, Group C – LASER Therapy, Taping with common protocol, Group D – LASER Therapy with common protocol and Group E – Control.

The pre and post test scores were documented for the following variables Pain, tenderness, Pain free active range of motion and functional assessment. The evaluation of the subjects was done on the 1st day before treatment and the post treatment data were collected on the 6th day, 12th day and 18th day after intervention.

Numerical Rating Scale was used to record the pain intensity of the subjects. The NRS consisted of a 10-cm horizontal line, anchored with “no pain” at the left end (i.e. threshold intensity) and “pain as bad you can imagine” at the right (i.e. maximally tolerable intensity). Tenderness was assessed by the
therapist on the Injured joint / Muscle of the subjects by palpation and their responses were documented according to grade of the tenderness scale 

David.magee et.al (1996). Grade 0 – No Pain, Grade I - Patient Complains of Pain, Grade 2- Patient complains of pain and winces, Grade 3- Patient winces and withdraw the joint, Grade 4- Patient will not allow palpation of the joint.

Disability of Arm Shoulder and Hand (QUICK DASH) -Sports Module was used to assess the functional level of the subjects with soft tissue injury in the upper limb. This module consist of 4 questions as follows (1) Using your usual technique for playing your instrument or sport? (2) Playing your musical instrument or sport because of arm, shoulder or hand pain? (3) Playing your musical instrument or sport as well as you would like? (4) Spending your usual amount of time practicing or playing your instrument or sport? The maximum score is 20 it means the subject unable to do any activity and the minimum score is 4 it denotes the subject is normal.

The Foot & Ankle Disability Index (FADI) Score - Sports Module was used to assess the functional level of the subjects with soft tissue injury in the lower limb. FADI Score consist of 8 questions as follows Running, Jumping, Landing, Squatting and stopping quickly, Cutting, lateral movements, Low-impact activities, Ability to perform activity with your normal technique, Ability to participate in your desired sport as long as you would like and score was given according the response of the patient. The maximum score is 100 it means no difficulty and the minimum score is 0 denotes unable to do.

The obtained data were statistically analyzed through Factorial analysis of variance and ANACOVA to test the significance of difference and the interpreted result were discussed as following
CONCLUSIONS

Within the limitations of the study the following conclusions were drawn from this study

1. It is concluded that there was significant reduction in pain intensity, reduction in tenderness grades, increase in pain free active range of motion and improvement in functional scores in group (A) Combination of Ultrasound Therapy & taping when compared among all the groups.

2. It is concluded that there was significant reduction in pain intensity, reduction in tenderness grades, increase in pain free active range of motion and improvement in functional scores of Group (B) only ultrasound therapy was better when compared with group (D) only LASER therapy.

3. It is concluded that taping is effective along with the any selected modality ultrasound or LASER, because it is proved from the following results: group (A) Combination of Ultrasound Therapy & taping, was effective in the management of soft tissue injuries when compared with Group (B) only ultrasound therapy.

   When the group (C) Combination of LASER with Taping compared with group (D) only LASER, Group (C) was documented good recovery when compared with group (D).
RECOMMENDATIONS

1. A similar study may be conducted on disabled athletes to get good recovery because they are more prone for injuries like sprain and strains.

2. A similar study may be conducted using large sample of subjects.

3. A similar study can be conducted in post surgical sports rehabilitation to find out the influence of the selected modality in the recovery rate.

4. The present study was conducted by including ten common sports injuries. A similar study may be conducted specific injuries and compare among them.

5. A similar study may be conducted on only male or female athletes.

6. A similar study may be conducted by including more variables.