

## **PP 09: Efficacy of Adopting KAATSU Training in Rehabilitating Exercises: A systematic review**

**S.A. Perera<sup>1</sup>, V.A. Samaranada<sup>2</sup>, K.T.G. Kanchana<sup>3</sup>, D.V.C. Gayan<sup>4</sup>**

*<sup>1</sup>Department of Biomedical Science, <sup>2</sup>Department of Medical Science in Acupuncture, <sup>3</sup>Department of Nursing, Faculty of Health Sciences, Kaatsu International University and <sup>4</sup>Sport and Exercise Medicine Unit, Lady Ridgeway Hospital for Children, Colombo*

**Introduction:** KAATSU training is a short-term, low-intensity, novel, and patented method that results in muscle hypertrophy and strength gains. Exercise rehabilitation is conducted to maximize function restoration in the shortest amount of time possible, assisting individuals in resuming normal function with the lowest potential risk of re-injury.

**Objectives:** To review the feasibility of adopting KAATSU training as a method of exercise rehabilitation and evaluate the efficacy.

**Methodology:** Based on the comprehensive studies concerning the guideline of PRISMA, the electronic databases of PubMed Central (n=178), Science Direct (n=14), Springer Link (n=2), Cochrane Library (n=19), and Google Scholar (n= 291) manually screened using the keywords "KAATSU," " rehabilitation", "muscle strength," "hypertrophy" and " sports medicine". After removing duplicates, 291 articles were screened twice for the keywords, and 21 were considered for the review.

**Results:** Out of the nineteen controlled clinical trials, fourteen were conducted on healthy young populations, four on athletes and one on patients with ischaemic heart disease. The two case studies were conducted on old adults. The results of all the studies suggested that short-term low-intensity resistance exercise with KAATSU training would be an effective method for improving skeletal muscle mass, endurance capacity and strength.

**Conclusion:** KAATSU training is a safe exercise method for the improvement of skeletal muscle mass, endurance capacity and strength in healthy young, elderly and populations with ischaemic heart disease. This may provide a complementary training method to exercise rehabilitation. However, conflicting evidence suggest the necessity of research on a broader level in adopting KAATSU training to re-building skeletal muscles after an injury.

**Keywords:** KAATSU, rehabilitation, hypertrophy, muscle strength