

A CROSS SECTIONAL STUDY ON PHYSIOLOGICAL PARAMETERS OF SILAMBATTAM PRACTITIONERS

INTRODUCTION

Silambattam is an Indian martial art originating from Tamil Nadu. This sport requires good foot movement and hand coordination on top of having a considerable amount of stamina. This is the first research study of its kind involving the Silambattam practitioners.

AIM AND OBJECTIVE

To measure the hand grip muscle strength, reaction time, blood pressure, heart rate and peak expiratory flow along Silambattam practitioners.

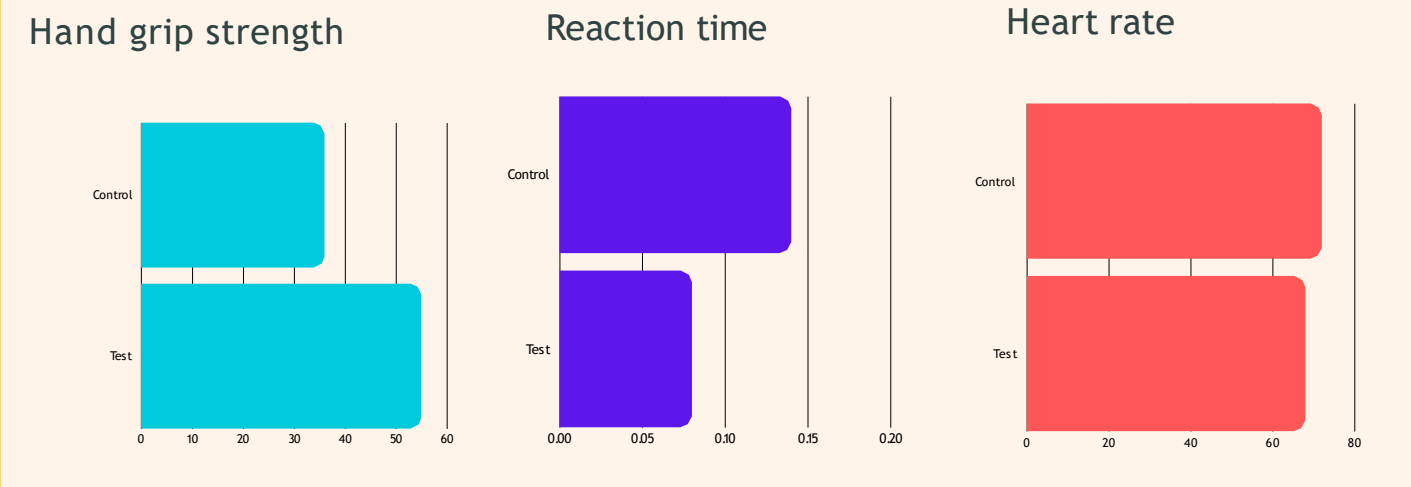
To measure and **compare** all these parameters with the control group.

METHODOLOGY

This is a comparative cross-sectional study involving 60 young males in the age group of 18 to 25 years. They were divided into 2 groups; control and test. The parameters measured were **blood pressure, heart rate, peak expiratory flow, hand grip muscle strength and reaction time**. The results are statistically analysed using unpaired T-test in SPSS software.

Author: Allen Nobel (2nd year MBBS student, Velammal Medical College Hospital and Research Institute, Madurai)
Registration ID: BMSseCON-2024-PHY-3020
Guide: Dr. S Anu, Professor and Head of Department of Physiology (VMCH&RI, Madurai)

Analysis



RESULTS

A statistically increased muscle strength along with higher peak expiratory flow ($P < 0.001$) was observed. A statistically significant decrease ($P < 0.001$) in reaction time and heart rate was measured. Although there was no change in blood pressure.

DISCUSSION

According to the research papers this is the first of its kind topic taking note of the physiology of Silambattam practitioners versus the control group. The test group would have **better reaction** time and **higher muscle hand grip strength** due to the practice with using sticks and jumping high up in the air hence increasing their respiratory volume. They would also have higher coordination regarding to control group.

Conclusion

Silambattam practitioners have good hand grip muscle strength and peak expiratory flow rate and their reaction time is faster with a lower heart rate than the control group.

REFERENCES

- Reaction time and anticipatory skill of athletes in open and closed skill-dominated sport Leila Nuri, Azadeh Shadmehr, Nastaran Ghotbi, Behrouz Attarbashi Moghadam
- Differences in lung function, bronchial hyperresponsiveness and respiratory health between elite athletes competing in different sports Guro P Bernhardsen, Julie Stang, Thomas Halvorsen, Trine Stensrud
- Strength, power and aerobic capacity of transgender athletes: a cross-sectional study Blair Hamilton, Andrew Brown, Stephanie Montagner-Moraes, Cristina Comeras-Chueca, Peter G Bush, Fergus M Guppy, Yannis P Pitsiladis

