measure the thickness of the SAT in the supra umbilical scar regions using the US.
Objectives: To evaluate the intra-rater reliability for measuring supra-abdominal SAT thickness in the US in adults.
Methods: We evaluated 44 participants (22 women and 22 men), aged between 20 and 42 years. For each gender, 12 eutrophic and 10 overweight participants were included. The participants were submitted to two days of SAT thickness evaluation, with a difference of 7 days between evaluations, using ultrasound (Ultrasound GE Healthcare Venue 40®). The measurements were performed by a linear transducer with a frequency of 12 MHz, positioned transversally one centimeter above and one centimeter below the umbilical scar. The evaluations were always performed by the same evaluator. Three measurements were taken in each region, and the three measurements' average was used. Intra-rater reliability was evaluated using the intraclass correlation coefficient (ICC). The ICC classification was considered low (<0.50), moderate (0.50-0.75), good (0.75-0.90), and excellent (>0.90) correlation. The level of statistical significance was set at $p<0.05$.
Results: Participants were characterized according to age (females: 25(23-32 years); males: 25(23-29)), body mass (females: 63.85$\pm$ 9.96; males: 78.93$\pm$11.03), height (females: 1.62$\pm$0.06 and males: 1.77$\pm$0.05), and body mass index (females: 24.20$\pm$3.47 and males: 25.22$\pm$3.30). The supra-abdominal ICC in women was 0.82 (confidence interval = 0.62-0.92), and in men, it was 0.91 (0.81-0.96). The infra-abdominal ICC for women was 0.77 (0.52-0.90) and for men was 0.89 (0.75-0.95). The reliability of the supra-abdominal SAT thickness measurement in women was considered good and in men it was excellent. On the other hand, in the infra-abdominal region, it was considered good for both women and men.
Conclusion: Ultrasonographic assessment for supra and infra-abdominal SAT can be performed in adults. Furthermore, there are differences between the reliability of measurements in the supra-abdominal region in men and women.
Implications: The US is characterized as a safe, cost-effective, and accurate method. Besides being painless, non-invasive, and not exposing individuals to ionizing radiation. Considering that the US is a method highly dependent on the skill of the operator, this study evaluated the intra-rater reliability for assessing the thickness of the abdominal SAT of the supra and infra-abdominal regions in men and women. This amplified assessment can be used to track changes in at-risk populations and throughout aging.
Keywords: Subcutaneous Fat, Abdominal, Obesity Abdominal, Cardiovascular System

Conflict of interest: The authors declare no conflict of interest.
Acknowledgments: To the funding agencies (CAPES and FAPESP - Proc. 2016/22215-7), all research participants, and Fiolly Isabô Leal for the contribution.
Ethics committee approval: Federal University of São Carlos (process number: 5.804.946).

https://doi.org/10.1016/j.bjpt.2024.100613

17

CLINICAL AND FUNCTIONAL EFFECTS OF SUPERVISED AND UNSUPERVISED CARDIOPULMONARY REHABILITATION IN POST-COVID-19 SYNDROME: STUDY PROTOCOL FOR A RANDOMIZED CONTROLLED CLINICAL TRIAL

Ana Carolina Sebastião da Silva[1], Luis Felipe da Fonseca Reis[1], Agnaldo José Lopes[1], Arthur de Sá Ferreira[1]
[1] *Postgraduate in Rehabilitation Sciences, Centro Universitário Augusto Motta (UNISUAM), Rio de Janeiro, Rio de Janeiro, Brazil*

Background: COVID-19 is an emerging pandemic disease caused by severe acute respiratory syndrome (SARS-CoV-2), and although most of those infected are asymptomatic or have mild symptoms, some develop severe symptoms that can affect their quality of life—and functional capacity. SARS-CoV-2 leads to the involvement and sequelae of systems, especially the musculoskeletal, in addition to the respiratory system. Some of these symptoms persist for a long period, called post-COVID-19 syndrome, directly interfering with the functional capacity and quality of life of these participants. Cardiopulmonary Rehabilitation exercises are focused on restoring functional capacity in patients affected by cardiopulmonary diseases.
Objectives: To evaluate the clinical and functional effects of a quarterly Cardiopulmonary Rehabilitation exercise program for participants with post-COVID-19 syndrome.
Methods: Randomized controlled clinical trial, with three parallel groups and intention-to-treat analysis. This study will be carried out in Rio de Janeiro, RJ, Brazil. A total of 90 participants will be randomized into three groups, one of which will be a control, one will perform face-to-face Cardiopulmonary Rehabilitation exercises (12 weeks, twice a week), and another with home intervention (12 weeks of exercises guided by a self-explanatory booklet). Recruitment began in July 2022. The control group will be instructed not to carry out any intervention during this period. The expected results will demonstrate the clinical effects of a supervised Cardiopulmonary Rehabilitation program and a self-performed exercise program guided by a validated booklet for handling musculoskeletal disorders and persistent symptoms. The results will be analyzed using mixed linear models of repeated measures. The study is double-blind since neither the volunteers nor the professional who performed the protocol are aware of the objectives and clinical valence that will be measured by the study.
Discussion: The findings of this study will help in clinical decision-making regarding the need to carry out a cardiopulmonary rehabilitation program in person or at home, understanding if it is fundamental for the effectiveness of the treatment of this population.
Trial registration: This trial was prospectively registered in Clinical Trials (NTC20457) in May 2022.
Keywords: COVID-19, Cardiopulmonary Rehabilitation, Everyday activities

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: I thank God and all those who contributed in some way to the completion of this work.
Ethics committee approval: Centro Universitário Augusto Motta (UNISUAM), CAAE 57251222.3.0000.5235; ClinicalTrials.gov- ID NTC20457.

https://doi.org/10.1016/j.bjpt.2024.100614

18

ASSESSMENT OF EXERCISE CAPACITY IN INDIVIDUALS HOSPITALIZED FOR COVID-19: COMPARISON BETWEEN 30 DAYS AND 12 MONTHS AFTER HOSPITAL DISCHARGE

Ana Carolina Vaz dos Santos[1], Daiane Roberta Viana[1], Lívia Maria Petilli Zopelari[1], Marielle Cristina Luciano[1], Maria Gabriela Colucci[1], Valéria Amorim Pires Di Lorenzo[1]
[1] *Postgraduate Program in Physiotherapy. Federal University of São Carlos (UFSCar), São Carlos, São Paulo, Brazil*

Background: The 6-Minute Step Test (6MST) has been used to evaluate exercise capacity and physiological responses during the test in different populations, to assess physical performance for the activity of stepping up and down a step, as well as check for possible symptoms that the individual may present during the test. The use of 6MST to evaluate the exercise capacity of individuals who were