

was observed that physical activity level significantly interferes with the evaluated functional capacity variables.

Conclusion: Individuals with SpA have worse functional capacity than healthy individuals, which may be, at least in part, a result of the lower level of physical activity.

Implications: From this study, it is suggested that physiotherapists and other health professionals include in their conduct the encouragement of physical activity regular practice for individuals with SpA, not only in the context of Primary Care, but also in the outpatient setting, with the aim to attenuate or prevent the deleterious effects of a sedentary lifestyle on functional capacity.

Keywords: Rheumatology, Fitness Trackers, Exercise Test

Conflict of interest: The authors declare no conflict of interest.

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VISUAL ASSESSMENT WITH COMPUTATIONAL TOOL IN INFANTS EXPOSED TO GESTATIONAL COVID-19: CROSS-SECTIONAL STUDY

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Background: Current literature has shown that COVID-19 during pregnancy can have a negative impact on maternal-fetal clinical outcomes, including miscarriages, preterm birth, and increased mortality (MEDEIROS et al., 2021; YANG et al., 2020). More recently, an association was demonstrated between the experience of the pandemic and a higher risk of delay in the development of fine motor skills and communication in 1-year-old children (HUANG et al., 2021). In adults, multiple neuro-ophthalmological manifestations have been described in association with COVID-19: visual field defects, optic nerve dysfunctions, eye movement abnormalities and nystagmus (GOLD; GALETTA, 2021). These findings raise concerns about the risks that gestational COVID-19 may bring to healthy vision development in children. However, these visual outcomes have been little explored in this age group so far, leading to difficulty in the early diagnosis of these conditions. With this, there remains a scientific gap on the risks in the visual development of the child population exposed to the coronavirus.

Objective: To evaluate fixation on the horizontal visual tracking in children of mothers exposed to gestational COVID-19.

Methods: This is a cross-sectional study. The evaluator did a stimulus 25cm from the child's face with the optotype with a figurative face from the Visual Battery by Ricci in horizontal visual tracking. The response was filmed with a camera to capture the near-infrared spectrum, and the filming was processed by software developed for

temporal facial mapping and iris movement. Visual fixation was analyzed in the videos of horizontal visual tracking processed by the software by 2 independent researchers who classified the visual fixation as unstable (<3s) or stable (≥3s) and recorded its total time. Statistical analysis was performed using the Statistica® 13.0 software, with a description in mean±SD. Between groups, the t-test was applied with p<0.05.

Results: The study included 15 infants separated into 2 groups, the COVID group with 7 participants, and the Control group with 8 participants. The sample showed birth weights of 3198±398 grams, and 1824±1040 grams, and gestational age of 38±1 weeks, and 33±5 weeks, in the COVID and Control groups, respectively. Unstable visual fixation was found in 14% of the COVID Group and 38% of the Control. The total fixation time was: 9.42 seconds ±6.32 (COVID), and 4.62 seconds ±3.11 (Control); however, it was not statistically significant (p=0.07).

Conclusion: Gestational COVID-19 has not been shown to influence stable fixation and total visual fixation time in infants.

Implications: The results of the study show that the coronavirus pandemic has had a smaller impact on the visual development of infants, which can be associated with mitigation measures and vaccination of the population.

Keywords: Eye movements, Premature birth, Vision screening

Conflict of interest: The authors declare no conflict of interest.

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USABILITY AND FEASIBILITY OF IMMERSIVE VIRTUAL GAMES IN THE TREATMENT OF PEOPLE WITH PARKINSON'S DISEASE

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Background: Parkinson's disease (DP) is a chronic, neurodegenerative, and progressive disease that affects the central nervous system, compromising motor and cognitive functions, which impact quality of life and activities of daily living. Physiotherapy has explored virtual reality games as a therapeutic modality in neurorehabilitation through exergames, which are games that require body movement. However, there is still no consensus regarding the selection of immersive virtual reality (RVI) exergames aimed at training upper limbs (MMSS), making it necessary to explore innovative and immersive approaches.

Objectives: This study aimed to evaluate the feasibility and usability of selected exergames in Quest 2, prioritizing cognitive and motor aspects aimed at upper limbs in individuals with PD.

Methods: This is a quasi-experimental longitudinal clinical trial to assess the usability and feasibility of RVI games using Quest 2 in individuals with DP. A sample of 10 people diagnosed with DP, stable in relation to dopaminergic medication, in stages I to III of the Hoehn & Yahr classification, between 40 and 85 years old, with normal or corrected visual and auditory acuity and a minimum education of 4 years of formal study. 4 games were carefully selected: FIT-XR, Fruit Ninja VR, Beat Saber and Final Soccer. The interventions took place in two sessions with an interval of 30 minutes between them.

The level of safety in using Quest 2 was assessed using the Simulator Sickness Questionnaire (SSQ) and the usability of the system was assessed using the System Usability Scale (SUS); user experience was evaluated with the Game Experience Questionnaire (GEQ). Finally, the evolution of learning in games was evaluated according to the scores registered in each session.

Results: There were no complications during the consultations, the score related to the appearance of side effects in the SSQ was minimal (9.3), indicating no symptoms that prevented the continuation of the training. The games were approved according to the scores obtained in the GEQ (negative experiences 0.5/4, tiredness 0.25/4, and positive experiences 3.85/4). The usability of the system was considered approved with excellence by the SUS (94.5/100). Total scores between attempts in games steadily increased even after the 30-minute break.

Conclusion: The results obtained suggest the usability and feasibility of Quest 2, in addition to the existence of a therapeutic potential for the four games, being necessary; however, studies with longer training time and with larger samples confirm these preliminary results.

Implications: The results of this study indicate progress in the use of exergames, with Quest 2 having the potential to be another resource in the therapeutic management of PD; this was a pilot study that could serve as a basis to consolidate evidence that will guide physiotherapists in the use of devices for immersive virtual reality in an efficient, safe, comfortable, and innovative way.

Keywords: Parkinson's disease, Feasibility, Virtual reality

Conflict of interest: The authors declare no conflict of interest.

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TELEREHABILITATION VERSUS A DIGITAL BOOKLET FOR PATIENTS WITH CHRONIC NON-SPECIFIC NECK PAIN: STUDY PROTOCOL OF A RANDOMIZED CONTROLLED TRIAL

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Background: Neck pain is a common disabling condition that directly affects the performance of daily life activities and participation in professional, social and sports activities, being one of the main causes of functional disability in the world. Telerehabilitation-based treatments have demonstrated their importance due to their ease of use, low cost, and tendency to improve clinical outcomes. However, in the current scientific evidence, there is a lack of studies that exemplify telerehabilitation protocols in individuals with chronic non-specific neck pain.

Objectives: The study was to verify the effect of a telerehabilitation protocol versus an online self-care booklet in individuals with non-specific chronic neck pain.

Methods: This is a blinded, randomized, controlled clinical trial that compares a telerehabilitation program for neck pain with a control group that will receive an online self-care booklet. Seventy patients will be recruited. Assessments and measures will perform before treatment, after 6 weeks and at 3 months after randomization. For this purpose, assessments and follow-ups will be carried out completely remotely, through online platforms (Google Meet, smartphone messages, email) and telephone calls. The primary outcome will be functional disability measured by the Neck Disability Index questionnaire consisting of 10 items. Secondary outcomes will be pain intensity measured using the numeric rating scale, perceived global effect measured using the perceived global exertion scale, patient self-efficacy using the Pain Self Efficacy Questionnaire, quality of life using the SF-12, and kinesiophobia through the Scale of Kinesiophobia. This clinical trial was approved by the Research Ethics Committee (no. 5.458.454) and was registered in the Brazilian Registry of Clinical Trials (no. RBR-10h7khvk).

Results: No results so far.

Conclusion: This study will examine whether the telerehabilitation treatment approach is superior to the self-care booklet in patients with chronic neck pain, functional disability, pain intensity, perceived global effect, patient self-efficacy, quality of life and kinesiophobia.

Implications: The study will impact clinical practice because telerehabilitation is a treatment option that aims to promote improvements in the functional disability and pain intensity of individuals with nonspecific chronic neck pain. This form of treatment appears as an alternative to ease the logistical and organizational conditions promoted by face-to-face care.

Keywords: Telerehabilitation, Neck Pain, Exercise Therapy

Conflict of interest: The authors declare no conflict of interest.

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Ethics committee approval: This clinical trial was approved by the Research Ethics Committee of the Federal University of Pará, Brazil (no. 5.458.454) and was registered in the Brazilian Registry of Clinical Trials (no. RBR-10h7khvk).

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EFFECTIVENESS OF PERCUSSIVE MASSAGE USING A PORTABLE DEVICE ON MUSCLE PAIN IN RECREATIONAL RUNNERS: RANDOMIZED CLINICAL TRIAL PROTOCOL

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Background: The increase in the number of running fans has made it one of the most popular activities in the world in recent years. Running requires repeated contractions, imposing a great mechanical load and tension on the lower limbs. As a result of the increase in shear stress, tissue can be altered, inducing neuromuscular functional impairments, damage to muscle fibers, edema, and muscle pain. Insufficient recovery from exercise-induced muscle damage impairs performance. To minimize the deleterious effects of muscle pain, research seeks to investigate which recovery technique is more effective. Among recovery strategies, local percussive massage using devices has gained notoriety in clinical practice. Some of the benefits of its use are the decrease in pain, gain in strength and