*Methods:* A randomized controlled clinical trial will be carried out with 209 workers over the age of 18 who work in an institution using computers for between 4 and 8 hours a day. The physiotherapy intervention will consist of occupational physiotherapy, which will be carried out daily (Monday to Friday), lasting 15 minutes, at pre-scheduled times, in the workplace itself. Posture school will also be carried out by means of a powerpoint presentation for each participant at their workstation, in which, initially, an explanation will be given about the structures of the body, functionality and posture so that the worker can single-handedly protect their health, reduce discomfort and the risk of injury and increase productivity. Next, possible ergonomic corrections will be made to the workstation, such as adjusting the height of the video monitor and chair, organizing the work table and equipment. Each school will last 30 minutes. There will also be two lectures: the first on ergonomics and the second on self-care. These lectures will be held in an auditorium on a pre-scheduled day and time, and each will last one hour.
*Results:* It is hoped that after this study, following the biopsychosocial model and the ICF, which interrelate aspects linked to functionality (body structure and function, activity and participation) with contextual factors (personal and environmental), the effects of physiotherapeutic intervention will be observed. Data will be collected according to 5 domains, in which the following instruments have been chosen for each category: Domain 1: body functions and structures (Nordic Musculoskeletal Questionnaire (MNQ)); Domain 2: activities (Work Limitations Questionnaire (WLQ)); Domain 3: participation (Short Form Health Survey (SF-36)); Domain 4: context factors (personal and environmental) (Sociodemographic Questionnaire; International Physical Activity Questionnaire - SHORT VERSION - IPAQ and Couto Checklist for assessing ergonomic conditions in workstations and computerized environments (2014 version)) and Domain 5: World Health Organization Disability Assessment Schedule (WHODAS 2.0). Implications: The existence of a physiotherapeutic intervention protocol allows for the development of scientific knowledge that will provide physiotherapists with efficient choices of conduct, generating opportunities for better action for this population. In addition to promoting the value of physiotherapists in the job market.
*Implications:* The existence of a physiotherapeutic intervention protocol allows for the development of scientific knowledge that will provide physiotherapists with efficient choices of conduct, generating opportunities for better action for this population. In addition to promoting the value of physiotherapists in the job market.
*Keywords:* Computers, Physical Therapy Specialty, Occupational Health

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## CONSTRUCT VALIDITY ANALYSIS OF NEED FOR RECOVERY WITH 7 ITEMS (NFR-7)

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*Background:* The Need for Recovery scale (NFR) assesses early symptoms of work-related fatigue. It is based on the daily recovery process from short-term fatigue, considering rest opportunities during and after the workday. If recovery is insufficient, symptoms may persist and accumulate over time. Structural analysis have shown that the scale consists of seven items. However, the construct validity of the seven-item NFR (NFR-7) has not yet been tested in Brazilian workers, only its 11-item version has been evaluated.
*Objectives:* To assess the construct validity of the NFR-7 in hospital workers.
*Methods:* This cross-sectional study involved the simultaneous application of the NFR-7 (scored from 0 to 100%) and the Borg CR-10 Scale via an online form to a convenience sample of healthcare workers. The sample consisted of 48 healthcare workers in both clinical and administrative roles at a university hospital. Participants were invited via institutional email, social media announcements, and internal hospital communication channels. The Spearman correlation test was used to assess the correlation between the two scales. A correlation of = 0.10 was considered small, = 0.10 and $<$ 0.50 moderate, and = 0.50 high. The significance level of 0.05 was adopted. Statistical analysis was conducted using R software v4.2.0 (R Core Team, 2022) with the 'stats' package.
*Results:* The mean age of the sample was 40 $\pm$ 6.8 years, with a majority of participants being female (66%), white (73%), and married (60%). The mean NFR-7 score was 44 $\pm$ 21%, and the mean Borg Scale score was 4.0 $\pm$ 2.4. A high and significant correlation was found between NFR-7 and Borg Scale (r = 0.62; 95% CI: 0.41, 0.77; p $<$ 0.001).
*Conclusion:* The NFR-7 demonstrated construct validity for use among healthcare workers.
*Implications:* The NFR-7 version is a valid tool for occupational health services and research in worker health. However, further studies with larger samples and additional evaluations of its measurement properties are needed.
*Keywords:* Need for recovery, Construct validity, Worker

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## WORK ABILITY AMONG BRAZILIAN WORKERS DURING THE COVID-19 PANDEMIC: A 3-YEAR LONGITUDINAL STUDY

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*Background:* The Work Ability Index (WAI) is a worldwide instrument to assess the workers physical and mental capacity to perform work activities, considering the social, psychological and economic context. Work ability may have been affected by the COVID-19 pandemic, reducing workers' capacity and increasing work demands. Monitoring the WAI allows the identification of possible changes in the workability and, consequently, the management of occupational health services to prevent absenteeism and early retirement.
*Objectives:* To describe the workability of Brazilian workers during the COVID-19 pandemic in a longitudinal study with 3 years of follow-up.
*Methods:* Longitudinal study of the IMPPAC cohort (Implications of the COVID-19 pandemic on psychosocial aspects and work ability among Brazilian workers). Data from the baseline (2020) and three annual assessments (2021, 2022 and 2023) were included. The sample was composed by 1211 workers in 2020, 633 workers in 2021, 494 workers in 2022 and 467 workers in 2023. Data collection took place from June 29th to September 29th of each year. A

sociodemographic and occupational questionnaire was used to obtain sex, age, marital status, education, among others. The WAI consists of seven items, with scores ranging from 7 to 49 points and classified as low (7-27 points), moderate (28-36 points), good (37-43 points) and excellent (44-49 points). Data was descriptively analyzed.
*Results:* The majority of the sample was composed by women (51,9%), between 31 and 40 years old (37,3%), married (54,7%) and having completed higher education (83,2%). In 2020, 49% of workers had good, 25% had excellent, 23% moderate and 3% low workability. In 2021, 47% had good, 28% excellent, 22% moderate and 3% low workability. In 2022, 50%had good, 27% excellent, 22% moderate and 1% low workability. In 2023, 43% had good, 32% excellent, 22% moderate and 3% low workability.
*Conclusion:* Brazilian workers from different economic sectors had immediate and late impacts on occupational health during and after the COVID-19 pandemic. In the first year there was a reduction from good to moderate, in the second year the WAI increased from good to excellent and there was a reduction in moderate frequency. In the third year of follow up there was a reduction in moderate and good frequencies and an increase in excellent.
*Implications:* Implications: It is necessary to implement individual and collective actions to maintain the working capacity of Brazilian workers, with a focus on those with moderate and low workability.
*Keywords:* Work ability, work, pandemics

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## TRANSCRANIAL DIRECT CURRENT STIMULATION FOR REDUCING IRRITABILITY IN CHILDREN WITH AUTISM SPECTRUM DISORDER

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*Background:* Autism Spectrum Disorder (ASD) is a neuropsychological condition that affects behavior and communication. Irritability is a common symptom, manifesting as outbursts of anger and difficulties with changes. Transcranial Direct Current Stimulation (tDCS) is a promising technique for modulating these symptoms.
*Objectives:* Investigating the effect of tDCS combined with virtual reality on reducing irritability in children with ASD.
*Methods:* A quasi-experimental study was conducted with 18 children diagnosed with ASD. The Childhood Autism Rating Scale (CARS) and the Affective Reactivity Index (IRA) were administered before and after the intervention. For statistical analysis, the Shapiro-Wilk test and paired t-test were used.
*Results:* There was a statistically significant difference in irritability levels after the intervention ($p = 0.00$), suggesting that tDCS had a positive impact on reducing the symptom.
*Conclusion:* tDCS combined with virtual reality demonstrated efficacy in reducing irritability in children with ASD, making it a promising alternative for managing these symptoms.
*Implications:* The results reinforce the need for randomized clinical trials to confirm the effects of tDCS and its clinical applicability.
*Keywords:* Transcranial Direct Current Stimulation, Irritability, Autism Spectrum Disorder

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## SINGLE-PULSE TMS IN ALS DIAGNOSIS: EMERGING INSIGHTS FROM A SCOPING REVIEW

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*Background:* Amyotrophic Lateral Sclerosis (ALS) is a progressive neurodegenerative disease with no precise biomarkers that makes early diagnosis challenging. The current diagnostic criteria, such as the El-Escorial and Gold Coast criteria, have limited sensitivity, often delaying neuroprotective treatments and clinical trial recruitment. Transcranial Magnetic Stimulation (TMS) has emerged as a valuable tool to assess corticospinal pathway integrity, offering a potential alternative in detecting early cortical hyperexcitability. Despite promising findings, inconsistencies in methodology and protocol standardization remain inconclusive.
*Objectives:* This study aims to evaluate the effectiveness of Single-Pulse TMS in ALS diagnosis, addressing key gaps and challenges in existing research.
*Methods:* In this scoping review, we searched for articles on Single-Pulse TMS using parameters like Resting Motor Threshold (RMT), Central Motor Conduction Time (CMCT), Motor Evoked Potential (MEP), and Silent Period (SP). The PICO strategy guided the research question, ensuring relevant evidence retrieval. Only cross-sectional studies were included, selected from Scopus, PubMed, Embase, and Web of Science (May 2021—Feb 2025). Inclusion criteria required ALS diagnosis using Single-Pulse TMS, while exclusions involved non-relevant techniques, ALS treatment, or language restrictions. Data extraction included patient demographics and disease characteristics. Methodological quality was assessed using JBI checklists for cross-sectional studies, addressing potential biases.
*Results:* A total of 1,222 articles were identified across four databases, with 19 totally meeting inclusion criteria. The JBI appraisal identified 11 studies as high quality and eight as moderate quality, based on criteria assessing bias, methodological rigor, and validity in cross-sectional research. The studies included 730 ALS patients and 526 controls. Findings in the majority showed reduced SP, lower MEP amplitude, prolonged CMCT, and shorter RMT. Five studies had ambiguous cortical hyperexcitability results.