

10% nursing technicians, and 10% physicians, with a mean of  $15.56 \pm 9.36$  years of training. The process of linking responses about the NICU environment and the ICF codes generated a total of 33 categories of environmental factors.

**Conclusion:** Based on the various physical, attitudinal, and social aspects considered as barriers and facilitators by professionals working in NICUs, it was possible to identify 33 categories of ICF environmental factors related to this environment, 14 of them at level 2 and 19 at level 3.

**Implications:** From the identification of the coders, we can proceed with the next steps of the research to arrive at the final model of an ICF checklist of environmental factors for the NICU. This checklist is essential to understand, classify and evaluate the environmental factors involved in the NICU and to encourage the creation of assessment instruments focused on these aspects.

**Keywords:** Environmental Exposure, Neonatal ICU, ICF

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## RELATIONSHIP BETWEEN SKIN TEMPERATURE AND BODY COMPOSITION WOMEN

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**Background:** Infrared Thermography (IT) is a tool for the investigation of physiological functions through changes in blood flow that are associated with the control of Skin Temperature (Tsk). Tsk depends on extrinsic factors, such as environmental temperature and humidity; and intrinsic factors, such as anthropometric characteristics, circadian rhythm, age and sex. Sex, menstrual cycle, use of exogenous hormones, subcutaneous fat, and metabolic rate can affect female Tsk. Although there are already studies that relate temperature to body fat percentage, there are few inconclusive studies that correlate body composition with skin temperature by specific area.

**Objective:** To correlate skin temperature and body composition by body segments of women in the physiological menstrual cycle, use of exogenous hormones, and menopause.

**Methods:** This is a prospective observational study. Participants were 45 volunteers equally allocated into three groups: Exogenous Hormone Group (EHG) [ $24.53 \pm 4.30$  years,  $58.59 \pm 8.46$ kg,  $161.13 \pm 6.67$ cm] Physiological Menstrual Cycle Group (PMCG) [ $26.33 \pm 4.83$  years,  $58.12 \pm 10.02$ kg,  $161 \pm 5.53$ cm] and Menopause Group (MG) [ $57.13 \pm 8.79$  years,  $68.76 \pm 15.82$ kg,  $157 \pm 7.16$ cm]. The EHG volunteers use combined oral contraceptives, while the others did not use any other type of medication or hormonal supplementation. To control the circadian rhythm and the phase of the menstrual cycle, all of them underwent segmental body composition measurements (muscle mass and fat in kilograms) using an InBody 120 bioimpedance scale, and skin temperature measurements were made using a FLIR model T-360 camera once a week, at the same time, over a 28-day period. The areas of interest were the breast region,

abdomen, trunk, lumbar spine, breech, upper and lower limbs. For correlation analysis between skin temperature and body composition a Pearson correlation test was performed using SPSS, version 21.

**Results:** There was no significant correlation ( $P > 0.05$ ) between muscle mass and skin temperature of the evaluated areas in any of the groups or evaluation times. Regarding to body fatness, it was observed that independently of the phase from the menstrual cycle, the PMCG presented a negative correlation between temperature and trunk fatness ( $r = -0.780$ ,  $P < 0.01$ ) and between upper limbs fatness and breast temperature ( $r = -0.655$ ,  $P < 0.01$ ) and abdomen ( $r = -0.638$ ,  $P < 0.01$ ). The EHG group showed significant negative correlations between body fat and temperature of breast ( $r = -0.712$ ,  $P < 0.01$ ), abdomen ( $r = -0.701$ ,  $P < 0.01$ ), posterior trunk (scapulae region) ( $r = -0.680$ ,  $P < 0.01$ ), right lower limb ( $r = -0.672$ ,  $P < 0.01$ ) and upper limbs ( $r = -0.686$ ,  $P < 0.01$ ). The MG showed only negative correlation ( $r = -0.591$ ,  $P < 0.01$ ) between fat and skin temperature of the posterior trunk.

**Conclusion:** Skin temperature has an inverse relationship with fatness of the assessed region, while resting muscle mass has little impact on the distribution of skin temperature in women at different stages of life.

**Implications:** The study shows the need to consider anthropometric characteristics when analyzing skin temperature by IT.

**Keywords:** Thermography, Menstrual cycle, Bioimpedance

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## ANTHROPOMETRIC MEASURES AND PAIN INFLUENCE THE STAIR CLIMB TEST PERFORMANCE IN PATIENTS WITH KNEE OSTEOARTHRITIS?

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**Background:** For the evaluation of physical function in the population with knee osteoarthritis (KOA), one of the tests recommended by the Osteoarthritis Research Society International (OARSI) is the Stair Climb Test, so it is important to investigate which factors can influence performance in the test.

**Objective:** To investigate whether sex, age, BMI, and pain intensity interfere with the performance of the population with KOA in the Stair Climb Test.

**Methods:** The present study is an observational cross-sectional study. Participants over 45 years of age, of both sexes, with clinical diagnosis of KOA, according to the American College of Rheumatology (ACR) criteria, and pain intensity greater than 4, evaluated by the Numeric Rating Scale (NRS), were recruited. Anthropometric data were collected through an initial anamnesis, followed by the application of the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) questionnaire. Subsequently, participants were submitted to the Stair Climb Test. Participants were instructed to climb and descend a flight of 11 stairs, each 20 cm in height, quickly but safely. The sum of the times for climbing and descending was recorded by the evaluator. The Statistical Package for Social Sciences, version 21.0, was used for the multiple linear regression analysis, and the significance level was set at 5%.

**Results:** 100 participants were included, 52% of whom were female, with a mean age of 60 years. The mean BMI of the participants was 29.64 with a mean pain intensity of 9.5 by the specific domain of the WOMAC questionnaire and Stair Climb Test performance of 22.79 seconds. The final regression model (Table 1) indicated that sex ( $p = 0.029$ ), age ( $p = 0.001$ ), BMI (0.004), and pain by the specific domain of the WOMAC ( $p = 0.003$ ) may explain 42% of the variability in Stair Climb Test performance.

**Conclusion:** The present study demonstrates that there is an association between sex, age, BMI, and painful symptoms in the performance of the Stair Climb Test, which may be potential factors that interfere with the performance of subjects with KOA.

**Implications:** Understanding the influence of such factors helps in the interpretation of the performance of patients with knee osteoarthritis in the stair climb test.

**Keywords:** Knee osteoarthritis, Rheumatology, Physiotherapy

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### SUBGROUP ANALYSIS IN SYSTEMATIC REVIEWS OF PHYSICAL THERAPY INTERVENTIONS PUBLISHED IN HIGH IMPACT JOURNALS: A METAEPIDEMIOLOGICAL STUDY

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**Background:** Systematic reviews (SRs) publications focusing on physical therapy rehabilitation have significantly increased. SRs are known to present the highest level of scientific evidence, thus constituting the most reliable type of research to be used in clinical decision-making in healthcare. In these studies, subgroup analysis is usually used as a statistical control technique to investigate sources of heterogeneity and explore treatment effects in individualized subgroups. However, the analyses recorded in the protocol are not always reported in published SRs, with complete absence, partial reduction in the number of analyses, and even the inclusion of new subgroups not protocolled.

**Objectives:** To evaluate the frequency with which physical therapy intervention SRs, published in high-impact journals, perform subgroup analyses that are previously reported in protocols or add post-publication unplanned analyses.

**Methods:** The Rayyan software was used by two independent authors to select all SRs published between March 2020 and August 2022 in the 10 highest impact rehabilitation journals according to the Journal Citation Reports (JCR). Disagreements were resolved by an experienced third reviewer. Subgroup analysis described in the protocol and reported in final publications were compared using descriptive statistics.

**Results:** 3,032 records were identified, of which 2,927 were excluded for not meeting the inclusion criteria. 105 SRs published in journals with impact factors ranging from 4.76 to 10.71 (JCR, 2021) were included. Of these, 60 (57.1%) reported subgroup analyses that were consistent with what was recorded in the protocol; 29 (27.6%) did not report any of the previously registered analyses, and 16 SRs (15.3%) added unplanned analyses in the protocol, with an

average of 1.6 new subgroup analyses included in the final publication.

**Conclusion:** The findings indicate that 43% of SRs present significant discrepancy between the subgroup analyses planned in registered protocols and those reported in published SRs, even in high-impact scientific journals. Thus, it is essential that SRs conducted in the physical therapy preserve as much as possible in the final text, the subgroup analyses planned in their respective protocols, making their results more reliable and accurate for researchers and clinicians in the field.

**Implications:** This study has the potential to highlight shortcomings in the methodological strategies used in SRs in the physical therapy field and, consequently, raise awareness for greater care in the planning and execution of studies that are more transparent and faithful to previously registered protocols, as well as greater caution in interpreting SR results, even if they come from sources considered to be reliable.

**Keywords:** Evidence-Based Practice, Systematic Reviews as Topic, Rehabilitation

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### MOTOR AND FUNCTIONAL EVALUATION OF CHILDREN EXPOSED IN THE INTRAUTERINE PERIOD TO THE ZIKA VIRUS

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**Background:** The Zika virus (ZIKV) is an arbovirus of the Flaviridae family, which brought many repercussions for causing microcephaly in newborns (NBs) of mothers who became ill during the gestational period. Neurological findings and alterations presented in the neuropsychomotor development of these children characterized Congenital Zika Virus Syndrome (SCZ), including delay in motor, cognitive, and speech development, visual and auditory alterations, epilepsy, and cerebral palsy. Among the main neurological findings are described severe microcephaly with cortical atrophy and malformations. So far, it is known that the delay in the NPMD of children will depend on the degree of CNS injury and in what gestational age period the infection occurred. In this sense, the earlier the intervention measures are applied to these children, the smaller the impacts on their development and future lives.

**Objectives:** To evaluate the motor and functional characteristics of children exposed in the intrauterine period to ZIKV.

**Methods:** Cross-sectional study with 16 children aged between 6 and 36 months of both sexes, residents of Pará state, exposed to ZIKV infection during pregnancy and evaluated by the Zika Project Physiotherapy team, developed at the IEC. Strength was assessed by Medical Research Council (MRC) scale and muscle tone using the modified Ashworth scale (ASW). In addition, the Gross Motor Function Classification System (GMFCS), the Mini-Manual Ability Classification System (MACS), developed to assess the ability to handle objects during activities of daily living, and were applied the Pediatric Assessment of Disability Inventory (PEDI).