dorsiflexion and inversion range of motion were close to those described in studies that evaluated adult women. In muscle strength findings, the ballet dancers showed a significant reduction of up to 50% in ankle dorsiflexors, inverters and evertors. However, an increase of 97.96% was observed in the muscle strength of the plantar flexors compared to the values described in the literature.
Conclusion: The ballet dancers showed above-average range of motion values for plantar flexion and eversion movements and muscle strength for plantar flexors muscles. However, in the other evaluations, the results were similar or lower than those reported in the literature for range of motion and muscle strength.
Implications: Describing the changes in the range of motion and muscle strength of the dancers improves the knowledge of the relationship between the performance and the physical characteristics of the participants. Thus, they can understand the functioning of their body structure and map the risk of injuries, improving the execution of the dance.
Keywords: Classical ballet, Range of motion, Muscle strength

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ACUTE EFFECT OF WHOLE-BODY PHOTOBIOMODULATION ON AGILITY TEST IN TRAINED AND HEALTHY INDIVIDUALS: PRELIMINARY STUDY

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Background: Whole-body photobiomodulation (PBM) emitted by LEDs (Light-Emitting Diodes) has been applied for sports performance. However, there are no studies with the use of whole-body PBM in trained and healthy individuals with performance evaluation in an agility test (Illinois Agility Test).
Objectives: To evaluate the effects of whole-body PBM on the performance of trained and healthy individuals through the agility test.
Methods: Randomized, double-blind, crossover and placebo-controlled clinical trial with 10 young (22.60±3.27 years) trained (33.6±7 months of resistance training) and healthy (25. 42±2.13 kg/m^2), randomly allocated into two crossed arms: effective PBM (13.85J/cm^2; 46.17mW/cm^2) and placebo PBM (0J; 0mW), applied according to randomization. Participants received both treatments, with a 7-day washout between each therapy. The effective PBM was applied for 10 minutes, respecting a time of 6 hours and 5 minutes before the assessment of the agility test (2 sessions of irradiation). The agility test was performed according to its validation, which consisted of an area of 4 external cones (9.2 m long and 3.6 m wide) and 4 internal cones (3.1 m apart). Before starting the official test, a familiarization was performed (2 attempts). Thus, the participants were instructed to perform 3 maximum running attempts (180 seconds of rest between them) running from the starting line (1st cone to 2nd cone - 9.2 m), deviating from 4 central cones (twice) and a distance of 9.2 m to the finish line. The evaluations were carried out in three moments [baseline (BL) – 1st day; Effective PBM or placebo, according to randomization at the time of 24h-post BL; and after 7 days of washout]. The evaluations were standardized in the same period of the day and place of the BL. Data were analyzed for normality using the Kolmogorov-Smirnov test. For comparison purposes, the paired t test, mean, standard deviation and 95% confidence interval (CI) were used, considering a significance level of 5%.
Results: On average, there was no significant difference (p=0.963) between effective PBM [0.01±0.73; t(9) = -0.048, 95% CI -0.53 to 0.51] and placebo PBM. The time in seconds was lower in effective PBM [0.37±0.43; t(9) = 2.753, p=0.022, 95% CI 0.06 to 0.69] compared to BL. There was no significant difference for placebo PBM [0.36±0.55; t(9) = 2.095, p=0.066, 95% CI -0.02 to 0.76] compared to BL.
Conclusion: Whole-body PBM was not able to increase agility test performance (Illinois Agility Test) in trained and healthy individuals. However, is a preliminary study, there is a need for a larger sample size (n=40, calculated by paired t-test, two-tailed, considering a mean effect of 0.5, α of 5% and statistical power=80%) to clarify the results.
Implications: Although the findings do not confirm the hypothesis, it is necessary to investigate the use of whole-body photobiomodulation in trained people to improve performance in agility tests, as it is an innovative resource that could benefit the sports and/or clinical environment.
Keywords: Low-level Light Therapy, Running, Physical Functional Performance

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CLINICAL CHARACTERISTICS OF INDIVIDUALS WITH TRAUMATIC PATELLOFEMORAL PAIN: A CROSS-SECTIONAL STUDY

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Background: Patellofemoral pain (PFP) is defined as retro- or peripatellar pain, exacerbated by activities that overload the patellofemoral joint. PFP is one of the most common musculoskeletal disorders of the lower limbs and is associated with several clinical alterations (e.g., reduced subjective function, quality of life and knee muscle strength). The development of PFP is commonly associated with an insidious onset. However, recent evidence demonstrates a high prevalence of PFP after traumas to the knee joint (e.g., injuries and/or surgery). Seven out of 10 individuals report symptoms of PFP after traumas to the knee. Nevertheless, most studies are carried out in individuals with insidious PFP, whereas little is known about which alterations may be present in individuals with PFP of traumatic origin; and even if they are the same as those presented by individuals with insidious PFP.
Objective: To compare clinical features of individuals with traumatic, insidious PFP and asymptomatic individuals with or without a history of knee trauma.
Methods: Thirty-nine subjects with traumatic PFP, 38 subjects with insidious PFP, 40 asymptomatic subjects with no history of trauma, and 18 asymptomatic subjects with a history of trauma aged 18 to 35 years were enrolled (Ethics Committee Number: 5,110,075). Variables of interest included duration of symptoms, worst level of pain