

Background: Studies already showed that the practice of physical activity (PA) is an important factor in the physical function (PF) of older adults, as well as the sedentary behavior (SB) can be negatively influence. The COVID-19 pandemic and the need for restrictive measures, the older adults had to interrupt their participation in exercise programs (EP) and consequently adopted a more restricted lifestyle.

Objectives: To evaluate the relationship between SB, PA level and PF of older adults during the COVID-19 pandemic.

Methods: This is a cross-sectional study. Older adults (≥ 60 years), with preserved ambulation and participants in a multicomponent EP (3x50min during the week) were included. Participants were evaluated 18 months after PE interruption due to the COVID-19 pandemic. The ActivPAL3™ micro accelerometer was used to assess the time spent in SB and the PA level. The PF comprised handgrip strength, assessed by the Lafayette® hydraulic dynamometer (model J00105); lower limb strength, assessed by the 30-second sit-to-stand test (30STS); and functional mobility, assessed by the Timed Up and Go (TUG) test. Data normality was assessed using the Shapiro-Wilk test. The relationship between SB, PA level and PF data were analyzed using Pearson's correlation test. The Simple Linear Regression model was used for to verify the effect of time spent in SB and PA level in the PF variables that showed statistically significant correlations. Statistical analysis was performed using the IBM® SPSS Software (version 26.0) and a significance level of $p < 0.05$ was adopted.

Results: Forty-two older adults were included (73.86 ± 6.78 years, 88.10% female), with 477.03 ± 122.77 minutes per day spent in SB and the total of 7593.95 ± 3257.23 steps per day. The handgrip strength was 24.50 ± 6.41 kgf, they presented the total of 11.31 ± 2.67 repetitions in the 30STS and performed the TUG in 10.02 ± 2.27 seconds. Correlations were found between PA level and lower limb strength ($r = 0.38$, $p < 0.05$), handgrip strength ($r = 0.40$, $p < 0.01$) and functional mobility ($r = -0.42$, $p < 0.01$). In the simple linear regression analysis, it was observed that the PA level was able to explain 15.6% of the handgrip strength ($R^2 = 0.156$, $F = 7.41$, $p = 0.010$), 14.2% of the performance in the 30STS ($R^2 = 0.142$, $F = 6.60$, $p = 0.014$) and 17.9% of the performance in the TUG test ($R^2 = 0.179$, $F = 8.72$, $p = 0.005$).

Conclusion: The PA level was related to the PF of older adults after the interruption of PE during the COVID-19 pandemic. In addition, the findings suggest that the PA level may be an important predictor of PF in older adults.

Implications: The findings of this study highlight the need to implement public policies that increase the practice of PA in older adults, especially in critical situations, such as the COVID-19 pandemic.

Keywords: Aged, Physical Function, COVID-19

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

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Ethics committee approval: This study was approved by the Ethics Committee for Research on Human Beings of UFSCar (Ethical approval n° 4.126.247/2020).

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430

NORMATIVE DATA FOR THE SINGLE LEG HAMSTRING BRIDGE TEST IN MALE FOOTBALL PLAYERS

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Background: Hamstring muscle (HM) injuries are one of the most common injuries in soccer, accounting for up to 13% of all injuries in this sport. The single leg hamstring bridge (SLHB) test has been one of the clinical tests used to assess hamstring muscle function in athletes. It has been used as a marker of progress in rehabilitation and as a criterion for returning to sport. Therefore, the SLHB is presented as a measure with an important role in the prevention and treatment of IQS injuries. The SLHB is a test proposed by Freckleton et al. (2013) for clinical evaluation of the functional capacity of the HM in a practical way, with low cost and better applicability compared to isokinetic dynamometry. The test requires only one evaluator and a 60 cm high box and can be performed in different environments within the sporting context. It also proved to be a reliable test (intra-examiner intraclass correlation coefficient (ICC) = 0.77-0.89, inter-examiner ICC = 0.89-0.91). Its main outcome measure is given by the number of valid repetitions performed by the athlete until fatigue. Australian football players who performed worse on the preseason SLHB had a higher risk of injury to the HM during the season, with uninjured athletes achieving scores ≥ 26 repetitions on the test.

Objectives: The main objective of this study was to establish normative data for the SLHB and to investigate the association of the results of this test with the history of hamstring injuries in professional male soccer players.

Methods: This is a cross-sectional observational study. In this study, professional male soccer players from Cruzeiro Esporte Clube (CEC) aged between 15 and 40 years were submitted to the SLHB. Mean comparison tests (T-test or Mann-Whitney) will be performed to compare the SLHB result between groups with and without a history of IQS injury.

Preliminary Results: The athletes of the under-17 category of the CEC with an average age of 15.29 ± 0.46 , average mass of 67.6 ± 6.05 and average height of 177.73 ± 7.12 made an average of 14.75 ± 3.46 repetitions in the right lower limb and 14.89 ± 3.6 in the left in the SLHB test. No athlete had a history of HM injury in the previous season.

Conclusion: Based on the preliminary results, it is concluded that under-17 men's soccer players have an average of repetitions in the SLHB lower than the non-injured Australian soccer players.

Implications: Athletes will benefit from access to qualified data on hamstring muscle function. This may enable the planning of more specific preventive programs based on normative data from the SLHB test for the soccer population.

Keywords: Hamstring function, Soccer, Normative Data

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

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431

THE INFLUENCE OF AFFORDANCES FROM HOME ENVIRONMENT ON THE PERFORMANCE OF INFANTS FROM THREE TO 10 MONTHS OLD: A LONGITUDINAL STUDY

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Background: Motor development is a dynamic and continuous process in which motor skills present a gain and progression. It is influenced by the experiences to which the infant is exposed, such as the home environment. The infants' residence has gained prominence, as it is the first environment experienced, and when rich in affordances, it establishes a positive connection with motor development. Motor skills such as head control, reaching, grasping, and manipulating objects provide greater functionality and exploration so that the infant can develop.

Objectives: To verify the influence of the available affordances in the home environment in the performance domain of typical infants' motor development.

Methods: This is a longitudinal study with two infants (one boy) born at term, evaluated in their homes from three to 10 months of age. The affordances availability was measured by Affordances in the Home Environment for Motor Development - Baby Scale (AHMED-IS) questionnaire. It covers dimensions of the home environment such as physical space, variety of stimulation, and gross motor and fine motor toys, classifying them as less than adequate, moderately adequate, adequate, and excellent. The evaluation of the dependent variable, motor performance, was performed using the Infant Motor Profile (IMP). The analyzes were carried out in a descriptive, exploratory, and blind manner by two evaluators. The items analyzed in the performance domains were head control and manual reach, in the supine (items 1 and 14), prone (items 22 and 27), sitting (items 34 and 40), and sitting on the guardians' lap (item 66) postures.

Results: Regarding the home environment affordances, infants maintained excellent and adequate classification in the gross motor skills and variety of stimulation domains during all months. The home physical space remained excellent for 50% of the infants, and for the other 50%, it changed from less than adequate to adequate in the 8th month. At this month, the infant achieved better scores in the motor performance domain. As the scores in the AHMED-IS domains improved, the infants improved their motor skills. It was observed that adequate availability of fine motor toys at four months old allowed a score of 5 (item 66) in the IMP. While at five months old with excellent availability, a score of 6 (item 66) was obtained in the posture sitting on the caregiver's lap and supine position.

Conclusions: The present study presented the influence of the home environment affordances on motor performance at IMP. As the physical space of the residence and fine motor toy dimensions scores increased, there was an increase in the reaching, grasping, and manipulating objects scores and, consequently, in the total score of the performance domain.

Implications: The knowledge about how the influence of home environment affordances on the motor performance and motor skills of infants can be essential to guide clinical practice. In addition, this knowledge will allow health professionals to coach parents on how to stimulate motor development at home in a more assertive and individualized way.

Keywords: Infant development, Motor skills, Infant Motor Profile

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

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432

CORRELATION BETWEEN PRIMARY DYSMENORRHEA AND MOOD DISORDERS IN NULLIPAROUS YOUNG WOMEN

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Background: Primary dysmenorrhea (PD) is characterized by menstruation with painful periods in women without pelvic organ damage. It constitutes a gynecological dysfunction that manifests itself with pain in the lower abdomen, which may radiate to the paravertebral region and thighs. PD pain can impair activities of daily living (ADLs) and affect women's behavior, even causing anxiety and depression.

Objectives: To assess PD and mood disorders (anxiety and depression) in young nulliparous women and identify their associations.

Methods: A descriptive, observational, cross-sectional study was carried out with a convenience sample of young nulliparous women. Women aged between 18 and 30 years, who had never been pregnant and were not taking medication to treat mood disorders, were selected. The participants were evaluated by the same examiner using the socio-clinical questionnaire, visual analogue pain scale (VAS) and hospital anxiety and depression scale (HADS). In the data analysis, the averages and standard deviation of the variables were calculated, according to the distribution of the sample's normality, and the groups with and without PD were compared using the t test for independent samples, and the correlation analysis between PD, anxiety and depression by Pearson's correlation coefficient (R). Data were analyzed using the Statistical Program for Social Sciences (version 23) considering a significance level of 5%.

Results: The sample consisted of 69 nulliparous young adult women with a mean age of 21.86 ± 3.16 years. The prevalence of PD was 65.21% (n=45) and from this group, 35 participants reported that PD affected their performance in ADLs. The level of dysmenorrhea pain was low, with an average VAS of 3.59 ± 3.16 points. Most participants mentioned a regular menstrual flow and average pain of 3.59 ± 3.16 by VAS. In the characterization of behavioral aspects, a prevalence of 59.42% (n=41) was identified in screening for anxiety and 23.18% (n=16) for depression. There was no statistically significant difference between the groups with and without PD regarding mood disorders, although the group with PD had higher values for such disorders. There was a weak direct correlation between anxiety and PD (R=0.30) and a moderate direct correlation between depression and PD (R=0.33).

Conclusion: PD and mood disorders are prevalent among young nulliparous women. Women with PD do not have more mood disorders compared to women without PD, however women who have PD, anxiety and/or depression tend to have higher levels of mood disorders concomitantly.

Implications: In scientific terms, women who have PD concomitantly with anxiety and/or depression tend to have higher levels of PD and mood disorders, which may negatively impact their lives. In clinical terms, this study demonstrates the importance of the professional's appreciation of the assessment of dysmenorrhea and mood disorders that can influence clinical therapeutic practice.

Keywords: Women's health, Dysmenorrhea, Mood disorders

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

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