

technological resources that contribute to effective interaction and clinical evaluation.

Methods: A qualitative cross-sectional study was conducted using focus group discussions. Brazilian physical therapists, both male and female, with at least three months of experience in Deaf Sports participated. Two online focus group sessions were held via Google Meet®. The discussion guide was developed by the research team based on existing literature on physical therapy and Deaf Sports. Data analysis was performed using Braun and Clarke's (2006) Thematic Analysis approach and Bardin's (2016) Content Analysis principles.

Results: Four physical therapists participated in the research and identified several key facilitators for the physical therapy assessment of athletes who are D/HoH. The presence of sign language interpreters was highlighted as essential for conducting comprehensive evaluations and ensuring clear communication. The use of technology, such as messaging apps and smartphones, was also considered a significant tool in bridging communication gaps. Additionally, lip reading and the use of gestures were reported as complementary methods to enhance interaction. The utilization of Brazilian Sign Language (Libras) and assistance from oralized athletes who are D/HoH further facilitated the assessment process.

Conclusion: The findings indicate that multiple strategies contribute to improving communication and assessment efficiency in the physical therapy care of athletes who are D/HoH. The integration of interpreters, technological resources, and alternative communication methods strengthens the therapist-athlete interaction and enhances evaluation accuracy.

Implications: These results emphasize the need for an inclusive approach that incorporates sign language interpreters, continuous training in sign language, and the adoption of digital communication tools in clinical practice. Supporting the use of these facilitators can significantly enhance accessibility, inclusion, and the overall effectiveness of physical therapy services for athletes who are D/HoH in Brazil.

Keywords: Physical Therapy Services, Persons With Hearing Impairments, Sports for Persons with Disabilities

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

Funding: CAPES - Finance Code 001.

Ethics committee approval: CAAE: 61176022.4.0000.5108.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101328>

66

ANXIETY AND DEPRESSION IN SWIMMERS WITH AND WITHOUT SHOULDER PAIN: A CROSS-SECTIONAL ANALYSIS

Raquel Lins de Sousa Lima, Gabriel Alves Dos Santos, Sávio Douglas Ferreira Santana, Bruna Gabriella Nascimento Bezerra, Mayara Ribeiro Da Silva, Marlison Douglas Nascimento Silva, Valéria Mayaly Alves de Oliveira, Danilo Harudy Kamonseki
Graduanda de Fisioterapia, Departamento de Fisioterapia, Universidade Federal da Paraíba (UFPB), João Pessoa, PB, Brazil

Background: Musculoskeletal injuries are common in overhead sports. Repetitive use of the upper limb in specific movements can lead to the development of pain and significant functional impairments, affecting athletic performance and quality of life. Psychological factors, such as anxiety and depression, can influence athletes' performance and overall well-being, particularly in those experiencing musculoskeletal pain. Shoulder pain is a common issue among swimmers due to the high demands of repetitive overhead movements, potentially impacting their mental health. Identifying

whether athletes with shoulder pain present higher levels of anxiety and depression can provide valuable insights for developing comprehensive rehabilitation strategies that address both physical and psychological aspects. The Hospital Anxiety and Depression Scale (HADS) is a widely used tool for assessing anxiety and depression symptoms in clinical and research settings. However, the relationship between shoulder pain and psychological distress in competitive swimmers remains unclear.

Objectives: To assess whether athletes with shoulder pain present higher scores for anxiety and depression based on the HADS.

Methods: This is a cross-sectional observational study, which was approved by the Ethics Research Committee. We included competitive swimmers, both with and without musculoskeletal pain, of both sexes, aged between 12 and 60 years, with at least one year of competitive experience and a training regimen of at least twice a week. Anxiety and depression were assessed using the HADS, which consists of 14 questions divided into two subscales. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 23.0. Data normality was assessed using the Shapiro-Wilk test. Between groups comparisons for normally distributed data were conducted using Student's t-test, while the Mann-Whitney U test was used for non-normally distributed data. Effect size (Cohen's d) was calculated for between-group differences.

Results: A total of 49 competitive swimmers were included in the study, with a mean age of $30,82 \pm 14,34$, $7,18 \pm 6,41$ years of sports practice, and 22 (44,9%) were women. No statistically significant differences were found between the groups for anxiety and depression. For the total HADS score the mean difference was 0.41 ((95% confidence interval [CI]: -3.094, 3.92, $p = 0.81$); Effect size (Cohen's d) = 1.74). For the anxiety subscale the mean difference was 0.85 ((95% CI: -1.34, 2.98, $p = 0.44$); Effect size (Cohen's d) = 1.83). For the depression subscale the mean difference was -0.43 ((95% CI: -2.22 to 1.35; $p = 0.62$); Effect size (Cohen's d) = 0.014).

Conclusion: The results indicate no statistically significant difference in anxiety and depression scores between athletes with and without shoulder pain.

Implications: The results of this study suggest that the anxiety and depression scores are not different between swimmers with and without shoulder pain. However, different results may be found using other measurement instruments to assess the anxiety and depression scores.

Keywords: Athletes, Anxiety, Depression

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

Funding: Empresa Brasileira de Serviços Hospitalares (Ebserh).

Ethics committee approval: No. 4.924.333.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101329>

67

PREVALENCE AND IMPACT OF CERVICAL AND SHOULDER PAIN ON RUNNING PERFORMANCE: PARTIAL SURVEY RESULTS FROM BRAZILIAN RUNNERS

Grazielly Marques Nascimento Silva, Ryan Barros Cabral Bahia, Juliana Falcão Padilha, Jamile Dias Teixeira, Renan Lima Monteiro, Juliana da Silva Alves, Areolino Pena Matos
Departamento de Ciências Biológicas da Saúde da Universidade Federal do Amapá (UNIFAP), Macapá, AP, Brazil

Background: Lower limb musculoskeletal injuries in runners are well-established in the literature; however, musculoskeletal injuries of the upper limbs related to running have been less frequently studied, and its impact on running performance remains unknown.

Objectives: The aim of study is to investigate the prevalence of neck and shoulder pain and the impact on running performance.

Methods: This prospective open survey study was conducted in accordance with the CHERRIES guideline recommendation. The study was conducted across the entire Brazilian territory using the Google Forms platform. Demographic data were collected, along with questions regarding the presence of cervical and shoulder pain. Among those who reported experiencing cervical and shoulder pain, they were also asked whether these pains limited their running performance. Finally, they completed two questionnaires to assess the levels of disability in the shoulder and cervical regions (SPADI and NBQ, respectively).

Results: 392 runners in all Brazilian territory answered this open survey which two-hundred ninety-one (58,16%) was women and one-hundred eighty-four (41,83%) was men. A total of 174 participants reported experiencing cervical and/or shoulder pain. Among them, 82 had cervical pain, corresponding to a prevalence of 20.92% (NBQ score = 20.65). Of these, 4 participants (4.88%) reported that cervical pain limited their running practice (NBQ score = 32.5). Additionally, 92 participants (23.47%) reported shoulder pain (SPADI score = 19.03), and among them, 5 (5.43%) stated that shoulder pain limited their running practice (SPADI score = 36.6). These preliminary findings suggest a moderate prevalence of cervical and shoulder pain among runners, with approximately 9% of affected individuals experiencing running limitations due to pain. Further studies are needed to better understand the relationship between cervical and shoulder pain and its impact on running performance.

Conclusion: These partial results suggest that the prevalence of neck and shoulder pain is 20.92% and 23.47%, respectively. However, only a small percentage of runners with cervical and/or shoulder pain experience limitations in running performance. Further studies are needed to identify the factors associated with the development of cervical and shoulder pain that may restrict running practice.

Implications: Understanding the impact of neck and shoulder pain on running performance can contribute to the development of preventive and rehabilitative strategies tailored to runners. Coaches, physiotherapists, and healthcare professionals should consider incorporating upper limb assessments and interventions into training programs to minimize potential biomechanical compensations and prevent further injuries. Future research should explore the underlying biomechanical and physiological mechanisms linking upper limb dysfunctions to running performance and injury risk. Additionally, longitudinal studies are needed to assess causality and the long-term effects of cervical and shoulder pain on runners' health and performance.

Keywords: Pain, running, prevalence

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

Funding: PIBIC/AF – CNPq.

Ethics committee approval: No. 4.359.315.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101330>

68

ASSOCIATION BETWEEN UPPER LIMB ROTATION TEST AND ISOMETRIC MUSCLE STRENGTH IN SWIMMERS

Danyelle Leite Furtado de Araújo, Gabriel Alves Dos Santos, Matheus Lemos Dos Santos, Bruna Gabriella Nascimento Bezerra, Mayara Ribeiro Da Silva, Marlison Douglas Nascimento Silva, Valéria Mayaly Alves de Oliveira, Danilo Harudy Kamonsek
Departamento de Fisioterapia, Universidade Federal da Paraíba (UFPB), João Pessoa, PB, Brazil

Background: Functional tests are widely used in the assessment of sports injuries to analyze aspects such as muscle strength, power, and athlete agility, being routinely applied in clinical practice for the prevention and rehabilitation of these injuries. The Upper Limb Rotation Test (ULRT) are frequently used for the evaluation of the upper limb functional status of athletes. However, the association between ULRT scores and isometric muscle strength of the kinetic chain muscles in swimmers is not completely understood.

Objectives: To evaluate the correlation between the isometric muscle strength of the kinetic chain muscles and the ULRT in swimmers.

Methods: This is a cross-sectional study that includes swimmers of both sexes, aged between 12 and 60 years, with at least 1 year of competitive practice, and a minimum of two training sessions per week. This study was approved by Ethics Research Committee. The ULRT was performed with the swimmers in a modified flexion position (on their elbows), close to a wall. They performed trunk rotation and external shoulder rotation at 90° of abduction and external rotation, touching a tape on the wall as quickly as possible for 15 seconds. The athletes performed three trials, and the mean was considered for the analysis. The peak isometric muscle strength of the shoulder elevators (scaption), shoulder internal and external rotators, lower trapezius (LT), serratus anterior (SA), trunk extensors and flexors, hip abductors and rotators (HIPSIT), hip flexors (HF), and knee extensors (KE) were measured using a handheld isometric dynamometer. The association between ULRT and muscle strength was assessed with Pearson Correlation Coefficient, which was classified as weak (0–0.39), moderate (0.40–0.69), and strong (0.70–1.00). A significance level of $p < 0.05$ was adopted. The data were analyzed with SPSS software version 23.0.

Results: A total of 50 athletes participated in the study, with mean age of 30.46 ± 14.27 and 27 (54%) were male. The ULRT showed a weak positive correlation with internal shoulder rotators ($r = 0.36$; $p = 0.008$) and moderate positive correlation with shoulder elevators ($r = 0.40$; $p = 0.004$), external shoulder rotators ($r = 0.41$; $p = 0.002$), LT ($r = 0.43$; $p = 0.001$), SA ($r = 0.42$; $p = 0.002$), trunk flexors ($r = 0.57$; $p < 0.000$), trunk extensors ($r = 0.43$; $p = 0.001$), HIPSIT ($r = 0.44$; $p = 0.001$), HF ($r = 0.43$; $p < 0.000$) and KE ($r = 0.44$; $p = 0.001$).

Conclusion: The study showed that performance in the ULRT is associated with muscle strength of shoulder elevators (scaption), external shoulder rotators, LT, SA, trunk extensors and flexors, HIPSIT, HF and KE. The results demonstrate that higher muscle strength in these muscles is associated with better performance in the test, highlighting the importance of the kinetic chain.

Implications: These findings can help clinicians to identify which components of the kinetic chain might affect ULRT performance.

Keywords: Physical Performance Test, Functional Test, Kinetic Chain

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

Funding: Empresa Brasileira de Serviços Hospitalares (Ebserh).

Ethics committee approval: CAAE: 82278824.8.0000.0017.

Registration: Not applicable.

<https://doi.org/10.1016/j.bjpt.2025.101331>

69

DOES ANKLE AND HIP JOINT MOBILITY AND STRENGTH ASYMMETRY CORRELATES WITH THE PERFORMANCE OF HOP TEST IN PHYSICALLY ACTIVE INDIVIDUALS?

Bianca Rezende Trindade Silva, Ana Luiza De Oliveira Souza, Aline de Oliveira, Bernardo Vitor Teodoro de Oliveira, Laís Emanuelle Meira Alves, Natalia Franco Neto Bittencourt, Luciana de Michelis Mendonça