

THE RELATIONSHIP OF FUNCTION, FLEXIBILITY, AND RIGIDITY OF THE HIP AND PERFORMANCE IN THE MODIFIED STAR EXCURSION BALANCE TEST

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Background: The Modified Star Excursion Balance Test (mSEBT) was developed as a dynamic postural control test, has been shown to be predictive of lower limb injuries and is consolidated as a valid and reliable measure. However, the relationship between hip variables and mSEBT performance has not been fully elucidated. Deficits in muscle function, flexibility, and range of motion (ROM) of passive medial rotation (MR) of the hip can compromise the performance of mSEBTs.

Objectives: To verify whether function, flexibility and passive ROM of hip MR predict mSEBT performance in athletes and practitioners of physical activity.

Methods: The database of the Physiotherapy Assessment Tool (PHAST) application was used to analyze the records of 125 patients. The relationship of the variables was verified, using multiple linear regression: function of hip extensors, gluteus medius and maximus, the flexibility of iliopsoas, rectus femoris and hamstrings, as well as passive ROM of medial rotation MR hip of the dominant limb with recordings of anterior, posteromedial, and lateral reach distance, as well as mSEBT composite score.

Results: The results revealed a statistically significant model for hip extensor function predicting mSEBT performance in 6% for the composite score ($F = 8.07$; $R = 0.24$; $R^2 = 0.062$; $p = 0.005$), in 7% for the posterolateral reach distance ($F = 9.18$; $R = 0.26$; $R^2 = 0.070$; $p = 0.003$), by 7% for the posteromedial reach ($F = 9.12$; $R = 0.26$; $R^2 = 0.069$; $p = 0.003$). The association of hip extensor function with gluteus medius function predicted mSEBT performance by 13% for posteromedial reach distance ($F = 9.40$; $R = 0.36$; $R^2 = 0.13$; $p = 0.000$). No other associations of hip variables were observed.

Conclusion: Hip extensor function has a statistically significant, but weak, association with mSEBT composite score performance and posterolateral and medial reaching distances. The hip extensor and gluteus medius functions had the highest percentage of prediction, still low, of mSEBT performance for the posteromedial reach.

Implications: These findings provide useful information for clinical practice on the contribution of hip musculature functions to mSEBT performance, injury prediction/prevention, and dynamic postural control in athletes and practitioners of physical activities.

Keywords: Dynamic postural control, Injuries, Test

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PHYSICAL THERAPY ASSESSMENT AND INTERVENTION IN MOTORCYCLE ACCIDENTS IN PRIMARY CARE: A NARRATIVE REVIEW

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Background: Traffic accidents are an important problem for public health, due to their great impact on morbidity and mortality, with a predominance of motorcycle accidents. Brazil is ranked 5th among the countries with the highest number of traffic deaths and is also the second leading cause of death among all deaths from external causes. Motorcyclists are 14 times more susceptible to death. In view of the vulnerability of risk factors, it is important to consider the types of injuries and body areas most frequently affected due to motorcycle accidents, observing the magnitude of the trauma, such as traumatic brain injury (TBI) and spinal cord injury (TRM); fractures in the upper and lower limbs; various injuries, dislocations, sprains and abrasions, contusions, sprains/dislocations, and cuts/lacerations. The evaluation and treatment of the grievance directed to Primary Health Care in the rehabilitation of the patient with musculoskeletal and neurological impairment resulting from these accidents, lacks a physiotherapeutic evaluation with instruments that can contribute to the process of assessment and physiotherapeutic intervention. In the evaluation, anamnesis, physical examination, using measurement instruments for pain assessment, evaluation of attitudes and behavior and driving style, and the type and severity of injuries and possibility of survival of motorcyclists involved in traffic accidents are performed.

Objectives: The objective of this study was to conduct a Narrative Review on traffic accidents and to investigate the type of physical therapy evaluation with its respective intervention in Primary Care.

Methods: To this end, a literature review was conducted in the Scielo, Lilacs, and PUBMED databases, including combining terms and keywords using the Boolean operators OR and AND, with the following descriptors: Traffic Accidents, Physical Therapy, Primary Care.

Results: The results found showed a certain vulnerability in the rehabilitation of patients with musculoskeletal and neurological impairment resulting from these accidents, lacking an accurate physiotherapeutic evaluation, with validated instruments that can contribute to the process of evaluation and physiotherapeutic intervention.

Conclusion: The physiotherapist has been dedicating his attention, almost exclusively, to the prevention, cure, and rehabilitation of polytraumatized and/or sequelae patients, whose mission is to develop actions aimed at health maintenance or, in the last case, to the prevention of sequelae, and not only to rehabilitation, and in the scope of injury prevention and health promotion.

Implications: This study allows us to present suggestions for possible future research paths. Some of these suggestions are related to new studies on changes in conceptions, highlighting the importance of conducting Health Education actions for the population through lectures, making these motorcyclists aware of the dangerous relationship to risk factors and traffic accidents, performing group attendance for experience reports regarding the experience lived during the period of the accident, besides offering to these public pamphlets, booklets with orientations alerting about the conditioning factors of accident prevention and health education, offering subsidies for the adoption of new habits in education and health.

Keywords: Traffic Accidents, Physical Therapy, Primary Care