Towards evidence-based classification in para-cycling

av

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Akademisk avhandling

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Abstract:

The aim of classification in Paralympic sport is to minimize the impact of impairment on the outcome of competition. The aim of this thesis was to investigate the impact of different types of impairments on para-cycling performance to develop an evidence-based classification system in the para-cycling C (bicycling) and T (tricycling) divisions.

This thesis is based on four articles. The first article examined differences in race performance between para-cycling classes by comparing track race results. The second article evaluated leg strength measures in para-cyclists with musculoskeletal impairments. The third article investigated leg coordination and leg strength and the association with para-cycling performance in para-cyclists with hypertonia, ataxia, or athetosis. The fourth article aimed to gather consensus on para-cycling classification issues and to identify research priorities within para-cycling, by consulting a panel with expertise within para-cycling and para-sport.

This thesis has identified performance characteristics in para-cyclists with musculoskeletal and coordination impairments, and suggested tests with potential to be used in para-cycling classification to assess muscle strength and coordination. The results indicate that the classes for athletes with the least impairments, as well as the classes for athletes with impaired coordination, need to be further investigated.

Keywords: cycling, para sport, Paralympics, performance, impairment
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