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Impact of Exercise Therapy on Functional Mobility Across Ages through TUDS: A Scoping Review

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ABSTRACT

Timed Up and Down Stairs (TUDS) test is clinically used to evaluate the functional mobility which demands good balance, muscle strength, coordination and Range of Motion (ROM) of lower extremities. To perform TUDS, the individual is asked to stand on the bottom of stairs (14 steps) wearing a regular shoes without orthosis, on command “go” the child has to quickly and safely go upstairs till 14 steps, then turn around on the top landing and come all the way down until both feet lands on the bottom step. The individual may hold the railings as per the need. This is widely used to assess functional mobility in individuals with varied ages, but still it is unexplored in literatures. To retrieve literature about impact of various therapeutic approaches on TUDS test, the Google Scholar, PubMed and Cochrane Library databases were accessed for this scoping review. Fifty articles were determined to be pertinent to the investigation. In summary, 10 met the review's inclusion specifications, so they had been thoroughly reviewed. The findings highlight that various training approaches improve functional mobility, as measured by the TUDS test, across all ages. In paediatric rehabilitation, the TUDS test is especially helpful since it gives healthcare professionals a quantifiable way to monitor changes in mobility and functional independence over time. Despite these positive outcomes, heterogeneity in the intervention protocols and study designs necessitates further standardisation. This review highlights the clinical relevance of incorporating individualised therapeutic approach to improve functional mobility (TUDS score) and identifies gaps for future research, particularly in long-term efficacy and standardised protocols.

Keywords: Age, Cerebral Palsy, Child, Lower extremity, Muscular strength, Postural balance.