

used to monitor a patient's progress during a course of physical therapy.

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CLINICAL BOTTOM LINE

Commentary on "Development of Reference Values for the Functional Mobility Assessment"

"How should I apply this information?"

This study provides reference data for the Functional Mobility Assessment (FMA). As discussed by the authors, these reference values can be used to indicate whether a child needs further examination by a physical therapist. This recommendation helps to support the efforts to improve the care for children with lower extremity sarcoma and gives an indication when a more comprehensive examination for an individual is warranted.

Moreover, the presented normative data for the Timed Up and Down Stair (TUDS), the Timed Up and Go (TUG), and the 9-minute Run/Walk test presented in this article can help physical therapists assess whether a child or adolescent is achieving a higher or lower score (centile) than his or her peers.

The tests that are being used in the FMA, the TUDS, the TUG, and the 9-minute Run/Walk test, have been shown to be reliable for children and adolescents with and without disabilities. Therefore, the normative data

presented in this article can be useful not only for physical therapists working with children and adolescents with lower extremity sarcoma but for physical therapists working with children with other diagnoses as well. “What should I be mindful about in applying this information?”

In this study, age categories were used for the construction of the reference data. Age is, in several cases, not the best parameter, because children of the same age can differ substantially in physique (eg, height and weight), especially in the case of those from different backgrounds and during puberty. Moreover, an individual with a greater stride length is generally thought to have an advantage in all 3 physical-related outcome measures that are part of the FMA. This might explain the fact that the scores achieved on the TUDS, the TUG, and the 9-minute Run/Walk test are not smoothly increasing with age (see Figure 1). Therefore, the presented reference values are not very suitable to monitor improvement over time in individual subject compared with the presented reference data. Another drawback of the current “reference values” is that only medians and ranges are provided. Medians and ranges are influenced by outliers. Furthermore, when using these statistics, it is not possible to calculate standard deviation scores to see how far the patient’s score is away from the mean.

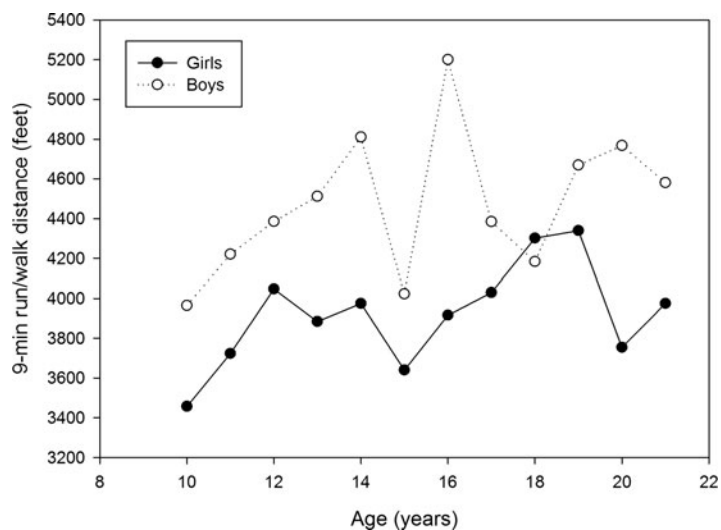


Fig. 1. The median score on the 9-minute Run/Walk test for boys and girls in relation to age (distance in feet).

Other studies have presented reference values for performance test in children using, for example, “centile (or percentile) charts.”^{1,2} Using these charts, data are smoothed and independent variables (eg, age or weight) are presented as continuous values, which facilitates the interpretation of individual test scores for practitioners. We would like to advise the authors to supplement this article with these additional analyses.

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