Development and preliminary assessment of the measurement properties of the Seating Identification Tool (SIT)¹

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Abstract:

Objective: To present and discuss the development and measurement properties of the Seating Identification Tool (SIT), a screening tool designed to identify the need for formal seating and wheelchair intervention among institutionalized elderly. Specifically, investigation of the inter-rater and test-retest reliability, sensitivity, specificity, the positive and negative predictive values of the SIT was conducted.

Design: A two-week retest design.


Subjects: Forty-two randomly selected residents with an average age of 83 years who had a disability and required the use of a wheelchair as their main mode of mobility.

Intervention: Two health care assistants from a long-term facility collected data using the SIT. One rater assessed all subjects two weeks later to evaluate test-retest reliability. Diagnostic properties (validity) were determined by having all subjects assessed by a seating therapist.

Main measurement: The SIT and formal evaluation by a therapist experienced in seating.

Results: The ICC for both test-retest and inter-rater reliability was 0.83. A cut-off score of 2 maximized the sensitivity (100%) and specificity (64% and 57% for raters 1 and 2 respectively) and the area under the receiver operating characteristics curve (0.855 and 0.862 for raters 1 and 2). The positive and negative predictive values ranged from 82 to 100%.

Conclusion: The SIT is a quick, easy to use, reliable and valid screening tool that can be used to facilitate clinical referral for formal intervention. Other potential uses include population-based surveys to estimate the need for including seating intervention in strategic planning for the institutionalized elderly.