

O'Connell DG, O'Connell J, Brewer B, Bessire B, Carrico M, MacIntyre C, Queen-Shelburne M, Wilson E. **The Certainty of Wheelchair Fit Survey: Validity and Reliability. The Certainty of Wheelchair Fit Survey: Validity and Reliability.** APTA Combined Sections Meeting, San Antonio, TX., February, 2022.

**Purpose/Hypothesis:**(1) Test survey validity via content validation; (2) Validate survey scores across WC fit experiential levels (four educational levels (DPT students and professional therapists); (3) Determine test-retest reliability on the three domains and total score of the Certainty of Wheelchair Fit and Wheelchair Teaching Survey (CWCFIT).  
**Subjects:** Forty-one DPT students and Physical Therapy Professionals participated.  
**Materials and Methods:** An initial survey was developed measuring subject's self-perceived confidence in fitting wheelchairs and in teaching wheelchair skills to clients. Three independent ABPT Neurological Specialists established content validity. Demographic questions included the number of hours of WC fitting experience as well as how much training subjects had in WC fitting. The final survey instrument (Likert scale) consisted of three, 15-question sections on general wheelchair fitting (GWC-fit), unique case-specific fitting (CSWC-fit), and teaching wheelchair skills (TWC-fit). GWC-fit questions included questions about fitting for seat width, backrest height, etc. CSWC-fit questions included topics such as fitting patients with hip flexor contractures and hemiplegia, etc. TWC-fit questions included teaching patients to climb into a wheelchair after a fall or transferring into wheelchairs from different height surfaces. Sums from these three sections comprised a Total WC-fit (TotWC-Fit) score. Subjects from within West Texas were recruited via email and asked to complete the electronic survey with a two-week follow-up. **Statistical Analysis:** Besides the establishment of content validity, validity was examined using One-way ANOVAs comparing TotWC-Fit scores against educational level (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> year DPT students and professionals as well as by experiential levels. Test-rest reliability was examined using Pearson correlations and stability was examined using paired-t-tests between participants first and second average scores for the three survey domains. Statistical significance was set at  $p \leq .01$  and computed using SPSS 26.0. **Results:** There were strong positive test-retest correlations for Tot-WC fit experience ( $r=0.785$ ), GWC fit ( $r=0.855$ ), TWC-fit ( $r=0.843$ ), and CSWC-fit ( $r=0.795$ ). One-way ANOVA indicated significantly lower scores in first year students for GWC-fit ( $F(3,103)=42.51$ ,  $p < .01$ ), TWC-fit ( $F(3,103)=26.70$ ,  $p < .01$ ) and CSWC-Fit ( $F(3,103)=54.85$ ,  $p < .01$ ). One-way ANOVA indicated significantly lower WC certainty of fit scores in lower WC fit experience groups (0-10hrs) for GWC-fit ( $F(3,103)=15.08$ ,  $p < .01$ ), TWC-Fit ( $F(3,103)=9.31$ ,  $p < .01$ ) and CSWC-Fit ( $F(3,103)=17.72$ ,  $p < .01$ ). **Conclusions:** The survey has content validity and demonstrates differences based on educational level and experience level. The survey is also reliable in three domains. **Clinical Relevance:** While the current survey needs additional testing to further delineate differences between experience and educational groupings, it appears valid and reliable and can help students and professionals self-evaluate their wheelchair fitting skills.