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Evidence for the Validation of a Single Item Recovery Question (SIRQ) in Children with Mild and Complicated Mild Traumatic Brain Injury.

Abstract

Background: Recovery from a brain injury occurs in varying degrees. The objective of this study was to investigate the concurrent validity of a parent-reported 10-point scale for degree of recovery, Single Item Recovery Question (SIRQ), in children with mild traumatic brain injury (mTBI) or complicated mTBI (C-mTBI) compared with validated assessments of symptom burden (Post-Concussion Symptom Inventory Parent form-PCSI-P) and quality of life (Pediatric Quality of Life Inventory [PedsQL]). Methods: A survey was sent to parents of children aged five to 18 years who presented to pediatric level I trauma center with mTBI or C-mTBI. Data included parent-reported postinjury recovery and functioning of children. Pearson correlation coefficients (r) were calculated to measure the associations of the SIRQ with the PCSI-P and the PedsQL. Hierarchical linear regression models were used to examine if covariates would increase the predictive value of the SIRQ to the PCSI-P and the PedsQL total scores. Results: Of 285 responses (175 mTBI and 110 C-mTBI) analyzed, Pearson correlation coefficients for the SIRQ to the PCSI-P ($r = -0.65$, $P < 0.001$) and PedsQL total and subscale scores were all significant ($P < 0.001$) with mostly large-sized effects ($r \geq 0.500$), regardless of mTBI classification. Covariates, including mTBI classification, age, gender, and years since injury, resulted in minimum changes in the predictive value of the SIRQ to the PCSI-P and the PedsQL total scores. Conclusions: The findings demonstrate preliminary evidence for the concurrent validity of the SIRQ in pediatric mTBI and C-mTBI.