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Research Summary – Spinal Cord Injury Bladder and Bowel Control Questionnaire (SCI-BBC-Q) – Neurological Impairment

Author Year Country Research Design Setting	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability

Bryce et al. 2025
 	
Study to develop and test the feasibility, reliability, and construct validity of SCI-BBC-Q
 	
SCI acute in-patient rehabilitation unit at an academic medical center in the United States
	N = 51 participants with SCI
	35M (69%), 16F (31%)
	Mean (SD) age 49 (19) years
	SCI level: Cervical (n = 32), thoracic (n = 13), lumbar/sacral (n = 4), and missing data (n = 2)
	ASIA class: A (n = 5), B (n = 8), C (n = 17), D (n = 18), and missing (n = 3)
	Mean (SD) since injury 2 (5) months
		Relationship between the baseline SCI-BBC-Q total score and AIS: r_s = 0.41, p = 0.004
		
		Relationship with SCI-BBC-Q and anorectal sensory and motor function as measured by the ISNCSCI:
		• Baseline SCI-BBC-Q total scores and the baseline ISNCSCI S4-5 sensory scores (r_s = 0.36, p = 0.01).
		• SCI-BBC-Q score changes and the ISNCSCI S4-5 sensory score changes between admission and
			Test-retest reliability:
			• Total score: ICC = 0.95
			• Subscores: Cohen's κ values:
			  ○ Q1 = 0.47
			  ○ Q2 = 0.63
			  ○ Q3 = 0.65
			  ○ Q4 = 0.53
			  ○ Q5 = 0.54
			  ○ Q6 = 0.76
			
			Internal Consistency:
			The Cronbach's α value for all SCI-BBC-Q items (Q1-6) was 0.73	

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		discharge (r_s = 0.39, p = 0.02). ○ Relationships between the baseline results of the ISNCSCI deep anal pressure assessments and: Q2 (item assessing the sensation of micturating: (χ^2(1, N = 43) = 5.06, p = 0.03, Nagelkerke R2 = 0.20). Q4 (item assessing the sensation of defecating: (χ^2(1, N = 44) = 9.17, p =		

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		0.002, Nagelkerke $R^2 = 0.34$) ○ Relationship between the baseline results of ISNCSCI voluntary anal contraction assessments and: Q6 (item assessing the ability to prevent defecation): ($\chi^2(1, N = 41) = 5.40$, p = 0.02*, Nagelkerke $R^2 = 0.17$) but not the item assessing the ability to prevent micturition.		

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		Association between changes in SCI-BBC-Q total scores and change in SCIM-III bladder management scores from admission to discharge (r_s = 0.40, p = 0.048) but not between changes in SCI-BBC-Q total scores and the change in SCIM-III bowel management scores.		