

Neurogenic Bowel Dysfunction Score (NBD)

Assessment Overview

Assessment Area

ICF Domain:

Body Functions

Subcategory:

Digestive, Metabolic and Endocrine

You Will Need

Length:

10 items

Scoring:

Total score: out of 47 (each item has a weighted response base)

Severity of bowel dysfunction:

Score 0-6: Very minor

Score 7-9: Minor

Score 10-13: Moderate

Score 14+: Severe

Summary

The NBD is a self-report questionnaire designed to help healthcare professionals evaluate the effectiveness of their patient's current bowel management routine by assessing the impact it has on the patient's quality of life.

Questions ask about background parameters (n=8), faecal incontinence (n=10), constipation (n=10), obstructed defecation (n=8), and impact on quality of life (QOL).

Availability

Available for free here:

https://www.coloplast.ca/Global/3_Bladder%20and%20Bowel/Pictures/Peristeen%20HCP/Peristeen_NBD_Score_Questionnaire_A4.pdf

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Not established in SCI

Typical Values

Bowel subjects: 15.18 (SD ± 5.77)

Control subjects: 4.68 (SD ± 2.98)

(Kelly et al. 2017; N=34 children, mean age: 5.3 years, level: 4 thoracic, 16 lumbar, 12 sacral, 2 unknown)

Measurement Properties

Validity ? **Low to High**

High Spearman's rank-order correlation for construct validity:

$$r_s = 0.943 (P < 0.0005)$$

(Kelly et al. 2017; N=34 children, mean age: 5.3 years, level: 4 thoracic, 16 lumbar, 12 sacral, 2 unknown)

Low Correlation between total NBD score & SF-36 bodily pain subscale:

$$r = -0.382$$

Moderate Correlation between total NBD score & SF-36 general health subscale:

$$r = -0.560$$

High Correlation between total NBD score & SF-36 vitality subscale:

$$r = -0.626$$

High Correlation between total NBD score & SF-36 social role functioning subscale:

$$r = -0.741$$

High Correlation between total NBD score & SF-36 emotional role functioning subscale:

$$r = -0.604$$

Low Correlation between total NBD score & SF-36 mental health subscale:

$$r = -0.687$$

High Correlation between change in total NBD score and change in Global Rating of Change scale at end of 2 months:

$$r = 0.821 (P = 0.007)$$

(Erdem et al. 2017; N=42, mean age (SD): 39 (16) years, level: 12 cervical, 24 thoracic, 6 lumbar)

Number of studies reporting validity data: 3

Reliability ? **Moderate and High**

Moderate Internal Consistency:

$$\alpha = 0.547$$

High Test-retest answers of each question:

$$r = 1.000, P < 0.001$$

High Consistency of frequency distribution:

$$r = 1.000, P < 0.001$$

(Erdem et al. 2017; N=42, mean age (SD): 39 (16) years, level: 12 cervical, 24 thoracic, 6 lumbar)

Number of studies reporting reliability data: 2

Responsiveness

Floor/Ceiling Effect:

Not established in SCI

Effect Size:

Not established in SCI

Number of studies reporting responsiveness data:

Not established in SCI