

Test-Retest Reliability and Concurrent Validity of a Dutch Version of the 8-Item Actionable Screening Questionnaire for Bladder Overactivity in Multiple Sclerosis

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Introduction

In patients with multiple sclerosis (MS) the impact of urological symptoms on quality of life and daily activities is considerable. Yet, a substantial percentage of patients may not be urologically evaluated and thus fail to be treated concordantly.

The 8-item Actionable questionnaire is a validated English screening tool for detection of neurogenic bladder overactivity in MS.

To enable the use of the 8-item Actionable in The Netherlands we translated the questionnaire into the Dutch language and investigated the test-retest reliability and the concurrent validity of the Dutch version.

Methods

- The process of translating the English Actionable questionnaire into the Dutch language included forward translations and back-translations.
- Then, in an online observational study, MS patients completed the Dutch Actionable at Days 1 and 8, and the Multiple Sclerosis Quality of Life 54-Items (MSQoL54) and Multiple Sclerosis Impact Profile (MSIP) questionnaires at Day 1; the Expanded Disability Status Scale (EDSS) score was assessed by phone at Day 1.
- For assessment of the test-retest reliability Pearson's correlation coefficient (r) between the Day 1 and Day 8 Actionable scores was calculated.
- For assessment of the concurrent validity r values were calculated between the Day 1 Actionable score and the EDSS score, the Physical and Mental MSQoL-54 composites, and the MSIP domain and symptom disability scores.

Results

- Study population: $N=141$ (106 female, 35 male) (80 relapsing remitting, 48 progressive, 13 unknown), mean age 47.8 (standard deviation [SD] 10.4) years, mean EDSS score 4.7 (SD 1.8); 137 patients completed the Day 8 assessment.
- Pearson's r between Actionable scores Day 1 and Day 8: 0.85 ($P<.0001$).
- Pearson's r between Actionable score Day 1 and scores for EDSS 0.41 ($P<0.0001$), MSQoL-54 Physical -0.31 ($P=0.0002$), MSQoL-54 Mental -0.29 ($P=0.0005$), MSIP Excretion and Reproductive Functions 0.44 ($P<0.0001$), Muscle and Movement Functions 0.39 ($P<.0001$), Basic Movement Activities 0.37 ($P<0.0001$), Activities of Daily Living 0.32 ($P<0.0001$), Participation in Life Situations 0.29 ($P=0.0006$) and Mental Functions 0.20 ($P=0.0189$).

Conclusion

In a web-based observational study we validated a Dutch version of the 8-item Actionable screening questionnaire for neurogenic bladder overactivity in MS patients. The Dutch Actionable showed a good test-retest reliability and a good concurrent validity with disabilities and HRQoL.

Table 1: Actionable scores at test (Day 1) and retest (Day 8), and Physical and Mental MSQoL-54, EDSS, and MSIP domain & symptom disability scores. SD, standard deviation.

	N	Mean	SD	Minimum	Maximum
Actionable score Day 1	141	8.00	3.94	0	18
Actionable score Day 8	137	7.61	4.00	0	21
MSQoL-54 Physical	138	53.32	17.42	15.00	96.60
MSQoL-54 Mental	138	64.88	16.92	21.15	92.40
EDSS	141	4.30	1.78	0.00	7.50
Muscle and Movement Functions	141	5.18	3.62	0.00	16.25
Excretion and Reproductive Functions	141	3.27	2.41	0.00	11.00
Mental Functions	141	2.65	1.93	0.00	9.00
Basic Movement Activities	141	3.38	3.60	0.00	15.00
Activities of Daily Living	141	6.82	6.06	0.00	24.00
Participation in Life Situations	141	4.30	4.53	0.00	18.00
Environmental Factors	141	4.78	3.87	0.00	16.00
Fatigue	136	0.38	0.60	0.00	3.00
Pain	141	2.06	0.96	0.00	4.00
Speech Functions	141	0.94	0.85	0.00	4.00
Visual Functions	131	0.72	0.86	0.00	4.00

Table 2: Dutch version of the 8-item Actionable screening questionnaire for bladder overactivity in multiple sclerosis.

INSTRUCTIES: Betreffende de onderstaande vragen: Vink a.u.b. het hokje aan dat het beste uw blaasklachten in de afgelopen 7 dagen beschrijft.

In de afgelopen 7 dagen, hoe vaak had u overdag het gevoel dat u meteen moest plassen?	Nooit	Soms	Meestal	Altijd
In de afgelopen 7 dagen, hoe vaak verloor u ongewild (wat) urine?	Nooit	Soms	Meestal	Altijd
In de afgelopen 7 dagen, hoe sterk was overdag het gevoel dat u meteen moest plassen?	Helemaal niet sterk	Een beetje sterk	Matig sterk	Heel erg sterk
In de afgelopen 7 nachten, hoe vaak werd u in een typische nacht wakker om te plassen?	Nooit	Eén keer	Twee keer	Drie keer of vaker
In de afgelopen 7 dagen, hoe vaak plaste u op een typische dag?	0 – 3 keer	4 – 6 keer	7 – 11 keer	12 keer of vaker

INSTRUCTIES: Betreffende de onderstaande vragen: Vink a.u.b. het hokje aan dat het beste de gevolgen beschrijft die u eventueel recent van uw blaasklachten heeft ondervonden.

In welke mate zijn recent uw activiteiten met vrienden en familieleden beperkt geweest door uw blaasproblemen?	Helemaal niet	Een beetje	Matig	Heel erg
In welke mate is recent uw vermogen om buitenshuis te werken (betaald of als vrijwilliger) beperkt geweest door uw blaasproblemen?	Helemaal niet	Een beetje	Matig	Heel erg
<input type="checkbox"/> Niet van toepassing				
In welke mate bent u recent in verlegenheid gebracht door uw blaasproblemen?	Helemaal niet	Een beetje	Matig	Heel erg

Zou u hulp willen krijgen voor uw blaasproblemen?	Ja <input type="checkbox"/>	Nee <input type="checkbox"/>
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