

## NINDS CDE Notice of Copyright

### Neuropsychiatric Inventory (NPI-Q) Questionnaire

<b>Availability:</b>	<p>Copyright belongs to Jeffrey L. Cummings, MD. For additional information and test materials, visit: <a href="#">Home - ePROVIDE™</a></p> <p>Non- funded academic research: if the project is not explicitly funded, but funding comes from overall departmental funds, from the University or individual funds then fees are waived. Funded academic research, including projects receiving funding from commerce, government, EU, and commercial studies (industry, CRO, any for-profit companies) should contact Dr. Cummings via MAPI Research Trust, to negotiate fees.</p>
<b>Classification:</b>	<p><b>Supplemental – Highly Recommended:</b> Parkinson’s Disease (PD)  <b>Supplemental:</b> Amyotrophic Lateral Sclerosis (ALS), and Stroke</p>
<b>Short Description of Instrument:</b>	<p><b>Purpose</b>  The NPI-Q is used to measure 12 categories of behavioral disturbance, in particular: Delusions, Hallucinations, Anxiety, Depression/Dysphoria, Agitation/Aggression, Elation/Euphoria, Disinhibition, Irritability/Lability, Apathy/Indifference, Motor Disturbance, Nighttime Behavior Problems, and Problems with Appetite/Eating. The questionnaire is completed by a caregiver and asks whether the patient exhibits each of the behaviors.</p> <p><b>Overview</b>  The NPI Questionnaire is a validated caregiver completed questionnaire derived from the original NPI. The questionnaire taps behavioral symptoms commonly observed post-stroke (e.g., disinhibition, apathy, irritability).</p> <p><b>Time</b>  The assessment takes approximately 10 minutes.</p> <p><b>Scoring</b>  The administrator ranks the severity of each behavior exhibited on a scale of 1 to 3, with 3 being the most severe. The total severity score is the sum of the severity scores obtained for each behavioral category. Additionally, the administrator ranks the patient’s level of distress from each behavior, on a scale of 1 to 5, with 5 indicating the most severe level of distress. The total distress score is the sum of the distress scores obtained for each behavioral category.</p>

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<b>Psychometric Properties:</b>	<p>Test-retest reliability of the NPI-Q is acceptable. The NPI-Q provides a brief, reliable, informant-based assessment of neuropsychiatric symptoms and associated caregiver distress that may be suitable for use in general clinical practice.</p> <p>Feasibility: The interview is rather simple to administer, taking 5 minutes to complete.</p> <p>Reliability: Test-retest correlations for symptom and distress scores was adequate (.80 and .94 respectively). Strong interscale correlations existed between the NPI total score and the NPI-Q severity total (.91), and distress total score (.92).</p> <p>Validity: The NPI was valid when compared with scores on the MMSE, only for those patients with low MMSE scores (<math>r=.44</math>).</p> <p>Sensitivity to Change: Unknown.</p> <p>Relationships to other variables: The NPI-Q has limited correlation with cognitive functioning, as measured by the MMSE, particularly for patients who are only mildly impaired. It has a stronger correlation with cognitive performance, for those with moderate to severe stage cognitive decline. Its relationship to depression and other measures are unknown.</p> <p>Strengths: This scale has been widely used across many neurological disorders, allowing for comparisons. The NPI-Q is very brief, and uses no staff resources to administer.</p> <p>Weaknesses: Caregiver ratings can be biased due to misinterpretation of complex clinical syndromes that are not in the common lexicon (e.g. delusions, hallucinations, apathy). Domains are weighted towards moderate stage dementia and less relevant for early-stage changes. Low NPI-Q validity ratings were found for patients with high MMSE scores. Ratings are acquired via caregivers instead of patients or clinicians, and is therefore less sensitive to change, due to recall bias, cultural beliefs, caregiver mood, etc. The NPI-Q is not designed for the ALS population, thus making dysarthria, motor weakness, and fatigue confounds in a variety of items. Copyright fees will likely apply for funded research projects.</p>
<b>References:</b>	<p>Kaufers, DI, Cummings, JL, Ketchel, P, Smith, V, MacMillan, A, Shelley, T, Lopez, OL, &amp; DeKosky, ST. (2000). Validation of the NPI-Q, a brief clinical form of the neuropsychiatric inventory. <i>J Neuropsychiatry Clin Neurosci</i>, 12, 233-239.</p> <p>O'Hara R, Mumenthaler MS, Davies H, Cassidy EL, Buffum M, Namburi S, Shakoory R, Danielsen CE, Tsui P, Noda A, Kraemer HC, Sheikh JI (2002). Cognitive status and behavioral problems in older hospitalized patients. <i>Annals of General Hospital Psychiatry</i>.</p>