

DOULEUR NEUROPATHIQUE EN 4 QUESTIONS (DN4)

ARABIC (MOROCCAN DIALECT) TRANSLATION

Translation and validation of the 7-item symptom assessment component of the DN4 (DN4 interview) only.

Bibliographic information for original (French) questionnaire

Reference

Bouhassira D, Attal N, Alchaar H, Boureau F, Brochet B, Bruxelle J, Cunin G, Fermanian J, Ginies P, Grun-Overdyking A, Jafari-Schluep H, Lantéri-Minet M, Laurent B, Mick G, Serrie A, Valade D, Vicaut E. Comparison of pain syndromes associated with nervous or somatic lesions and development of a new neuropathic pain diagnostic questionnaire (DN4). *Pain*. 114: 29-36, 2005.

PubMed identifier (PMID): <http://www.ncbi.nlm.nih.gov/pubmed/15733628>

Bibliographic information for translated (Brazilian Portuguese) questionnaire

Reference

Harifi G, Ouilki I, El Bouchti I, Ouazar MA, Belkhou A, Younsi R, Amine M, Tazi I, Abouqal R, Niamane R, El Hassani S. Validity and reliability of the Arabic adapted version of the DN4 questionnaire (Douleur Neuropathique 4 Questions) for differential diagnosis of pain syndromes with a neuropathic or somatic component. *Pain Pract* 11: 139-147, 2011.

PMID: <http://www.ncbi.nlm.nih.gov/pubmed/20602717>

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Properties of the translated questionnaire

Purpose

Diagnostic/screening: To identify whether pain is likely to be neuropathic in origin.

Language

Arabic (Moroccan dialect)

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Translation process:

Forward and reverse translation, with consensus discussions after each phase of translation. Forward translation from the original French version of the DN4 (seven-item interview component only) was completed by two groups of native speakers of the dialectal Arabic who were fluent in French; one group two was aware of the questionnaire and its function, the other group had no medical background. A consensus Moroccan dialectal Arabic version of the questionnaire was reverse translated by another team. The translation teams and a panel of experts (three pain management specialists, a methodologist, psychologist, clinical researcher, and a linguist) then compared the French and Moroccan dialectal Arabic forms of the questionnaire for semantic and conceptual equivalence. The final version of the Arabic DN4 was pilot tested on a sample of 30 patients to detect potential conceptual problems.

Changes from original questionnaire:

No changes other than adapting idiomatic terms such as “pins and needles” (picotements) to culturally appropriate equivalents.

Assessment

SYMPTOMS (INTERVIEW):

Two questions (seven items) addressing symptoms:

- Pain quality (presence of three symptoms assessed: burning, painful cold, electric shocks)
- Non-painful symptoms (presence of four symptoms assessed: numbness, tingling, itching, pins-and-needles)

Scoring system

All seven items are answered in the affirmative ('yes') or negative ('No'). All 'yes' responses are scored as 1, and 'no' responses are scored as 0. The individual item scores are summed and a total score calculated. A score of 3 or greater indicates that the pain is likely to be of neuropathic origin (**this threshold was confirmed during the validation of the translated questionnaire**).

Scoring direction

Score ≥ 3 indicate that the pain is likely to be neuropathic in origin

Validation population

One-hundred and seventy (170) adult Moroccan dialectal Arabic-speaking pain patients who had had pain for at least three months were recruited to the study. Pain was clinically

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diagnosed as being neuropathic in 94 patients (primarily diabetic neuropathy and radiculopathies) and non-neuropathic in 76 patients. The non-neuropathic pain group and neuropathic pain group had similar sex ratios, educational levels, socioeconomic status. The neuropathic pain group were reported pain of significantly greater intensity (52mm vs 42mm on a visual analogue scale) but shorter duration (12 months vs. 28 months) compared to the non-neuropathic pain group. All participants were assessed at least once with the questionnaire. A sub-sample of 110 participants were reassessed about 72 hours after the first assessment, by independent assessors, and a further subset of 60 participants from this reassessed sub-sample were assessed for a third time (by the same investigator that made the second assessment) via telephonic interview.

Psychometric properties

Diagnostic validity (using a threshold score ≥ 3)

Sensitivity: 89.4%

Specificity: 72.4%

Receiver-operating characteristic (ROC): Area under the curve (AUC) = 0.88

Subset analysis of the cohort showed that specificity decreased below 70% in patients with mild pain (specificity = 69.2%), patients with no education (specificity = 48.1%), and in patients with pain for more than 24 months (specificity = 0.64).

Construct validity

Not assessed

Convergent/criterion validity

Not assessed

Reliability

Internal consistency: Poor (Assessor 1 (n =170): Cronbach's alpha (total score) = 0.60; Assessor 2 (n =110): Cronbach's alpha (total score) = 0.59)

Inter-rater reliability: Excellent (Assessor 2 (n= 110): Cohen's Kappa for each item ranged between 0.82 and 0.98; intraclass correlation coefficient (total DN4 score) = 0.96)

Test-retest reliability: Excellent (Intraclass correlation coefficient (n = 60) = 0.97)

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Validation studies of translated questionnaire for specific pain conditions

n/a

Additional information

n/a