EVALUATION OF THE NEUROPATHIC PAIN SYMPTOM INVENTORY: CONCEPTUAL ADEQUACY IN SIX COUNTRIES

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OBJECTIVE: The purpose of this study was to determine whether the Neuropathic Pain Symptom Inventory (NPSI) adequately assesses neuropathic pain symptoms in patients with diabetic peripheral neuropathy, post-herpetic neuralgia, trigeminal neuralgia, and sciatica across multiple cultures. METHODS: From data collected from 132 subjects in 6 countries, qualitative research methods identified their most important symptoms (and verbal descriptions) associated with neuropathic pain. A core set of commonly described symptoms spanning multiple cultures was also described. Moderators using a semi-structured discussion guide conducted focus groups consisting of patients in the US, Brazil, Japan, China, Finland, and Spain to elicit concepts that were most important and relevant (concept elicitation phase). Study subjects ranked the importance of each neuropathic pain symptom, completed the NPSI, and commented on its ability to capture key symptoms (face and content validation phase). RESULTS: Descriptive terms for sensations of neuropathic pain were similar in all countries; burning, electric shocks, and pins and needles were among the most-common sensations. Individuals with neuropathic pain experienced all sensations that were included in the NPSI. They also tended to describe pins and needles and numbness interchangeably, perhaps reflecting the relative number of DPN subjects on study. Chinese subjects included in the NPSI. They also tended to describe pins and needles and numbness interchangeably, perhaps reflecting the relative number of DPN subjects on study. Chinese subjects were obese and non-obese subjects. RESULTS: The original 21-item TFEQ model (Bentler’s Comparative Fit Index [CFI] = 0.91) that was otherwise identical to the original factor structure (UE, CR, and EE). This modified structure was verified using data from the web-based survey (CFI = 0.96). Cronbach’s alphas for the 18-item TFEQ structure for each scale were high and ranged from 0.70-0.92 and 0.78-0.94 in the clinical and web-based studies, respectively. There were no ceiling or flooring effects. Correlations with BMI were small. In the clinical study, the CR domain showed the most visibly linear relationship with BMI; a one category increase led to a 1.55 kg/m² (95% CI: 0.79; 2.30) decrease in BMI. In the web-based survey, there was a visibly linear relationship between BMI and all domains except the CR domain. The relationship between BMI and CR depended in part on obese and diabetes status. CONCLUSION: The 18-item TFEQ (with 3 items removed from the TFEQ-R21 CR domain) has satisfactory psychometric properties and may be a useful tool to characterize uncontrolled eating, cognitive restraint, and emotional eating in obese patients.