Letters to the Editors

Development of the Rheumatic Disease Illness Perception Questionnaire (RD-IPQ) reliability, validity and responsiveness

Sirs,

Recent research has found that illness perceptions are important in explaining variations in outcomes in chronic illness including rheumatic disease (1-3). Five instruments for assessing the illness perceptions of patients with rheumatic diseases were identified by a recent systematic review (3). Three of these instruments are based on Leventhal's self-regulatory model of illness perceptions, the most widely applied being the Illness Perception Questionnaire (IPQ) (4, 5). These instruments have not been evaluated in Norway and, to our knowledge none have been assessed for responsiveness to change. Moreover, when these instruments have been adapted for patients with rheumatic disease, the wording of the items has simply been changed in an attempt to make them more disease-specific (6, 7).

The aim of this study was to develop and evaluate a short-form version of the Illness Perception Questionnaire (IPQ) for patients with rheumatic disease and to evaluate data quality, reliability, validity and responsiveness of the questionnaire in patients undergoing rheumatology rehabilitation.

A litterature review, a pilot study, patient interviews and an expert group of researchers and clinicians informed the development of the 11-item Rheumatic Disease Illness Perception Questionnaire (RD-IPQ). The RD-IPQ was designed to be acceptable and clinically relevant to patients with rheumatic disease.

The RD-IPQ comprises cognitive and emotional illness perceptions including illness cause, comprehension, consequences, emotions, fluctuations, identity, personal control and treatment control. The questionnaire asks about illness perceptions in the last two weeks. The items have a five-point scale from "not at all" to "to a very large extent". An English version of the questionnaire is available (http://www.diakonsyk.no/modules/module_123/proxy.asp?D=2&C=634&I=2478)

Patient interviews and consultation with an expert group led to changes in item wording, the removal of items and the inclusion of a specific time-frame. The RD-IPQ was then evaluated in 208 patients attending three rheumatology rehabilitation centres in Norway at arrival and discharge. Generic and specific instruments were also included in the questionnaire. The RD-IPQ was also administered to 63 patients one to two days after admission at one of the institutions for purposes of assessing test-retest reliability. 134 (64.42%) patients responded to the RD-IPQ. Their mean age was 55.38 (SD 10.23) years and 86.6% were female. Item missing data ranged from 0% to 0.7 % (Table I). The results of PCA showed that six items form an important summary scale of illness perceptions with acceptable internal consistency. The test-retest questionnaire was completed by 56 (88.89 %) patients. Weighted Kappa values ranged from 0.33 to 0.73 for individual items and the RD-IPQ scale had an intraclass correlation coefficient of 0.94 (Table I). RD-IPQ scores had small to moderate correlations with the MHAQ (r=0.44), disease activity (0.60), pain (0.52) and the SF-36 (-0.32–0.51). The RD-IPQ standardised response mean (SRM) of 0.47 was higher than those for the other instruments (0.01<SRM<0.36).

Table I. Data quality, PCA and reliability of the RD-IPQ (n=134).

RD-IPQ*	Missing %	Mean (SD)	Component Loading	Cronbach's alpha/Item-total correlation	Intra class Correlation/ Weighted Kappa
Component 1 **		58.22 (14.93)		0.83	0.94
Experienced symptoms (identity)	0.7	2.73 (0.71)	0.62	0.47	0.70
Symptoms affected your life (identity)	0	2.70 (0.78)	0.81	0.68	0.61
Negative effect on your life (consequences)	0	2.46 (0.74)	0.80	0.67	0.42
Good life in spite of disease (consequences)	0	1.73 (0.73)	0.72	0.60	0.73
Worried (emotions)	0.7	2.16 (0.89)	0.74	0.61	0.65
Negative emotions (emotions)	0.7	2.19 (0.99)	0.75	0.64	0.53
Component 2				0.52	
Able to influence disease (Personal control)	0.7	2.17 (0.70)	0.79	0.36	0.49
Clear understanding of disease (comprehension)	0.7	1.72 (0.85)	0.75	0.36	0.43
Component 3				0.13	
Thought health care can help (treatment control)	0	1.40 (0.83)	0.82	0.07	0.43
Experienced fluctuations in disease (cyclical)	0.7	2.26 (0.78)	0.60	0.07	0.33

* Items are scored on a 5-point scale from 0–4 (not at all – to a very large extent). Items 4, 7, 8 and 9 in this Table were revised prior to analysis. ** The 6-item RD-IPQ is scored from 0–100; 0 and 100 are the best and worst possible illness perceptions.

The RD-IPQ scale comprised items relating to illness consequences, emotions and identity and the results suggest that these are the most important as a measure of illness perceptions for patients with rheumatic diseases. However, other aspects of illness perceptions comprising the RD-IPQ are potentially important and should be considered for application as single item measures. However, these items did not contribute to important scales which suggests that they lack validity.

The RD-IPQ is a short and acceptable instrument for assessing illness perceptions of patients with rheumatic disease with evidence for data quality, reliability, validity and responsiveness to change. The RD-IPQ should be considered for application in clinical practice and alongside other measures of health outcome in intervention studies, where illness perceptions are an important factor.

We thank the members of the patient panel and the patients who participated in this study, and the following institutions involved in data collection: Diakonhjemmet Hospital, Lillehammer Rheumatology Hospital, Skogli Rehabilitation center AS and Vikersund Kurbad. This work was funded by the Norwegian Rheumatism Association.

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Competing interests: none declared.

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