



## Letter to the Editor

# Validity induction: Comments on the study of Compliance Questionnaire for Rheumatology<sup>☆</sup>



## Inducción de la validez: comentarios al estudio de validación del Compliance Questionnaire on Rheumatology

Mr. Editor:

In a recent report,<sup>1</sup> the validation and calibration of the Compliance Questionnaire on Rheumatology (CQR),<sup>2</sup> one of the measures internationally valued as a “gold standard” and, possibly representative in the assessment of adherence<sup>3</sup> is informed. The importance of the study of the authors is far from being questioned, but there are several methodological inaccuracies that could invalidate the study. This letter is intended to highlight these limitations.

The authors identify their work as one of validity, but it seems to be an unjustifiable ambitious nomination for the study conducted by them, because the investigation of the metric validity corresponds to a set of evidence,<sup>4</sup> rather than to a single one. This is due to the fact that the authors make a contribution aimed to the classificatory use of the scoring instruments and solve only one type of evidence. On the other hand, there is other unresolved evidence, and due to this it cannot be stated that there is no guarantee that the set of CQR items will function as an interpretable unit. Indeed, one of the fundamental validity evidences and that conditions other validity evidences is the internal structure<sup>5</sup>; this corresponds to determining the dimensionality and the parameters of the item-test relationship, the invariance of the metric properties and the reliability.<sup>5</sup> Among these criteria, the first is the *sine qua non* evidence.

The problem is highlighted as a seriously problematic methodological issue for two reasons: first, the dimensionality of the CQR has not been usually investigated<sup>6</sup> with recommended methods, even by the creators of the CQR themselves,<sup>2,6</sup> and second, because in one of the few studies that analyzed the internal structure with multivariate methods,<sup>7</sup>

it was found that all the CQR items did not represent a single domain of measurement. Therefore, the results of Hughes<sup>7</sup> suggest that it is reasonable to suppose that the dimensionality can be challenged and it must be investigated.

The absence of verification of the internal structure in the sample of study itself, and the citation of external sources of validity evidences instead of using the data themselves, are actions that characterize the *induction of validity*,<sup>8</sup> that is, when the statement of validity of an instrument is supported by the referencing of other studies with little or no relevance.

We conclude that a) the careful study of the diagnostic validity of the CQR<sup>1</sup> should be accompanied by an evaluation of its dimensionality, and b) that the statement of validity of the CQR should be properly focused on the specific type of evidence evaluated.

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