INSTRUMENTS

Profile of Quality of Life in the Chronically Ill (PLC)

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This standardized self-administered psychometric questionnaire represents a modular approach towards assessing health-related quality of life in chronically ill people. It is composed of a general, non-specific part that measures three dimensions of functioning or performance and of well-being (see Figure 1) (40 Likert-scaled items), and by a disease-specific part which captures disease- and treatment-specific symptoms and limitations (between 10 and 20 items). In addition, a few socio-demographic and coping-related questions have been included (11 items).

Application of this measure requires some 10 to 15 minutes, and in specific target groups (e.g. impaired sight or disabled condition), the test can be applied as an interview as well. We did not observe high non-response rates or significant differences in response according to age, gender or socio-economic status.

Thus, the test can be applied widely among chronically ill people, with only three major restrictions: first, we do not recommend to apply the test among severely ill patients with life-threatening conditions due to the fact that the subtle cognitive processes of rescaling or denial are not captured by our measurement approach. Secondly, patients with severe psychiatric disorders as well as very old patients may not be included since validity of self-report measures in these instances is limited. Thirdly, the test is intended for adult populations, including adolescents, but excluding children.

What is the specific conceptual background of this test, justifying the existence of still another measure of health-related quality of life (HRQoL)? Basically, we argue that this test provides an equal representation of the sociological, interpersonal dimension of HRQoL in addition to the frequently assessed physical and psychological dimensions. Secondly, we give equal weight to the two aspects of performance capacity and well-being which underlie a notion of health proposed most convincingly by Rene Dubos, i.e. health as a capacity of striving for self-determined or given goals. Thus, we emphasize intentional capacity as an important determinant of HRQoL. The analytical dimensions of the multidimensional latent construct of HRQoL underlying our measurement approach are described in Figure 1.

Concerning the test-statistical properties of the main, disease-non-specific module (40 items; see Figure 1) the following information is briefly summarized. Applying both exploratory and confirmatory Principal Component Analysis we usually observe six uni-dimensional factors defining six scales, as conceptually represented in Figure 1. Of course, the replication of the factorial structure to some extent depends on the composition of the group studied. Moreover, we have not yet conducted sufficient linear structural equation modelling to ensure a one-dimensional latent structure of the whole construct of HRQoL. Therefore, we recommend evaluating the results specifically according to the scores of the six scales.

The reliability of the scales (Cronbach's alpha) is, in general, high or at least satisfactory, varying between .93 and .72, with the exception of the scale 'Social well-being' with somewhat lower reliability. Additional testing for test-retest reliability reveals values between .83 and .75. At the same time, sensitivity to change over time has been tested as an important quality criterion of the scales (in fact, as a prerequisite for applying the PLC test in clinical studies) and has been found to be very satisfactory (for details see Siegrist, Broer, Junge 1996). Concerning validity, we conducted a series of studies including both chronically ill and healthy people, different medical treatments (e.g. controlled clinical trials), different age, gender and socio-economic groups and groups from different countries (especially Germany, Spain and Russia). Thus, we are in a position to evaluate discriminant and criterion validity. In addition, concurrent validity was assessed in at least one study, using PLC and the Nottingham Health Profile simultaneously.

As particular strengths of this measurement approach we may mention that reference values on the six scales are now available from a representative healthy adult population sample in Germany and that a comprehensive test-statistical data bank is currently being established, using a specifically designed software program based on extensive developmental research conducted at the University of Oviedo, Spain. Moreover, we conducted optimal scaling analysis to check to what extent the assumption of interval scale information inherent in Likert scale technique is justified. Given the fact that at least a dozen studies have been conducted so far using PLC in clinical and epidemiological settings in different countries, and given the fact that a variety of clinical conditions of chronic illness have been examined, such as hypertension, diabetes, acute myocardial infarction, congestive heart failure, low back pain, epilepsy, among others, we feel that this instrument provides a useful, and well-tested economic tool for measuring HRQoL both for research purposes and for clinical practice. ●

Figure 1. Theoretical dimensions and factorial structure of the PLC

	Capacity of Performance	Well-being
Physical	I. Physical Functioning (Performance capacity) (8 items)	Listing of Symptoms (number of items entering a sum score: disease-specific)
Psychological	II. Psychological Functioning (Capacity of enjoying and of relaxing) (8 items)	III. Positive Mood (5 items) IV. Negative Mood (8 items)
Social	V. Social Functioning (Capacity of performing in social roles) (6 items)	VI. Social Well-being (Feelings of belonging) (5 items)

Source: Siegrist J, Broer M, Junge A. Profil der Lebensqualität Chronisch Kranker (PLC), Hogrefe Publ. Comp., Göttingen, 1996:18.

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