

PSYCHOMETRIC EVALUATION AND VALIDATION OF THE TAIQOL: A GENERIC HEALTH RELATED QUALITY OF LIFE MEASURE FOR 1-4-YEAR-OLDS

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**Aim** - Aim of the study was to evaluate psychometric performance and criterion validity of the TAIQOL: a generic questionnaire for Health Related Quality Of Life (HROOL) in 1-4 year olds. Such a questionnaire was needed in evaluating HROOL outcome in clinical research on children with a Very Low Birth Weight (VLBW), related to HROOL in children in the open population (OP). HROOL was defined as Health Status (HS) plus affective responses to problems in HS. HS was defined to encompass 10 domains: lung functioning, stomach functioning, skin functioning, sleeping, appetite, eating disorders, aggression, positive mood, anxiety, vitality. In addition, for children of 1.5 years and older, social functioning, motor functioning and communication were taken into account. Consequently, the TAIQOL consists of 35 items for children younger than 1.5 years, and 46 items for children aged 1.5-4 years. The TAIQOL is completed by a parent in about 10 minutes.

**Method** - All parents of VLBW children, aged 1-4, consulting the out-patient neonatology clinic of the Leiden University Medical Centre, during an 8 month period, were invited to complete the TAIQOL (n=188). Response rate was 88% (n=165). Moreover, 4 Well Baby Clinics drew a random sample of 150 children each, from the open population (OP sample; n=600); the children's parents were invited to complete the TAIQOL. Response rate was 60% (n=363). Psychometric performance in both samples was evaluated by calculating Cronbach's alpha's for each scale and by calculating the % of items with a higher item-rest Pearson correlation coefficient (r) than item-other scale r's.

The proposed multidimensionality of HROOL was evaluated by calculating, in a varimax rotated factor structure, the % of items with a higher loading on their intended factor than on other factors; and by calculating r's between TAIQOL scales. The relevance of the distinction between HS and HROOL was determined by calculating the total number of HS problems reported and the % of such problems that led to negative affective consequences.

Criterion validity was evaluated by analyses of variance. The 13 TAIQOL scales were dependent variables. TAIQOL scales were tested against three criteria: prematurity, chronic diseases, and medical treatment in the past half year period.

**Results** - Cronbach's alpha's in the VLBW sample ranged from 0.66 to 0.89; Cronbach's alpha in the OP sample ranged from 0.52 to 0.85. Because of very low prevalence of eating disorders in the OP sample (<5%), this scale was excluded from subsequent analysis in this sample. 98% Of item-rest r's in the VLBW sample, and 94% of item-rest r's in the OP sample were higher than item-other scale r's.

In the VLBW sample, 97% of items loaded higher on their proper factor than other factors. In the OP sample, this percentage was somewhat lower (91%). In both the VLBW sample and the OP sample, r's between TAIQOL scales were very low; in each sample only 2 r's exceeded 0.40 slightly. The % of HS problems per scale that led to negative affective responses ranged from 0.21 to 0.86. Most TAIQOL scales were significantly related to the three criteria. On the whole, as expected, VLBW children, children with a chronic disease and children under medical treatment had worse HROOL than other children.

**Discussion** - Psychometric performance of the TAIQOL was good. The findings support the proposed multidimensional definition of HROOL. The fact that on average only 38% of HS problems led to negative emotional consequences supports the essential importance of this distinction. Criterion validity of the TAIQOL was good. In conclusion, the TAIQOL is a suitable instrument in assessing HROOL in groups of very young children.