

Validation of the mini and standardised versions of the Paediatric Asthma Quality of Life Questionnaire

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Background

One of the primary aims of managing asthma in children is to identify and assess the impact of symptoms on quality of life (QoL). The Paediatric Asthma Quality of Life Questionnaire (PAQLQ) (Juniper et al 1996) reliably measures the problems that children (7 - 17 years) with asthma experience, although it is time consuming to complete and requires training in administration. Here we compare the validity of two new, simpler questionnaires, the MiniPAQLQ and the Standardised PAQLQ (PAQLQ(S)) with the original PAQLQ to provide new tools for measuring QoL in children.

Methods

Forty-two children with current symptoms of asthma (Asthma Control Questionnaire (ACQ) score >1.5) aged 7-17 were recruited from a hospital paediatric asthma clinic and a GP practice. Children were assessed at baseline and after 1, 5 and 9 weeks. At each visit, a trained interviewer administered the PAQLQ, the MiniPAQLQ and the PAQLQ(S) as well as other measures of asthma control ACQ and Health Utilities Index (HUI). Validity, reliability and responsiveness were assessed by correlating MiniPAQLQ and PAQLQ(S) scores with the gold standard (PAQLQ) and the ACQ and HUI.

Results

Correlations between overall and individual domain scores for the PAQLQ(S), MiniPAQLQ and the original PAQLQ were strong ($r > 0.80$; all $p < 0.001$) apart from the activities domain which showed only a moderate ($r = 0.56$) correlation. The PAQLQ(S) and the MiniPAQLQ showed comparable reliability (detecting asthma stability over time and different levels of impairment between children) (intraclass correlation coefficient (ICC) > 0.89) apart from the activity domain of the MiniPAQLQ which was lower (ICC 0.56). Both PAQLQ(S) and

the MiniPAQLQ were able to detect differences between stable, deteriorated and improved groups according to PAQLQ score (all $p < 0.001$). All three questionnaires showed moderate-strong negative correlations (because of reverse scoring system for ACQ) with the ACQ (PAQLQ $r = -0.77$, PAQLQ(S) $r = -0.79$, MiniPAQLQ $r = -0.72$; all $p < 0.001$). There were only poor correlations between the three questionnaires and the HUI ($r = 0.0, 0.13$ and 0.06 respectively; all $p = ns$)

Conclusion

In summary, the new PAQLQ(S) and MiniPAQLQ are valid and reliable instruments for measuring QoL in children. The fact that they are easier to administer and complete should facilitate their use in practice.