

Outcome Measure	Assessment of Quality of Life (AQoL)
Sensitivity to Change	Yes
Population	Paediatrics (Note: designed as adult and adolescent self-report measure).
Domain	Health-Related QOL
Type of Measure	Parent-report
ICF-Code/s	b1, b2, d1-d9
Description	<p>The Assessment of Quality of Life (AQoL), developed by Australian researchers, is a multi-attribute utility (MAU) health-related quality of life instrument. While it can be used to measure health-related quality of life alone, its main purpose is to measure the ‘utility’ of health states (that is, the preferences people have for different health states) in a way suitable for use in economic evaluation studies, in particular, cost-utility analysis.</p> <p>The AQoL consists of 15 items (attributes) covering five dimensions:</p> <ol style="list-style-type: none"> 1) illness – use of medicines, reliance on medicines and medical aid, need for regular treatment; 2) independent living – assistance with self care, assistance with household tasks, mobility at home and community; 3) social relationships – closeness and warmth, friendship and loneliness, family role; 4) physical senses – vision, hearing, communication; and 5) psychological wellbeing – sleep, low mood, pain (Hawthorne et al 1999). <p>Each item has 4 response levels. For example, the item concerning mobility (Item 6) asks: ‘Thinking about how easily I can get around my home and community:</p> <ol style="list-style-type: none"> A. I get around my home and community by myself without any difficulty. B. I find it difficult to get around my home and community by myself. C. I cannot get around the community by myself, but I can get around my home with some difficulty. D. I cannot get around either the community or my home by

myself.'

To provide a profile of health-related quality of life, each item on the AQoL is scored out of 3 (where 'A' scores 0, 'B' scores 1, 'C' scores 2, and 'D' scores 3). The maximum score is 9 per domain and 45 in total, and a higher score indicates poorer quality of life. An algorithm is available to transform unweighted health-related quality of life scores into utility scores weighted by preferences. The AQoL provides a utility score that ranges from 1.00 (full health) to 0.00 (death-equivalent health states) to -0.04 (health states worse than death) (Hawthorne and Osborne 2005). The illness domain is not used in the calculation of utility scores.

Applications

The AQoL questionnaires are applicable to all public health and clinical interventions, and can be used in different ways. As a 'psychometric' measure: Each instrument can be used to derive a simple psychometric score for health related quality of life (HRQoL) and to provide profile scores on the different dimensions or items of the descriptive systems. The score is derived by adding the unweighted response order of each question. As a 'utility' measure: When utilities are computed, these instruments can provide dimension scores and an overall index of the health state utility which can be used in economic evaluations, and specifically, cost-utility analysis requiring the computation of quality-adjusted life years (QALYs). The 'utilities' are, in effect, preference weights and final utility scores should reflect peoples' preferences more accurately than unweighted aggregates.

Instrument		Items	Completion time	Dimensions included
AQoL-8D	35		less than 6 min	Independent Living, Happiness.

			Mental Health, Coping, Relationships, Self Worth, Pain, Senses
AQoL-7D	26	3-4 min	Independent Living, Mental Health, Coping, Relationships, Pain, Senses, Visual Impairment
AQoL-6D	20	2-3 min	Independent Living, Mental Health, Coping, Relationships, Pain, Senses
AQoL-4D	12	1-2 min	Independent Living, Mental Health, Relationships, Senses

Participants are asked to tick the box that best describes your situation as it has been over the past week. There are 5 response options for each question (example: "How often do you feel sad" - "never", "rarely", "some of the time", "usually", "nearly all the time").

Although the AQoL was designed for individual self-completion, there will be times when individuals cannot meaningfully complete it. The most appropriate proxy, however, is the respondent's main caregiver. This caregiver is likely to know their caree's real situation and be able to represent it.

Algorithms can be downloaded to calculate scores:

<http://www.aqol.com.au/scoring-algorithms.html>

Norming information is available: <http://www.aqol.com.au/norms.html>

Properties

Overview

AQoL was designed to measure health-related quality of life (HRQoL), and to be the descriptive system for a multi-attribute utility instrument.

- 1) 8 separately scored dimensions, consisting of AQoL-6D and 2 additional dimensions, totalling 35 items.
- 2) Items were developed from other mental health scales and focus groups
- 3) A simple global 'utility' score

Timing

The AQoL takes 5 minutes to complete and can be self-completed by patients. Administering the AQoL either as a postal questionnaire or over the telephone did not result in significant differences in scores (Hawthorne 2003).

Scoring

To provide a profile of health-related quality of life, each item on the AQoL is scored out of 3 (where 'A' scores 0, 'B' scores 1, 'C' scores 2, and 'D' scores 3). The maximum score is 9 per domain and 45 in total, and a higher score indicates poorer quality of life. An algorithm is available to transform unweighted health-related quality of life scores into utility scores weighted by preferences. The AQoL provides a utility score that ranges from 1.00 (full health) to 0.00 (death-equivalent health states) to -0.04 (health states worse than death) (Hawthorne and Osborne 2005). The illness domain is not used in the calculation of utility scores.

The questionnaire, a manual, and the algorithm to derive the utility scores are available from the AQoL website.

Psychometric Properties

Based on the WHO's definition of health a model of HRQoL was developed. Items were written by focus groups of doctors and the researchers. These were administered to a construction sample, comprising hospital patients, and community members chosen at random. Final construction was through an iterative process of factor and reliability analyses. The AQoL measures 5 dimensions: illness, independent living, social relationships, physical senses and psychological wellbeing. Each has three items. Exploratory factor analysis showed the dimensions were orthogonal, and each was unidimensional. Internal consistency was alpha = 0.81. Structural

	<p>equation modelling explored its internal structure; the <u>comparative fit index</u> was 0.90. These preliminary results indicate the AQoL has the prerequisite qualities for a psychometric HRQoL instrument for evaluation; replication with a larger sample is needed to verify these findings. Scaling it for economic evaluation using utilities is being undertaken. Respondents have indicated the AQoL is easy to understand and is quickly completed. Its initial properties suggest it may be widely applicable.</p> <p>The AQoL has high internal consistency (alpha = 0.81) (Hawthorne et al 1999) and in general correlates well to other MAU instruments (r = 0.75), such as the EQ- 5D (Hawthorne et al 2001). Unlike other generic utility instruments, a unique feature of the AQoL is that the utility weights have been derived from an Australian population sample (Hawthorne et al 2001) and norms of the Australian population are available (Hawthorne and Osborne 2005).</p> <p>The AQoL is sensitive to changes in health states (Hawthorne and Osborne 2005). There is a direct relationship between utility scores obtained using the AQoL and healthcare costs (Hawthorne et al 2001). As a utility measure, it has been suggested that the minimal clinically important difference of the AQoL is 0.06 (Hawthorne and Osborne 2005).</p> <p>See also Hawthorne, Richardson, & Osborne (1999); and http://www.buseco.monash.edu.au/centres/che/aqol/</p>
<p>Advantages</p>	<ol style="list-style-type: none"> 1) Good evaluation requires instruments that are sensitive to the health states they measure. The sensitivity of existing instruments varies greatly and utility scores are inconsistent. The AQoL instruments were created to increase measurement sensitivity, especially in the psychosocial dimensions. 2) The questionnaires take only between 2-6 minutes to complete. 3) The AQoL is a generic instrument so its use is not restricted to specific health conditions. Each domain can be reported separately, giving insight into how a health condition affects a person's life. For example, in a recent study we showed that the domain of independent living was most significantly affected in people after ankle fracture (Lin et al 2008). <p>See</p> <ul style="list-style-type: none"> ✓ Hawthorne G (2003) <i>Qual Life Res</i> 12: 1081–1088. ✓ Hawthorne G, Osborne R (2005) <i>Aust NZ J Public Health</i> 29: 136–142.

	<p>✓ Hawthorne G et al (1999): <i>Qual Life Res</i> 8: 209–224.</p> <p>✓ Hawthorne G et al (2001): <i>Ann Med</i> 33: 358–370.</p> <p>Lin CC et al (2008) <i>Aust J Physiother</i> 54: 201–208. Richardson J et al (2004) <i>Aust Econ Rev</i> 37: 62–88. Website http://www.psychiatry.unimelb.edu.au/qol/aqol/use_aqol.html</p>
Disadvantages	
Additional Information	<ol style="list-style-type: none"> 1. Registration is required prior to using the AQoL in a research study. 2. Recently, the AQoL-2 has been developed (Richardson et al 2004) but further investigation of the clinimetric properties of this new version is required. 3. AQoL instruments measure health-related Quality of Life. The four instruments differ in sensitivity and length in different domains of health. Each has a scoring algorithm which combines responses into dimension scores and a single utility score. They were initially created to assist with economic evaluation, and specifically, Cost Utility Analysis.
Reviewers	<p>Vicki Anderson</p> <p>Cathy Catroppa</p>

References

Richardson, J, Iezzi, A, Khan, MA, & Maxwell, A. (2014). [Validity and Reliability of the Assessment of Quality of Life \(AQoL\)-8D Multi-Attribute Utility Instrument](#). *The Patient - Patient Centered Outcomes Research*, 7, pp 85-96. DOI 10.1007/s40271-013-0036-x

Construction of Descriptive System

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Construction of Utility Weights

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Validity and Reliability

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- Richardson J, Khan MA, Iezzi A. (2010). *Preliminary results for the validation of the Assessment of Quality of Life AQoL-8D instrument*, Centre for Health Economics, Monash University, Melbourne.
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- Test-retest reliability coefficients - page 38 in Richardson J, Chen, G, Iezzi, A & Khan, MA. (2011). [Transformations between the Assessment of Quality of Life AQoL Instruments and Test-Retest Reliability](#). Centre for Health Economics, Monash University, Melbourne.

Transformations

- Richardson J, Chen, G, Iezzi, A & Khan, MA. (2011). *Transformations between the Assessment of Quality of Life AQoL Instruments and Test-Retest Reliability*. Centre for Health Economics, Monash University, Melbourne.

Norms

- Richardson, Iezzi, Khan, Chen G. *Population norms for the AQoL-6D and AQoL-8D multi attribute instruments*. (Submitted for publication, contact [Angelo Iezzi](#)).