

The Underactive Thyroid-Dependent Quality of Life Questionnaire (ThyDQoL): Summary Guidelines

The ThyDQoL is an individualised measure of the impact of hypothyroidism on quality of life (QoL).

Scoring

- *Two overview items*: scored individually. QI: *present QoL* (score +3 to -3), QII: *hypothyroid-dependent QoL* (score -3 to +1). See format and scoring on page 3.
- *Individual domains*: a weighted score for each domain is calculated as follows:

$$\begin{aligned} \text{Weighted impact score} &= \text{impact rating (score -3 to +1) x importance rating (0 to 3)} \\ &= -9 \text{ (maximum negative impact of hypothyroidism)} \\ &\quad \text{to +3 (maximum positive impact of hypothyroidism)} \end{aligned}$$

NB. Domains marked 'not at all important' score 0, regardless of the magnitude of the impact of hypothyroidism on QoL. Domains with no impact of hypothyroidism score 0, regardless of their importance to QoL.

Nine domains have not applicable response options. If the following six domains are marked not applicable the domains are not scored, i.e. no domain weighted impact score is calculated: 2:*work*, 3:*holidays*, 4:*family*, 6:*relationship*, 7:*sex life*, and 17:*motivation*. However, three domains with not applicable response options refer to symptoms that might change over the course of a study as a result of treatment (14:*weight*, 15:*bodily discomfort* and 16:*depressed*). To avoid the loss of data available to analysis when a respondent indicates that one or more of these three symptom domains is applicable at one stage of a study but not another, we recommend that the respondent is given a weighted impact score of zero for the symptom that is not applicable, which can be interpreted as hypothyroidism having no impact on the symptom.

Calculation of Average Weighted Impact Score

Average Weighted Impact Score (AWI-18):

$$\begin{aligned} &= \frac{\text{Sum of weighted ratings of all applicable domains}}{\text{N of applicable domains}} \\ &= -9 \text{ (maximum negative impact of hypothyroidism)} \\ &\quad \text{to +3 (maximum positive impact of hypothyroidism)} \end{aligned}$$

Average Weighted Impact Score (AWI-14) excludes four symptom items (9:*energy*, 14:*weight*, 15:*bodily discomfort* and 16:*depressed*). This is to be computed instead of the AWI-18 when the ThyDQoL is used in conjunction with the symptom measure, the Underactive Thyroid Symptom Rating Questionnaire.

$$\begin{aligned} \text{AWI-14} &= \frac{\text{Sum of weighted ratings of all applicable domains minus 4 symptom items}}{\text{N of applicable domains minus 4 symptom items}} \\ &= -9 \text{ (maximum negative impact of hypothyroidism)} \\ &\quad \text{to +3 (maximum positive impact of hypothyroidism)} \end{aligned}$$

Comment

The design of the ThyDQoL is based on that of the ADDQoL for people with diabetes for which there is considerable evidence for reliability, validity and responsiveness. The ThyDQoL has only recently been designed and developed, but it has also been shown to have high internal consistency reliability, and there is evidence for some aspects of validity.

Availability

The ThyDQoL can be obtained from: Prof Clare Bradley [address below].

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Website: www.healthpsychologyresearch.com

Format of the 2 overview items (showing the scores assigned)

I)	In general, my present quality of life is:						
	3 excellent	2 very good	1 good	0 neither good nor bad	-1 bad	-2 very bad	-3 extremely bad

II)	If I did <u>not</u> have underactive thyroid, my quality of life would be:				
	-3 very much better	-2 much better	-1 a little better	0 the same	1 worse

Format of a condition-specific domain with not applicable option (showing the scores assigned)

2	Are you currently working?	Yes	1	No	0
	If no, do you want to work?	Yes	1	No	0
	<p>If yes to either question, complete (a) and (b). If no to both questions, go straight to Question 3.</p>				
(a)	If I did <u>not</u> have underactive thyroid, my working life would be:				
	-3 very much better	-2 much better	-1 a little better	0 the same	1 worse
(b)	For me, working life is:				
	3 very important	2 important	1 somewhat important	0 not at all important	

Summary of the 18 domain-specific items and their response options:

No:	Wording	Response options
If I did not have underactive thyroid,.....		
1	...I would enjoy the things I do in my spare time....	very much more – less
2*	...my working life would be....	very much better – worse
3*	...my holidays would be....	very much better – worse
4*	...my family life would be....	very much better – worse
5	...my social life would be....	very much better – worse
6*	...my closest personal relationship would be....	very much better – worse
7*	...my sex life would be....	very much better – worse
8	...physically I could do....	very much more – less
9	...my energy levels would be....	very much higher – lower
10	...the speed I could do things would be....	very much faster – slower
11	...getting out and about (e.g. shopping, short trips) would be....	very much easier – more difficult
12	...I could handle my household tasks....	very much better – worse
13	...my physical appearance would be....	very much better – worse
14*	...my weight would be....	very much better – worse
15*	...my experience of bodily discomfort would be....	very much less – greater
16*	...I would feel depressed or low....	very much less – more
17*	...my motivation to do things would be....	very much greater - less
18	...my feelings about the future (e.g. worries, hopes) would be....	very much better - worse

* These items include a 'not applicable' response option

Selected references

- Bradley C et al. (1999) The development of an individualised questionnaire measure of perceived impact of diabetes on quality of life: the ADDQoL. *Quality of Life Research* **8**: 79-91.
- Bradley C (2001) Importance of differentiating health status from quality of life. *The Lancet* **357**: 7-8.
- McMillan CV et al. (2004) Design of new questionnaires to measure quality of life and treatment satisfaction in hypothyroidism. *Thyroid* **14**(11): 916-925.
- McMillan CV et al. (2004) Psychometric properties of two new measures of quality of life (QoL) and treatment satisfaction in hypothyroidism: the ThyDQoL and ThyTSQ. *Quality of Life Research* **13**(9): 1556.
- McMillan CV et al. (2005) Quality of life and treatment satisfaction in patients with hypothyroidism. *Proceedings of the British Psychological Society* **13**(1): 83.
- McMillan CV et al. (2005) Psychometric validation of new measures of hypothyroid-dependent quality of life (QoL) and symptoms. *Endocrine Abstracts* **9** P151.
- Razvi S et al. (2005) Quality of Instruments used in measuring symptoms, health status and quality of life in hypothyroidism: a systematic qualitative review. *Clin Endocrinol (Oxf)* **63** 617-624.

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