

The RTSQ

Background

The Renal Treatment Satisfaction Questionnaire (RTSQ) was designed specifically to measure satisfaction with treatment for patients with chronic kidney failure (CKF), for use in routine clinical care and clinical trials. The thirteen-item RTSQ was based on the format of the eight-item Diabetes Treatment Satisfaction Questionnaire (DTSQ) (Bradley and Lewis, 1990; Bradley 1994), used extensively with people with Type 1 and Type 2 diabetes (e.g. Bradley and Speight, 2002; DAFNE Study Group, 2002; Witthaus et al 2001). Six items from the DTSQ appeared to be useful or readily modified to be appropriate for patients on renal treatment, confirmed by interviews (Barendse et al 2005). Additional items were designed to measure satisfaction with other aspects of treatment specific to patients with CKF. Items were designed to be answered by patients receiving any form of treatment for CKF because individual patients may experience a variety of treatments for their condition. Psychometric development work on an earlier 12-item RTSQ showed that 11 items could be summed to form a Treatment Satisfaction score. The item that could not be combined concerned the *demands* of treatment. This item has since been reworded and a new item concerned with *side effects* has been added. Further psychometric evaluation is needed to determine the optimal scoring for these two items. At present, psychometric evaluation has only been conducted on the status version of the RTSQ (RTSQs). A change version of the measure (RTSQc) is also available and can be used in studies that are large enough ($N \geq 100$) to offer opportunities for psychometric evaluation. The instructions, format and response options of the RTSQc are modelled on the DTSQc for diabetes but with items as for the RTSQs. The DTSQc was developed to overcome potential ceiling effects (i.e. where respondents score maximum or near-maximum satisfaction at baseline and can show little or no improvement at follow-up). Please refer to the DTSQ summary for guidance on use of a -TSQ change version.

Availability

The RTSQs and c can be obtained from: Prof Clare Bradley [address below].

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Website: www.healthpsychologyresearch.com

RTSQ

1.1 Using the RTSQ

We recommend use of the RTSQs at baseline and follow-up to provide a 'difference' score.

You may wish to repeat the RTSQs between baseline and endpoint in order to have a picture of how satisfied people are during that period. The RTSQs can usefully be given at intervals throughout a treatment period and when steady increases in RTSQs scores are seen, this provides evidence that scores are determined by experience and are not simply an initially hopeful response to a new treatment, which subsequently declines.

1.2 Scoring the RTSQs

The latest status version has 13 items and produces the following measures:

- *Treatment Satisfaction:*

All the items except for items 3 (*side effects*) and 4 (*demands*) are summed to produce a Treatment Satisfaction score (range: 0 to 66) as demonstrated in Barendse et al 2005. The higher the score, the greater the satisfaction with treatment. Psychometric development is needed to determine whether the recently revised *demands* item and the newly added *side effects* item can be combined with the other items to produce a total scale ranging from 0 to 78. Until this work is done, items 3 and 4 should be treated separately.

- *Individual satisfaction with treatment can be considered separately for each item:*
All rated: 6 (very satisfied, convenient, flexible, etc.) to 0 (very dissatisfied, inconvenient, inflexible, etc.). The higher the score, the greater the satisfaction with each aspect of treatment.

1.3 Scoring the RTSQc

It is anticipated that, as for the RTSQs, all the items (with the possible exceptions of items 3 (side effects) and 4 (demands) can be summed to produce a Treatment Satisfaction (change) score. However, psychometric analyses including principal components analysis and reliability analyses need to be conducted on the first data set of 100+ patients to establish the appropriate scoring.

1.4 Wording of the RTSQc instructions

The wording at the beginning of the instructions needs to relate to the particular intervention in your study. Thus it may need to be changed to be suitable for your particular study. We have produced a wording for the beginning of the introduction that is as generic as possible to minimise the need for changes, but you may need to adapt the wording to be suitable for the study duration and type of intervention. The wording has been based on the study design in which it is most commonly used (i.e. a randomised controlled trial). It may therefore need to be changed for use in an observational type of study. Please note that the last two sentences beginning "Please answer each question...", are the same for all occasions. These latter sentences should not be changed.

Please include in your protocol the details, in English, of any change to the wording of the RTSQc instructions for your particular study. If a run-in treatment period is included and involves a change of treatment for at least some people, the comparison is probably best made with treatment prior to commencement of the study. For crossover studies we would recommend that you make one comparison at the very end of the study, asking participants to compare their current treatment with the previous treatment¹.

Selected references

RTSQ and background references to the DTSQs and DTSQc

- Barendse S, Speight J and Bradley C (2005) The Renal Treatment Satisfaction Questionnaire (RTSQ): A Measure of Satisfaction With Treatment for Chronic Kidney Failure. *American Journal of Kidney Diseases*, **45**, 3, 572-579.
- Bradley C (1994) The Diabetes Treatment Satisfaction Questionnaire: DTSQ. In Bradley C (Ed) *Handbook of Psychology and Diabetes: a guide to psychological measurement in diabetes research and practice*. Chur, Switzerland: Harwood Academic Publishers.
- Bradley C and Lewis KS (1990) Measures of psychological well-being and treatment satisfaction developed from the responses of people with tablet-treated diabetes. *Diabetic Medicine* **7**, 445-451.
- Bradley C, Plowright R, Stewart J, Valentine J and Witthaus E (2007) The Diabetes Treatment Satisfaction Questionnaire change version (DTSQc) evaluated in insulin glargine trials shows greater responsiveness to improvements than the original DTSQ. *Health and Quality of Life Outcomes* **5** (5) 57, <http://www.hqlo.com/content/5/1/57>
- DAFNE Study Group* (2002) Training in flexible, intensive insulin management to enable dietary freedom in people with type 1 diabetes: the dose adjustment for normal eating (DAFNE) randomised controlled trial. *British Medical Journal*, **325**, 746-749 (full 6 page version: <http://bmj.com/cgi/content/full/325/7367/746>).
- Jordan J, Cahn P, Goebel F, Matheron S, Bradley C and Woodcock A (2005) Abacavair Compared to Protease Inhibitors as Part of HAART Regimens for Treatment of HIV Infection: Patient Satisfaction and Implications for Adherence. *AIDS PATIENT CARE and STDs*, **19**, 1, 9-18.
- Witthaus E, Stewart J and Bradley C (2001) Treatment satisfaction and psychological well-being with insulin glargine compared with NPH in patients with Type 1 diabetes. *Diabetic Medicine* **18**, 619-625.

¹ **Example for a crossover design:**

For the past N* weeks you have used either X** or Y**. Today we would like to know how your experience of this treatment for CKF (including medication and diet) has changed from your experience of the previous treatment, which you used in the N weeks before you changed to the treatment you are using now. Please answer...etc.

Where:

*N = the number of weeks/months in each treatment period

**X and Y = the two treatments being compared