

**The RTSQ (Renal Treatment Satisfaction Questionnaire):  
A condition-specific measure of satisfaction  
with treatment for End-Stage Renal Failure.**

**S Barendse and C Bradley**

Dept of Psychology, Royal Holloway, University of London,  
Egham, TW20 0EX, UK.

**1) Aims**

- To design and develop a measure of satisfaction with treatment for end-stage renal failure, for use in routine clinical care and clinical trials.
- To investigate the psychometric properties of the RTSQ using data from 140 outpatients undergoing renal replacement therapy at a U.K. hospital-based renal unit.

**2) Introduction**

**Background:**

Quality and effectiveness of care can be enhanced through the use of condition-specific measures of satisfaction with treatment. The RTSQ (Renal Treatment Satisfaction Questionnaire) is a measure of satisfaction, designed to be suitable for people using different treatment modalities for ESRF. It was modified from the Diabetes Treatment Satisfaction Questionnaire<sup>1</sup>, which has proved to be a valuable tool in understanding patient views of treatment, and identifying changes in treatment satisfaction during clinical trials<sup>2</sup>.

**Questionnaire design:**

The undeveloped RTSQ design included 12 items

7 items were modified from the DTSQ to be suitable for the renal condition (RTSQ items 1, 3, 4, 6, 9, 10, 11).

additional items were designed to measure

- satisfaction with renal control
- freedom afforded by treatment
- demands of treatment
- satisfaction with time involved in treatment
- discomfort or pain involved with treatment

The design of the RTSQ was informed by:

- the literature
- experience of existing condition-specific treatment satisfaction measures including the DTSQ
- pilot testing and interviews.

**3) Method**

The 12 - item RTSQ was included in the questionnaire package for a study of 140 patients receiving renal replacement therapy from one District General Hospital. Modality of treatment of study participants was as follows:

- haemodialysis: N = 35
- CAPD: N = 59
- transplant: N = 46

Patients received a mailed invitation to participate in the study, as part of a review of the renal service. They were asked to return completed questionnaires, including the RTSQ, to the research team in the pre-paid envelope provided.

**4) Results**

Investigation of the psychometric properties of the measure using data from all treatment modalities revealed an 11-item scale, which accounted for 68% of the variance in the dataset. The factor structure is presented in Table 1.

Scale reliability was excellent (alpha coefficient for 10-item scale [whole sample] was 0.93). Alpha coefficient also proved robust to analysis in separate treatment groups (alpha coefficients ranged between 0.89 and 0.95)

Larger subject numbers are needed to confirm the scale structure in separate treatment groups.

**RTSQ  
QUESTIONNAIRE**

The Renal Treatment Satisfaction Questionnaire: RTSQ

The following questions are concerned with the treatment for your renal condition (which may include some form of dialysis, tablets, dietary and/or fluid restrictions) and your experience over the past few weeks. Please answer each question by circling a number on each of the scales.

- How satisfied are you with your current treatment?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- How well controlled do you feel your renal condition is now?  
very well controlled 6 5 4 3 2 1 0 very poorly controlled
- How convenient have you been finding your treatment to be recently?  
very convenient 6 5 4 3 2 1 0 very inconvenient
- How flexible have you been finding your treatment to be recently?  
very flexible 6 5 4 3 2 1 0 very inflexible
- How satisfied are you with the amount of freedom you have with your present treatment?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- How satisfied are you with your understanding of your renal condition?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- How satisfied are you with the time taken by your present form of treatment?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- How satisfied are you with the amount of discomfort or pain involved with your present form of treatment?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- How satisfied are you with the extent to which the treatment fits in with your lifestyle?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied
- Would you recommend this form of treatment to someone else with your kind of renal condition?  
Yes, I would definitely recommend the treatment 6 5 4 3 2 1 0 No, I would definitely not recommend the treatment
- How satisfied would you be to continue with your present form of treatment?  
very satisfied 6 5 4 3 2 1 0 very dissatisfied

Please make sure that you have circled one number on each of the scales.

Thank you

RTSQ © Prof C. Bradley: 1991 (latest revision: 10.10.98 / Hosp./Renal clinic)  
Dept of Psychology, Royal Holloway, University of London, Egham, Surrey, TW20 0EX.

**Enquiries**

All enquiries and correspondence regarding the DTSQ should be made to:  
Professor Chris Bradley,  
Health Psychology Research  
Royal Holloway, University of London  
Egham Hill, Surrey, TW20 0EX, U.K.  
Tel: 01753 483751 Fax: 01753 483397

**Table 1. Factor Structure**

Item no.	Item Content	Factor Loading
1	Satisfaction with current treatment	0.774
2	Satisfaction with control over renal condition	0.676
3	Convenience of treatment	0.863
4	Flexibility of treatment	0.831
5	Freedom afforded by treatment	0.776
6	Satisfaction with understanding of condition	0.583
7	Satisfaction with time taken by treatment	0.807
8	Discomfort or pain involved with treatment	0.767
9	How well treatment suits lifestyle	0.780
10	Would you recommend this treatment?	0.715
11	How satisfied would you be to continue present treatment?	0.806

**5) Conclusions**

The 11-item RTSQ provides a reliable, brief, condition-specific treatment satisfaction measure for clinical trials and routine clinical care in renal replacement therapy.

The RTSQ may be used to help:

- quantify individual satisfaction / dissatisfaction with aspects of the ESRF treatment
- identify people who may benefit from changes in treatment modality
- compare treatment satisfaction in subgroups of patients (e.g. those using different treatment modalities)

**6) References**

- Bradley, C (1994). Diabetes Treatment Satisfaction Questionnaire (DTSQ) in Bradley, C (Ed), *Handbook of Psychology and Diabetes: A guide to psychological measurement in diabetes research and practice*. Harwood Academic Publishers, Chur, Switzerland, p392-393.
- Bradley, C (1999). On calculating Treatment Satisfaction. *Diabetes Care*, 22 : 1760.

**Acknowledgements**

We thank Professor John Walls and Susannah Carr together with other members of the renal care team at Leicester General Hospital for providing access to their clinics and patients.

We also thank the patients who participated in the study for their valuable contribution.