The RetTSQ

The RetTSQ is owned by Health Psychology Research Ltd. ("HPR"). Users must have a licence from HPR, which is contactable either via its website at www.healthpsychologyresearch.com or by email at info@healthpsychologyresearch.com

Background

The Retinopathy Treatment Satisfaction Questionnaire (RetTSQ © Prof. Clare Bradley 2001, latest revision 11.4.19) was designed specifically to measure satisfaction with treatment for diabetic retinopathy. The design and development of the RetTSQ was published in 2009 (Brose and Bradley, 2009) and has since been used in various studies including the international trial CLARITY, which assessed the clinical efficacy of intravitreal aflibercept versus panretinal photocoagulation in patients with proliferative diabetic retinopathy (Sivaprasad et al., 2017) and the study of treatment satisfaction of patients with macular edema receiving two different regimens of Ozurdex (intravitreal Dexamethasone implant) (Ramu et al., 2017).

The design of the RetTSQ was adapted from the template provided by 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; Ashwell et al., 2008; Bretzel et al., 2008; Reaney et al., 2015; Bradley et al., 2018).

The RetTSQ is designed for use with adults with diabetic retinopathy. The questionnaire may be sent by mail and be self-completed by patients with adequate vision; alternatively, it can be administered in clinic or via telephone interview for a range of purposes including:

i. An assessment tool with individuals;

ii. An assessment tool with groups of patients;

iii. A broad cross-sectional survey instrument;

iv. A routine part of clinical audit cycles;

v. An outcome measure for clinical research trials evaluating new treatments.

The RetTSQ is only suitable for people who have experienced treatment for retinopathy, including visits to the clinic for monitoring the progression of the condition.

The main body of the measure consists of 13 items (see Table 1), covering various aspects of treatment, each with a 7-point scale scored from 6 (e.g. very satisfied) to 0 (e.g. very dissatisfied). For two items (items 3 and 4) there is a further response option with a score of 7, which is useful for obtaining frequencies of participants not experiencing the aspect of treatment in question (e.g. 'no discomfort experienced', Figure 1). For data analysis purposes, scores of 7 are recoded as 6. Item 11 comprises several questions about whether any information about the treatment was given, its form and timing and the respondent's satisfaction with the information provided. If participants indicate that they received no information about their treatment, this is scored as 0. In a final item, respondents are invited to mention any features of treatment, with which they have been either satisfied or dissatisfied, that are not covered by the questionnaire. Responses to this final item may be summarised and verbatim responses to this item may be collated to determine whether any further items need to be added to the RetTSQ in the future. When no new items are suggested, this provides valuable evidence for content validity.

Table 1. Overview of RetTSQ Items

Item #	Treatment Satisfaction Domain
1	Overall treatment satisfaction
2	Treatment is working
3	Bothered side effects / after-effects *
4	Bothered discomfort / pain *
5	Unpleasantness of treatment
6	Difficulty of treatment
7	Apprehensive
8	Influence over treatment
9	Safety
10	Time taken
11	Information
12	Recommend
13	Continue / Repeat treatment

* Has an eight-point scale with 7 as an option, rescored as 6 for data analysis.

Figure 1. RetTSQ example item.

4. How bothered are you by any discomfort or pain from the treatment for your diabetic eye problems?

- **no discomfort experienced... 7** ☐
- **not at all bothered..... 6** ☐
- **..... 5** ☐
- **..... 4** ☐
- **..... 3** ☐
- **..... 2** ☐
- **..... 1** ☐
- **very bothered ..... 0** ☐

The RetTSQ items (scored or rescored from 0 to 6) can be used individually as well as summed to produce a Treatment Satisfaction score (range: 0 to 78). The higher the score, the greater the satisfaction with treatment.

Timing of RetTSQ administration

We recommend that you use the RetTSQ at baseline (if patients have prior experience of treatment) or within 2 to 4 weeks of first experience of the trial treatment, and at endpoint.

If you are having a long gap between baseline and endpoint (e.g. a year) and/or multiple treatment episodes, you may wish to repeat the RetTSQ in order to have a picture of how satisfied people are during that period. The RetTSQ can usefully be given at intervals throughout a treatment period and when steady increases in RetTSQ 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.

Wording of the RetTSQ instructions

The wording at the beginning of the instructions needs to relate to the particular intervention in your study. The current wording is based on the most probable study design (i.e. a randomised controlled trial) and is as generic as possible. You may need to adapt the wording to be suitable for the study duration, type of intervention and study type used in your 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 suggested change(s) to the wording of the RetTSQ instructions for your particular study. If you would like to compare two specific treatments, trial specific instructions will be needed to explain exactly what is being compared.

Format and administration of the RetTSQ

The RetTSQ is designed for self-completion by adults with diabetic retinopathy. The font is Arial 16 bold and all text is justified to the left (to make it easier to follow the vertical line down the page). The use of upper case is avoided except where dictated by grammar, as capital letters are less easy to differentiate from each other than lower case letters. Dotted lines guide the respondent from questions to response options (see Figure 1 above).

The RetTSQ is suitable for administration by telephone interview or face-to-face interview. We recommend that for each individual respondent the same method of administration is used at all time points (e.g. telephone interview throughout the study). This is to avoid method completion bias, where the respondent may be positively or negatively influenced by the method of completion (Mitchell et al., 2010). Telephone interview (or face-to-face interview) is preferable except where all participants are able to read large print and can self-complete the RetTSQ without help. Instructions for interviewers are available in English and some other languages.

Availability

The RetTSQ is made available to users by formal arrangement with the copyright holder, Professor Clare Bradley via Health Psychology Research Ltd, which licences her questionnaires. A user agreement is necessary to avoid breach of copyright and to ensure that the latest and most appropriate version of the questionnaire is used.

Evidence of licensing may be required by regulators, editors and/or examiners.

Contact Information

For permission to use the RetTSQ and to ensure you have the most up-to-date version, please contact:

E-mail: info@healthpsychologyresearch.com

Website www.healthpsychologyresearch.com

RetTSQ and Background References to the DTSQs

Ashwell, S.G., Bradley, C., Stephens, J.W., Witthaus, E. & Home, P.D. (2008). Treatment satisfaction and quality of life with insulin glargine plus insulin lispro compared with NPH insulin plus unmodified human insulin in individuals with type 1 diabetes. *Diabetes Care* **31** (6), 1112-7. doi: 10.2337/dc07-1183. http://www.ncbi.nlm.nih.gov/pubmed/18339977.

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., Eschwège E., de Pablos-Velasco P., Parhofer K.G., Simon D., Vandenberghe H. and Gönder-Frederick L. (2018) Predictors of Quality of Life and Other Patient-Reported Outcomes in the PANORAMA Multinational Study of People with Type 2 Diabetes. *Diabetes Care* **41** (2), 267-276.

Bradley C. and Lewis K.S. (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. & Speight J. (2002) Patient perceptions of diabetes and diabetes therapy: assessing quality of life. *Diabetes Metabolism Research and Reviews* **18**, S64-S69.

Bretzel , R.G., Nuber, U., Landgraf, W., Owens, D.R., Bradley, C. & Linn, T. (2008). Once-daily basal insulin glargine versus thrice-daily prandial insulin lispro in people with type 2 diabetes on oral hypoglycaemic agents (APOLLO): an open randomized controlled trial. *The Lancet **371*** (9618), 1073-1084. doi:10.1016/S0140-6736(08)60485-7. http://www.thelancet.com/journals/lancet/article/PIIS0140673608604857/abstract http://digirep.rhul.ac.uk/items/dd2a797e-9f6c-02ed-3dfe-5d016ccf9d99/1/

Brose L.S. and Bradley C. (2009) Psychometric development of the Retinopathy Treatment Satisfaction Questionnaire (RetTSQ). *Psychology, Health & Medicine* **14** (6), 740-754.

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).

Ramu J., Chatziralli I., Yang Y., Menon G., Bailey C., Eckstein M., Hykin P., Sivaprasad S. (2017) Health-related quality of life, visual function and treatment satisfaction following intravitreal dexamethasone implant for diabetic macular edema. *Patient Prefer Adherence* **11**, 579-586. doi: 10.2147/PPA.S132859.

Reaney, M., Yu, M., Lakshmanan, M., Pechtner, V., & van Brunt, K. (2015). Treatment satisfaction in people with type 2 diabetes mellitus treated with once-weekly dulaglutide: data from the AWARD-1 and AWARD-3 clinical trials. *Diabetes Obesity & Metabolism* **17** (9), 896-903. doi:10.1111/dom.12527.

Sivaprasad S., Prevost A.T., Vasconcelos J.C., Riddell A., Murphy C., Kelly J., Bainbridge J., Tudor-Edwards R., Hopkins D., Hykin P.; CLARITY Study Group (2017) Clinical efficacy of intravitreal aflibercept versus panretinal photocoagulation for best corrected visual acuity in patients with proliferative diabetic retinopathy at 52 weeks (CLARITY): a multicentre, single-blinded, randomised, controlled, phase 2b, non-inferiority trial. *Lancet* **389** (10085), 2193-2203. doi: 10.1016/S0140-6736(17)31193-5.

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.