

# Summary of the MacTSQ

## A measure of treatment satisfaction in patients with macular degeneration

### 1. Background

The MacTSQ<sup>1</sup> was developed in 2006/7 and is based on the DTSQ (Diabetes Treatment Satisfaction Questionnaire)<sup>2,3</sup> and the RetTSQ (Retinopathy Treatment Satisfaction Questionnaire).<sup>4,5</sup> The MacTSQ was designed with the help of members of several Macular Disease Society self-help groups, using in-depth interviews.

The psychometric development was conducted using a dataset from a British clinical trial, the IVAN trial, comparing treatment regimens for an anti-VEGF drug administered by intraocular injection. The scoring algorithm was prepared following psychometric analysis and development.

The MacTSQ follows the RetTSQ format designed for completion by visually impaired people, using Arial 16 bold font and with all text justified to the left (to make it easier to follow the vertical line down the page). Dotted lines guide the respondent to response option tick boxes. An example of an item from the MacTSQ is shown in Figure 1. The measure can also be administered by telephone interview as long as the interview is conducted by someone other than eye clinic staff so that patients feel able to express dissatisfaction as well as satisfaction.

The measure consists of 13 items (Table 1), each with a 7-point scale scored from 6 (e.g. very satisfied) to 0 (e.g. very dissatisfied). For three items (items 2, 3 and 7, see Table 1) there is a further response option with a score of 7 (Figure 1). This option is used when the aspect of satisfaction has not been experienced (e.g. no pain experienced). 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 from initial studies to determine whether any further items need to be added to the MacTSQ in future.

**Figure 1 Example of an item from the MacTSQ**

### 3. How bothered are you by any discomfort or pain from the treatment for your MD?

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

**Table 1 MacTSQ items and response options**

|      | MacTSQ item  | Response options   |
|------|--|--|
| 1.   | How satisfied are you with the treatment for your MD?  | very satisfied – very dissatisfied   |
| 2.*  | How bothered are you by any side effects or after effects you experienced with the treatment for your MD?  | none experienced, not at all bothered – very bothered                              |
| 3.*  | How bothered are you by any discomfort or pain from the treatment for your MD?   | no discomfort experienced, not at all bothered – very bothered                     |
| 4.   | How well do you feel the treatment for your MD is working?   | very well - very badly   |
| 5.   | How unpleasant did you find your most recent treatment for MD?   | not at all unpleasant – very unpleasant  |
| 6.   | How apprehensive did you feel about your most recent treatment for MD?   | not at all apprehensive – very apprehensive  |
| 7.*  | How satisfied are you with any cost to you associated with the treatment for your MD?  | no cost to me, very satisfied – very dissatisfied                                  |
| 8.   | How difficult is your journey to the eye clinic where you had recent treatment for your MD?  | very easy – very difficult   |
| 9.   | How satisfied are you with the safety of the treatment for your MD?  | very satisfied – very dissatisfied   |
| 10.  | Were you given any written information designed to prepare you for your MD treatment e.g. information about <ul style="list-style-type: none"> <li>• procedures</li> <li>• possible side effects/risks</li> <li>• expected benefits</li> </ul> | yes/no<br>yes/no<br>yes/no   |
| 10a. | If yes, was the information given to you long enough before your treatment to allow you to make best use of it?  | yes/no   |
| 10b  | How satisfied are you with the information provided about the treatment for your MD?   | very satisfied – very dissatisfied   |
| 11.  | If further treatment for your MD were necessary, how satisfied would you be to continue or repeat the treatment?   | very satisfied – very dissatisfied   |
| 12.  | Have you had a fluorescein angiogram (when dye is injected into your arm or hand and then the back of the eye is photographed)?  | yes/no   |
| 12a  | How satisfied are you with the experience of fluorescein angiography?  | very satisfied – very dissatisfied   |
| 13.  | How satisfied are you with the time spent at the hospital on each treatment day?   | very satisfied – very dissatisfied   |
| 14.  | How satisfied are you with the time taken by the course of treatment for your MD?  | very satisfied – very dissatisfied   |
| 15.  | Would you encourage someone else with MD like yours to have your kind of treatment?  | yes, I would definitely encourage them – no, I would definitely not encourage them |
| 16.  | Are there any other features of the treatment for your MD, causing either satisfaction or dissatisfaction, that have not been covered already?   | yes/no (open text box for description if response is 'yes')                        |

\* Item has 8 point scale

## 2. Recoding

Items 2 (*side effects*), 3 (*pain or discomfort*) and 7 (*cost of treatment*) are scored between 7 and 0. For each of these items the score of 7 indicates that the respondent has not experienced this aspect of treatment. The value 7 is useful for obtaining frequencies of participants not experiencing those aspects of treatment. For the purposes of other analyses involving MacTSQ scale and subscales, scores of 7 should be recoded as 6. Other values remain unchanged.

### 3. Scoring

3.1 The MacTSQ has 2 subscales:

- Subscale 1 (*Information provision and convenience*) contains six items (1, 10b, 11 and 13-15). Each item is scored between 6 (e.g. very satisfied) and 0 (e.g. not at all satisfied). Item scores are summed to give a subscale score of between 0 and 36. The higher the score, the greater the satisfaction with treatment.
- Subscale 2 (*Impact of treatment*) contains six items (items 2-6 and 9). Each item is scored between 6 (e.g. very satisfied) and 0 (e.g. not at all satisfied) after recoding of items 2 and 3 as described in point 2 above. The scores of the six items are summed to give a total of between 0 and 36. The higher the score, the greater the satisfaction with treatment.

3.2 The MacTSQ as a single scale: The 12 items from the two subscales can be combined to form a single scale with a range of scores between 0 and 72. The higher the score, the greater the satisfaction with treatment.

3.3 Items 7, 8 and 12 are scored separately: Items 7 (*cost of treatment*), 8 (*journey to the eye clinic*) and 12 (*experience of fluorescein angiography*) are not included in either subscale or in the single scale but, if required, can be scored separately. Item 7 will not apply in regions where a specific treatment being investigated is freely available or where all treatments are freely available but it may have considerable impact if patients have to pay for treatment. Item 8 will be an issue for some patients and not others, depending upon their circumstances. The item may be of interest to clinicians if, for example, there is a concern over attendance for some patients. Item 12 was included in the measure because, in the design phase of the MacTSQ, a number of interviewees reported that the fluorescein angiogram (FA) was more distressing than their treatment. If there is evidence of dissatisfaction with FA, it may be informative to investigate the relationship of this item to others such as items 1, 2 3, 5 and 6.

### 4. Missing data

4.1 Subscale 1: The Cronbach's alpha for the subscale is 0.740. If one item is removed the alpha falls to below 0.70. Therefore cases with any missing data should be removed from analysis of the subscale.

4.2 Subscale 2: The Cronbach's alpha for the subscale is 0.776. With one item removed the alpha falls to 0.709. With more than one item removed the reliability of the scale falls below 0.70. Therefore cases with two or more items of missing data should be excluded from analysis of the subscale

4.3. Single scale: The Cronbach's alpha for the single scale is 0.815. With three items removed the alpha is 0.716. The alpha falls to below 0.7 with more four items removed. Therefore cases with four or more items of missing data should be removed from the analysis.

### 5. 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 type of treatment being investigated may need to be changed. In the second section (starting 'In this questionnaire please') the first bullet point may be changed to suit the study but the following two bullet points should not be changed or removed. Please discuss any changes requested with the administrator at Health Psychology Research Ltd when you seek a licence to use the MacTSQ via the website in point 6 below.

### 6. Availability

The MacTSQ can be obtained from: [www.healthpsychologyresearch.com](http://www.healthpsychologyresearch.com)

## Selected references

1. Mitchell J, Brose LS, Bradley C. Design of a measure of satisfaction with treatment for Macular Degeneration (MacTSQ). 2007 International Society for Quality of Life Research meeting abstracts [[www.isoqol.org/2007mtgabstracts.pdf](http://www.isoqol.org/2007mtgabstracts.pdf)]. *Quality of Life Research supplement* 2007:A-120, Abstract #1150.
2. Bradley C, Lewis KS. Measures of psychological well-being and treatment satisfaction developed from the responses of people with tablet-treated diabetes. *Diabetic Medicine* 1990;7:445-451.
3. Bradley C. The Diabetes Treatment Satisfaction Questionnaire: (DTSQ). In: Bradley C, editor. *Handbook of Psychology and Diabetes: a guide to psychological measurement in diabetes research and practice*. Chur, Switzerland: Harwood Academic Publishers, 1994:111-132.
4. Woodcock A, Plowright R, Kennedy-Martin T, Hirsch A, ffytche T, Bradley C. Development of the new Retinopathy Treatment Satisfaction Questionnaire (RetTSQ). *Proceedings of Vision 2005; International Congress Series* 2005;1282:342-346.
5. Brose LS, Watkins J, Bradley C. Retinopathy Treatment Satisfaction Questionnaire (RetTSQ): psychometric development. 2007 International Society for Quality of Life Research meeting abstracts [[www.isoqol.org/2007mtgabstracts.pdf](http://www.isoqol.org/2007mtgabstracts.pdf)]. *Quality of Life Research supplement* 2007;October 2007:A-21, Abstract #1197.