

Train the trainer in eccentric viewing (TTEV): full study evaluation

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The aim of the project was to train members of the Macular Disease Society who had central vision loss caused by MD, to use eccentric viewing techniques and to pass these skills on to other people with MD.

A series of 3-day courses, each with a maximum of eight attendees, were held throughout the United Kingdom to train people to become trainers. Attendees were taught to locate their own preferred retinal locus and to use it consistently for eccentric viewing. They were taught to use 'steady eye strategy', a technique to aid eccentric viewing by keeping head and eye still while moving the text (book, paper etc) from right to left. Advice on lighting and use of low vision aids was included in the course.

The attendees were taught how to help other people with central vision loss to locate their own preferred retinal locus and to use

eccentric viewing and steady eye strategy. Once trained as trainers they were allocated trainees.

The trainees were people with MD who had heard about the course, either through the press or from the Society, and had asked to be put on a waiting list for training. They were trained in a series of three or more 1-hour sessions over several weeks. Baseline and follow-up reading data were collected by trainers at the beginning and end of each individual's training; quality of life and visual function data (using the MacDQoL and items from the LVQOL questionnaires respectively) were collected by telephone interview at baseline (one week before the start of training) and follow-up (3 months following training).

Effective visual function items were included part way through the study, resulting in only small subsamples of trainers and

trainees with complete visual function data. Trainer and trainee data were analysed separately.

Trainers' results

A total of 114 trainers (79 women, 35 men, mean age 69 years) had a mean initial reading speed of 52 words per minute (wpm) and a significantly faster follow-up reading speed of 61 wpm ($t = -20.6, p < 0.001$). Data from a small subgroup of 12 trainers with complete visual function data indicated a trend towards improvement in vision function in five of nine activities investigated (e.g. reading large print, reading small print, recognising faces, seeing TV, using tools).

A subsample ($n = 54$) with complete baseline and follow-up interview data showed reduced negative impact of MD for MacDQoL scores for five aspects of life following training (independence, personal affairs, work, shopping and friends and social life) (p 's < 0.05). In this subsample a total of 30/54 people said they used both eccentric viewing and steady eye strategy. Seven of the 54 trainers used neither technique,

11 used eccentric viewing only, six used steady eye strategy only.

Trainees' results

The sample of 216 trainees with complete reading speed data (73 men, 143 women, mean age 80 years) had an average initial reading speed of 29 wpm and a significantly faster follow-up speed of 36 wpm ($t = 6.5, p < 0.001$), a decrease in smallest readable font from 24 to 16 (median scores) ($t = 3.2, p < 0.005$) and a decrease in speed reading test font from 16 to 24 (median scores) ($t = 7.4, p < 0.005$). A small subsample with complete vision function data ($n = 9$) showed a significant improvement in vision function for four of nine activities investigated (p 's < 0.05) and a non-significant trend towards improvement in four of the remaining five activities.

A subsample of trainees with complete telephone interview data ($n = 98$) showed reduced negative impact of MD on two aspects of life following training (personal affairs and future) measured by the MacDQoL (p 's < 0.05). In this subsample a total of 72 people (74%) said they used eccentric

viewing techniques and 64 (65%) said they used steady eye strategy following training.

Over 90% of trainers and trainees found advice on lighting either somewhat useful or very useful and over 80% of trainers and trainees found advice on use of low vision aids either somewhat useful or very useful. The perceived usefulness of this advice was associated with improvements in some aspects of reading (finding reading easier, reading for longer, reading different types of written material and relying less on others to read for them). Anecdotal evidence from trainers and trainees indicated that training benefited participants in areas other than

reading; embroidery, playing cards, gardening, painting and crosswords were among activities that were successfully revisited by participants following eccentric viewing training.

Although the trainees showed more improvement in vision function after training than did the trainers, improvements in the impact of MD on quality of life were more apparent in the trainers. It may be that other factors associated with the older age of the trainees and their poorer initial reading speed prevented improvements in vision from benefitting quality of life in the trainees as much as they benefitted the trainers.

