Effects of Cognitive Bias Modification of Interpretation Bias on Students with Fear of Failure: A Single-Case Design

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Summary

Background. Fear of failure is known to have a negative influence on educational performance. About 20% of the students in higher and academic education struggles with fear of failure. Cognitive behavioural therapy has been found to be the most effective for the treatment of fear of failure. A relatively new technique to change a person’s way of thinking by modifying dysfunctional cognitive processes is cognitive bias modification (CBM). CBM can be focused on several cognitive aspects. The focus of this study is on CBM-I which aim is to teach people to interpret ambiguous situations in a more positive way. In the current study the effects of a CBM-I training on students with fear of failure was examined.

Aim. The aim of the present study was to examine if participation in CBM-I training results in a decrease of fear of failure, study stress, negative interpretation bias and an increase of positive interpretation bias.

Participants, procedure, design. Participants were 8 university students with negative fear of failure who can be typified as overstrivers and who participated in a weekly cognitive behavioural group training which took place in the same time period as their participation in this study. To describe the effects of the CBM-I intervention, a single case, A-B design was used. Baseline and intervention phase both lasted six weeks. Participants completed measures for the current study on a weekly basis. During the intervention phase they also completed a CBM-I session each week.

Measures. Fear of failure was measured by the Dutch translation of the Fear of Failure questionnaire (FoF; Thrash & Elliot, 2003) and by the scale Fear of failure, of the Study Problems Questionnaire (SPQ). Interpretation bias (positive and negative) was measured by a version of the Recognition Task (RT; Eysenck, Mogg, May, Richards, & Mathews, 1991) and by the Rating Scales-Bias (RS-Bias). Study stress was measured by the Rating Scales-Study stress (RS-Study stress). The CBM-I training concerned 6 sessions of an online computerised
training to learn to interpret ambiguous situations in a positive way. Each session consisted of 20 trials.

**Results.** Four of the eight participants showed improvements over the intervention phase on some of the various measures. The measures and corresponding concepts in which the improvement came forward was rather variable per participant.

**Conclusion.** The results of the current study do not offer enough proof to accept the hypotheses that CBM-I training leads to improvements in fear of failure, study stress and negative interpretation bias. However, a cautiously optimistic trend is seen in which CBM-I training is associated with improvement in negative interpretation bias and in some cases with improvement of symptoms. No support was found for the hypothesis that CBM-I training increases positive interpretation bias. For future single case design studies, research on assessment tools for the concepts of fear of failure, study stress and interpretation bias is needed to provide knowledge about the levels to which these tools are sensitive to treatment change.

*Keywords: Fear of failure, test anxiety, CBM-I, interpretation bias, single case design*