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Brief communication

Alexithymia and cognitive behaviour therapy outcome for subthreshold depression

Spek V, Nyklíček I, Cuijpers P, Pop V. Alexithymia and cognitive behaviour therapy outcome for subthreshold depression.

Objective: Alexithymia is hypothesized to be a stable trait that hinders favourable outcomes of psychotherapy. We tested two hypotheses: i) alexithymia is not stable but changes along with a change in depressive symptoms and ii) pretreatment alexithymia hinders gaining benefits from psychotherapy.
Method: A total of 201 participants (mean age = 54 years, SD = 4.4) with subthreshold depression were treated with cognitive behaviour therapy. Outcome was defined as the change in depressive symptoms from pretreatment to post-treatment and to 1-year follow-up.
Results: Changes in depressive symptoms were significantly correlated with changes in alexithymia. Baseline alexithymia scores were not correlated with treatment outcome.
Conclusion: Alexithymia is less stable than hypothesized: changes in alexithymia were associated with change in depressive symptoms. Furthermore, alexithymia does not hinder cognitive behaviour therapy outcome.

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Key words: affective symptoms; treatment outcome; depression

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Significant outcomes

- Alexithymia is less stable than hypothesized.
- Changes in alexithymia were associated with a change in depressive symptoms.
- Pretreatment alexithymia did not hinder cognitive behaviour therapy outcome.

Limitations

- Alexithymia was not measured directly after treatment; therefore, we can only study the association between change in depressive symptoms and alexithymia in the longer term (1 year after the start of treatment).
- The participants of this study were somewhat more highly educated than the general population in this age group. Therefore, it is uncertain whether the results of this study can be generalized to the whole population.

Introduction

Alexithymia refers to an inability to find appropriate words to describe feelings, a relative constriction in emotional functioning and a poverty of fantasy life (1). Alexithymic individuals manifest bland affect. They do not have much insight into their motives and behaviour. Alexithymic individuals are concerned with their bodies and the adequacy of its physiological functioning. Their anxiety and tension find outlet in bodily symptoms. They emphasize communication through action and non-verbal behaviour. They tend to keep people at a distance and avoid close interpersonal relationships (2). In short, alexithymia can be seen as a fairly stable deficit regarding processing of emotions (3).

Alexithymia is expected to hinder favourable outcomes of psychotherapy, as management of emotions is explicitly or implicitly crucial in all

forms of psychotherapy, including cognitive behaviour therapy. In the hitherto only study conducted on alexithymia and outcomes of short-term psychotherapy, it was reported that alexithymia at baseline predicted less favourable treatment outcomes (4).

An alternative hypothesis regarding alexithymia is that alexithymia may not be stable at all (5). A strong correlation between alexithymia and depression has often been found (5–9). Based on this, it may be hypothesized that alexithymia may sometimes be secondary to depression (10, 11) and that, after treatment, levels of alexithymia might decrease along with the decrease in depressive symptoms.

Aims of the study

The aim of this study was to investigate whether alexithymia was related to treatment outcome of cognitive behavioural therapy with a 1-year follow-up, to get more insight into long-term effects. We investigated two hypotheses: i) alexithymia is not stable but changes along with a change in depressive symptoms and ii) pretreatment alexithymia hinders gaining benefits from psychotherapy.

Material and methods

Participants

Participants were 132 women and 69 men (mean age = 54 years, SD = 4.4) with subthreshold depression: high levels of depressive symptoms on the Edinburgh Depression Scale (12–14) but not enough symptoms to meet the DSM-IV criteria of depression during a World Health Organization Composite International Diagnostic Interview (15). They were treated with cognitive behaviour therapy. Analyses were performed on complete cases only: at post-treatment, we had complete data of 129 participants; at 1-year follow-up there were complete data of 119 participants.

The study protocol was approved by the Maxima Medisch Centrum Eindhoven (regional hospital) ethics committee, which is certified by the Central Committee on Research involving Human Subjects in the Netherlands.

Measures

Beck Depression Inventory – second edition (BDI-II) The BDI (16) is the most frequently used self-report measure for depressive symptoms. It contains 21 items. The BDI was developed to assess the intensity of depressive symptoms. Internal consistency is high and in the Dutch manual Cronbach's alphas of 0.92 and 0.93 are reported (17). The BDI scores were used as the primary outcome measure. The BDI was administered at baseline, directly after treatment and at 1-year follow-up.

Toronto Alexithymia Scale-20 The Toronto Alexithymia Scale-20 (TAS-20) (18, 19) is a 20-item self-report questionnaire, measuring difficulty in distinguishing between different emotions and physical sensations, difficulty describing and verbally expressing emotions, and thinking oriented at external facts and not at inner emotions. Internal consistency and test–retest reliability are satisfactory (18). Cut-off scores on the TAS-20 are the following: scores of ≥61 indicate alexithymia and scores ≤51 indicate no alexithymia. Scores between 52 and 60 are categorized as intermediate (5). The TAS-20 was completed at baseline and at 1-year follow-up.

Procedure

At the start of the study, participants were asked to complete the pretreatment questionnaires, including the BDI and TAS-20. After cognitive behaviour therapy, participants were asked to complete the post-treatment BDI. The 1-year follow-up assessment included the BDI and TAS-20.

Analyses

All analyses were performed using SPSS 14.0. (SPSS Inc., Chicago, IL, USA) ANOVAS and chi-squared tests were used to analyse whether people who dropped out before completing baseline measurements differed from people who did complete baseline assessment. With the same techniques, we also analysed whether people who did not provide post-treatment data and/or follow-up data differed from completers.

To test the hypothesis that alexithymia would change along with change in depressive symptoms, we conducted paired samples *t*-tests and subsequently calculated correlations between the changes on the BDI and changes in the TAS-20.

For the hypothesis that pretreatment alexithymia is related to psychotherapy outcomes, we conducted a correlation analysis for total alexithymia scores with treatment outcome. Evaluation of the effectiveness of the treatment itself has been presented in earlier reports (20, 21).

Results

Preliminary analyses included checks for normality and the computation of descriptive statistics. All

variables were distributed acceptably close to normal.

Participants who dropped out at any moment (before baseline, after baseline, at post-treatment or after 1 year) did not differ from those who completed (data not shown).

At pretreatment, the mean alexithymia scores were somewhat elevated, corresponding to intermediate levels of alexithymia. One year after the start of treatment, the mean scores were lowered to the level of the cut-off score between no alexithymia and intermediate alexithymia (51/52) [$t(105) = 4.73$, $p < 0.001$]. We calculated an effect size (d) for this change by dividing the absolute difference between the post-treatment average score (M_{post}) and the pretreatment average score (M_{pre}) by the pretreatment standard deviation (SD_{pre}) ($d = 0.36$). This effect size thus indicates that the post-treatment average score is 0.36 standard deviation larger than the pretreatment average score (Table 1).

Table 1. Characteristics of participants: means (standard deviations) or percentages

BDI score 1-year follow-up	11.38 (8.45)
Age	54 (4.4)
Percentage women	65.7%
With partner	80.5%
≤9 years of education	18%
10–14 years of education	46%
≥15 years of education	36%
BDI score baseline	18.67 (8.24)
BDI score post-treatment	11.72 (8.61)
TAS-20 score baseline	55.23 (10.25)
TAS-20 score one-year follow-up	51.80 (10.76)

BDI, Beck Depression Inventory; TAS-20, Toronto Alexithymia Scale-20.

To test the hypothesis that alexithymia would decrease with decreased depressive symptoms, we calculated the correlation between the change on alexithymia scores and the improvement on the BDI scores over the course of a year. Changes in alexithymia scores were significantly correlated with a change on the BDI ($r = 0.26$, $p = 0.01$).

To investigate whether pretreatment alexithymia was related to psychotherapy outcomes, we calculated correlations. We found no significant correlations for pretreatment alexithymia scores and treatment outcome at post-treatment or at 1-year follow-up ($r = 0.03$, $p = 0.73$ and $r = 0.04$, $p = 0.69$ respectively).

Discussion

We investigated the role of alexithymia in treatment outcome of cognitive behavioural therapy interventions for older adults with subthreshold depression (symptoms of depression, but not enough to meet the DSM-IV criteria for major depression). We tested two hypotheses: i) alexithymia is not stable but changes along with a change in depressive symptoms and ii) pretreatment alexithymia hinders gaining benefits from psychotherapy.

Regarding our first hypothesis, we found that alexithymia is not as stable as is often conceptualised, but that alexithymia can change significantly over the course of a year. In addition, the reduction in alexithymia was associated with a reduction in depressive symptoms. This result is consistent with findings of Honkalampi et al. (5), who also found that improvement in alexithymia was strongly related to improvement in depression scores. Given the fact that alexithymia and depressive symptoms have repeatedly been reported to be substantially interrelated, one may hypothesize that alexithymia may sometimes be secondary to depression (10, 11). However, despite the fact that we found that both depressive symptoms and alexithymia changed over the course of the year, we cannot draw conclusions about the causal direction of this association. Future prospective research using multiple measurements during a certain period may enlighten this issue.

We did not find evidence for our second hypothesis regarding alexithymia as a predictor of treatment outcome. This is inconsistent with the only earlier study conducted in this area, finding that alexithymia was associated with worse psychotherapy outcome (4). This discrepancy may be because of the difference in the treatments used in both studies. In the earlier study (4), supportive and interpretive therapies were used; we studied cognitive behaviour therapy. One may speculate that cognitive behaviour therapy may be less problematic for individuals with elevated alexithymia compared with more insight-oriented therapies.

This study has several limitations. First, the participants of this study were somewhat more highly educated than the general population in this age group (22). Therefore, it is uncertain whether the results of this study can be generalized to the whole population. Second, alexithymia was not measured directly after treatment, precluding the possibility of drawing conclusions regarding immediate post-treatment effects.

Despite the limitations of this study, we found that alexithymia was not stable: a significant reduction in alexithymia was associated with a reduction in depressive symptoms. Furthermore, alexithymia was not associated with unfavourable treatment outcome over the course of a year.

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