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Alexithymia and Outcome in Psychotherapy

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Key Words
Alexithymia · Psychodynamic therapy · Group therapy · Relative stability · Absolute stability

Abstract
Background: About 25% of all patients seeking psychotherapeutic treatment are considered to be alexithymic. Alexithymia has been assumed to be negatively associated with therapeutic outcome. On the other hand, it is unclear to which extent alexithymia itself may be modified by psychotherapeutic interventions. ***Methods:*** From 414 consecutively admitted inpatients, 297 were followed up after 4 weeks (t1) and after 8–12 weeks (t2) upon discharge. Patients were treated with psychodynamic group therapy in a naturalistic setting. The Toronto Alexithymia Scale (TAS-20) and the Symptom Checklist-90 were administered. ***Results:*** Twenty-seven percent of the patients were alexithymic (TAS-20 $\geq$61) at baseline. Multivariate models with repeated measurements indicated significant changes in Global Severity Index of the Symptom Checklist-90 in both alexithymic and nonalexithymic subjects. However, alexithymic subjects had significantly higher Global Severity Index scores than nonalexithymic subjects at t0, t1 and t2 ($p < 0.001$). The TAS-20 scores demonstrated a high relative stability in the total sample. However, in the alexithymic group, the TAS-20 scores changed considerably from baseline to discharge [66.3 (SD = 4.7) to 55.9 (SD = 9.9); t = 8.69; d.f. = 79; $p < 0.001$]. ***Conclusion:*** The inpatient treatment program including psychodynamic group therapy significantly reduced psychopathological distress and alexithymic features in alexithymic patients. Still, these patients suffered from higher psychopathological distress at discharge than nonalexithymics. Therefore, alexithymic features may negatively affect the long-term outcome.

Introduction

Personality is assumed to play an important role in modulating one's capacity to cope with stressful life events, interpersonal conflicts but also to influence one's ability to respond to psychotherapeutic treatment [1, 2]. The construct of alexithymia focuses on difficulties in describing and expressing feelings, on the paucity of fantasies. Recent studies have associated alexithymia with dissociation [3], depression [4–6], anxiety disorders [7, 8], pathological gambling [9] and a broad range of psychopathologic features [10]. Given the relative temporal stability [11–16], the pattern of correlations with traits of personality models like the NEO-FFI and the tempera-

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ment and character model [17–19], alexithymia is considered to be a unique and distinct personality construct. However, there is an ongoing debate on the changeability of alexithymic traits by psychotherapy in the light of lacking absolute stability [6, 14, 20, 21].

The impact of alexithymia itself on outcome in psychotherapy is less clear. First, subjects with alexithymia are often socially avoidant, cold, less emotionally attached to others. This could lead to a reduced adherence to psychotherapy despite of severe mental distress [19, 22]. Second, the lack of imagination, psychological mindedness and awareness to emotional cues may significantly reduce the ability to be successfully engaged in psychotherapy [5]. Third, early observations of Sifneos [23] and others described alexithymic patients to respond poorly to dynamic psychotherapy.

However, there has been little empirical research to investigate whether alexithymia predicts psychotherapy outcome [24]. Some treatment studies found alexithymia to be associated with persistent somatization in somatoform disorders [25] and with a negative outcome in medical treatment of functional gastrointestinal disorders [26]. In short-term group therapy for outpatients with complicated grief and in short-term individual therapy for outpatients with mixed diagnoses, alexithymia predicted a negative outcome [27] as well as in a naturalistic follow-up of outpatients with major depression [28]. However, alexithymia did not interfere with the response to multimodal cognitive behavioral therapy in patients with obsessive-compulsive disorder [29].

We evaluated a large sample of inpatients undergoing intensive psychotherapeutic treatment to investigate the following hypotheses: (1) Assuming higher levels of interpersonal stress and social avoidance behavior, alexithymics more often stop their inpatient treatment in the early phase of therapy. (2) At baseline, alexithymic patients show higher levels of psychopathological distress compared to nonalexithymics. (3) The symptom reduction in alexithymics is lower and the psychopathological distress at the end of the intervention is still significantly higher than in nonalexithymics. (4) There are no or only little changes in Toronto Alexithymia Scale (TAS-20) scores in both groups over the course of the treatment.

Methods

Subjects

All participants gave their written informed consent prior to inclusion into the study. The analyzed questionnaires were handed out from April 2005 to July 2006 to all consecutively admitted patients for psychotherapeutic treatment at the hospitals for mental health at Uchtspringe and Bernburg, Germany. Their therapists added all professional information required. Patients with depressive disorders, anxiety and adjustment disorders, somatoform disorders, eating disorders and comorbid alcohol-related disorders and personality disorders were admitted for psychotherapy. Patients with additional alcohol dependence or abuse were withdrawn from alcohol prior to the psychotherapeutic treatment.

At baseline (t0), 414 questionnaires were returned. Fifty-one patients were discharged prior to the 4-week follow-up (t1). Due to missing data at t1 and/or t2, 66 patients were excluded from the final analyses. 297 patients fully completed the questionnaires at baseline, at the 4-week follow-up and at discharge (t2). Data collection was performed by professional full-time documentary assistants, one in each hospital, who also managed and supervised data entry and quality procedures. Descriptive data of the sample are given in table 1 and 2.

Treatment Program

The duration of the inpatient treatment ranged regularly between 8 and 12 weeks depending on the individual response. Each patient received 3 times per week psychodynamic short-term group psychotherapy (1.5 h per session) with an insight-orientated approach. Special focus was given to the verbalization of individual emotional and interpersonal problems. The therapists took a relatively active part in encouraging the patients to engage themselves in the group process. Once a week, a group session within a larger setting took place for role plays including psychodrama. Each patient received 1 h of individual psychotherapy per week. Psychotropic medication (antidepressants, sedatives) was offered when clinically indicated. Additionally, art therapy, sport therapy, relaxation therapy, body and movement therapy were offered on a daily basis.

Instruments and Diagnostic Procedure

Alexithymic traits were assessed with the German version of the TAS-20 [30–32]. This self-report scale comprises three factors: (1) difficulty in identifying feelings; (2) difficulty in describing feelings; (3) externally orientated thinking.

The revised version of the Symptom Checklist-90 (SCL-90-R) is a 90-item, widely used self-report measure of current psychopathology [33]. In addition to nine syndrome scales, a global rating (Global Severity Index, GSI) reflects the general psychological distress. The reliability and validity of the German version of the SCL-90-R are similar to the original one [34]. Both the SCL-90-R and in particular the GSI are frequently used in psychotherapy research, especially when assessing psychotherapeutic change [35, 36]. For the purpose of this study, we chose the GSI as the main outcome variable. Response was defined as a 50% reduction of the baseline score.

The clinical diagnoses were assessed by standard clinical interview according to the ICD-10 criteria. For the purpose of this paper, only the main categories were analyzed.

Statistical Analysis

Descriptive statistics were performed with t tests or χ^2 tests (two tailed) or t tests for paired samples when appropriate. ANOVA was used to compare the GSI scores at t0, t1 and t2 between both groups. The treatment response was analyzed with a MANO-

Table 1. Comparison between the patients (n = 51) with early discharge (<28 days) and the patients who completed treatment until t2 (n = 297)

	Patients with early discharge (n = 51)	Patients completing treatment (n = 297)	Statistics
Age, mean ± SD, years	37.8 ± 11.7	37.8 ± 11.9	t = –0.009; d.f. = 346; p = 1.0
Sex			
Male	29 (56.9%)	158 (53.2%)	χ^2 = 0.2; d.f. = 1; p = 0.6
Female	22 (43.1%)	139 (46.8%)	
Prior inpatient treatments	13 (29.5%)	85 (29.3%)	χ^2 = 0.001; d.f. = 1; p = 1.0
TAS-20 ≥61	12 (23.5%)	80 (26.9%)	χ^2 = 0.3; d.f. = 1; p = 0.6
Mean TAS-20 score	52.7 (10.9)	53.8 (10.2)	t = –0.65; d.f. = 346; p = 0.5
Global Severity Index (SCL-90-R)	1.10 (0.8)	1.06 (0.7)	t = 0.31; d.f. = 346; p = 0.7
High school education	7 (13.7%)	63 (21.2%)	χ^2 = 1.5; d.f. = 1; p = 0.2
Marital status			
Married	11 (22.0%)	79 (26.6%)	χ^2 = 0.5; d.f. = 1; p = 0.5
Separated	4 (8.0%)	19 (6.4%)	χ^2 = 0.2; d.f. = 1; p = 0.7
Divorced	5 (10.0%)	59 (19.9%)	χ^2 = 2.8; d.f. = 1; p = 0.1
Number of ICD-10 diagnoses, mean ± SD	1.9 ± 0.9	2.5 ± 0.8	t = –4.56; d.f. = 346; p < 0.001
Alcohol dependence or abuse	19 (37.3%)	149 (50.2%)	χ^2 = 2.9; d.f. = 1; p = 0.09
Depressive disorders	14 (27.5%)	159 (53.2%)	χ^2 = 11.5; d.f.=1; p= 0.001
Anxiety and/or adjustment disorder	23 (45.1%)	112 (37.7%)	χ^2 = 1.0; d.f. = 1; p = 0.3
Dissociative and/or somatoform disorders	6 (11.8%)	34 (11.4%)	χ^2 = 0.004; d.f. = 1; p = 0.9
Eating disorders	3 (5.9%)	38 (12.8%)	χ^2 = 2.0; d.f. = 1; p = 0.2
Personality disorders	34 (67.6%)	247 (83.2%)	χ^2 = 7.6; d.f. = 1; p = 0.006

Table 2. Comparison between the patients without and with alexithymia at baseline who completed the treatment

	Patients without alexithymia (n = 217)	Patients with alexithymia (n = 80)	Statistics
Age, mean ± SD, years	38.5 ± 12.1	35.8 ± 11.4	t = 1.74; d.f. = 295; p = 0.08
Sex			
Male	126 (58.1%)	32 (40%)	χ^2 = 7.7; d.f. = 1; p = 0.006
Female	91 (41.9%)	48 (60%)	
Prior inpatient treatments	60 (28.0%)	25 (32.9%)	χ^2 = 0.6; d.f. = 1; p = 0.4
Admitted with psychopharmacological treatment	84 (38.7%)	36 (45%)	χ^2 = 1.0; d.f. = 1; p = 0.3
Mean TAS-20 score	49.2 (7.5)	66.3 (4.7)	t = –19.09; d.f. = 295; p < 0.001
Global Severity Index (SCL-90-R)	0.9 (0.6)	1.5 (0.8)	t = –6.94; d.f. = 295; p < 0.001
High school education	49 (22.6%)	14 (17.5%)	χ^2 = 0.9; d.f. = 1; p = 0.34
Marital status			
Married	54 (29.9%)	25 (31.3%)	χ^2 = 1.2; d.f. = 1; p = 0.3
Separated	14 (6.5%)	5 (6.3%)	χ^2 = 0.005; d.f. = 1; p = 0.9
Divorced	47 (21.7%)	12 (15.0%)	χ^2 = 1.6; d.f. = 1; p = 0.2
Duration of treatment, mean ± SD, days	68.5 ± 22.0	75.4 ± 29.0	t = –2.21; d.f. = 283; p = 0.03
Number of ICD-10 diagnoses, mean ± SD	2.4 ± 0.8	2.7 ± 0.8	t = –3.40; d.f. = 295; p = 0.001
Alcohol dependence or abuse	116 (53.5%)	33 (41.3%)	χ^2 = 3.5; d.f. = 1; p = 0.06
Depressive disorders	109 (52.2%)	49 (61.3%)	χ^2 = 2.9; d.f. = 1; p = 0.09
Anxiety and/or adjustment disorder	76 (35.0%)	36 (45.0%)	χ^2 = 2.5; d.f. = 1; p = 0.12
Dissociative and/or somatoform disorders	20 (9.2%)	14 (17.5%)	χ^2 = 4.0; d.f. = 1; p = 0.047
Eating disorders	20 (9.2%)	18 (22.5%)	χ^2 = 9.2; d.f. = 1; p = 0.002
Personality disorders	69 (86.3%)	178 (82%)	χ^2 = 0.7; d.f. = 1; p = 0.4

VA for repeated measures. The GSI scores of t0, t1 and t2 were the dependent variables, alexithymia (TAS-20 score ≥61) at baseline (t0) was entered as fixed factor. Age and sex were covariates. In a second analysis, the diagnoses as categories according to ICD-10 were additionally entered as covariates into the equation.

The test-retest reliabilities were determined for the alexithymia scores comparing the baseline rating with the ratings at t2. Further, hierarchical regression analyses were performed in order to test the extent to which the baseline TAS-20 scores predict the TAS-20 scores at t2 while controlling for individual differences in the severity of the GSI score. In the first model, the TAS-20 scores at t2 served as criterion variable, GSI at baseline and GSI at t2 were the predictor variables. In the second model, the baseline TAS-20 scores were added to the model as additional predictor variable [20, 26]. Additionally, linear regression analyses were performed using the changes in the TAS-20 as criterion variable and the changes of GSI scores as predictor variable in order to determine the contribution of changes in the GSI to changes in the TAS-20 scores from baseline to t2.

Results

Fifty-one (12.6%) patients left the treatment program before the 4-week follow-up and were compared with the 297 treatment completers (table 1). These 51 patients were characterized by a lower rate of depressive and personality disorders. However, no differences emerged with regard to alexithymia or general psychopathological distress (GSI) at baseline compared to the completers. Within the sample of treatment completers (n = 297), 80 patients (26.9%) were considered as alexithymic at baseline and 217 (73.1%) as nonalexithymic. Alexithymic patients were more likely to be female and to suffer from a higher rate of comorbid dissociative, somatoform and eating disorders. General psychopathological distress (GSI) was significantly associated with alexithymia (table 2).

Alexithymic subjects had significantly higher mean GSI scores than nonalexithymic subjects at t0 (ANOVA: $F = 48.2$; d.f. = 1, 296; $p < 0.001$), t1 ($F = 43.8$; d.f. = 1, 296; $p < 0.001$) and t2 ($F = 22.7$; d.f. = 1, 296; $p < 0.001$). The mean GSI score in the alexithymic group dropped from 1.51 (SD = 0.77) at t0 to 0.82 (SD = 0.65) at t2 and in the nonalexithymic group from 0.90 (SD = 0.63) to 0.51 (SD = 0.43) at t2. The overall effect of change in GSI scores in the first multivariate model with repeated measurements (adjusting for age and gender) was highly significant (Pillai-Spur = 0.14; $F = 23.4$; d.f. = 2, 292; $p < 0.001$) with significant effects of the interaction between GSI scores and alexithymia (Pillai-Spur = 0.05; $F = 7.4$; d.f. = 2, 292; $p = 0.001$).

The overall effect of change in GSI scores in the second multivariate model with repeated measurements (adjusting additionally for the presence of depressive disorders, anxiety or adjustment disorders, dissociative or somatoform disorders, eating disorders, alcohol dependence, personality disorders) was still significant (Pillai-Spur = 0.08; $F = 12.3$; d.f. = 2, 285; $p < 0.001$) with significant effects of the interaction between GSI scores and alexithymia (Pillai-Spur = 0.047; $F = 7.1$; d.f. = 2, 286; $p = 0.001$).

One hundred and eleven (51.2%) of the baseline nonalexithymics and 43 (53.8%) of the baseline alexithymics had at least a 50% reduction in GSI scores from t0 to t2 ($\chi^2 = 0.16$; d.f. = 1; $p = 0.7$). Upon discharge, 38.9% of the baseline nonalexithymics and 42.5% of the baseline alexithymics received psychopharmacological treatment ($\chi^2 = 0.3$; d.f. = 1; $p = 0.6$).

TAS-20 scores changed over the course of treatment. The TAS-20 scores were 53.77 (SD = 10.25) at baseline and 49.12 (SD = 10.78) at t2 for the whole completer sample ($t = 7.76$; d.f. = 296; $p < 0.001$). In the nonalexithymic group, the scores remained stable from t0 to t1 [49.16 (SD = 7.50) to 49.75 (SD = 9.62); $t = -1.08$; d.f. = 216; $p = 0.3$] but changed from t0 to t2 [49.16 (SD = 7.50) to 46.63 (SD = 10.0); $t = 3.99$ d.f. = 216; $p < 0.001$]. From t0 to t2, scores of factor 1 and 3 dropped significantly ($p < 0.001$) but not of factor 2. In the alexithymic group, the scores changed from t0 to t1 [66.28 (SD = 4.74) to 62.50 (SD = 8.19); $t = 4.37$; d.f. = 79; $p < 0.001$] and from t0 to t2 [66.28 (SD = 4.74) to 55.87 (SD = 9.91); $t = 8.69$; d.f. = 79; $p < 0.001$]. From t0 to t2, scores of all three factors decreased significantly ($p < 0.001$). Likewise, the rate of alexithymic subjects (TAS-20 >61) within the baseline-alexithymia group dropped to 55 (68.8%) at t1 and to 29 (36.6%) at t2.

In test-retest analyses (baseline-t2) the TAS-20 score and the three factors showed $r \geq 0.5$ ($p < 0.001$; Pearson, bivariate). The results of the hierarchical regression analyses indicated a significant prediction of the TAS-20 score at t2 by the TAS-20 score at baseline (standardized beta = 0.45; $t = 9.03$; $p < 0.001$) while adjusting for the effects of GSI at baseline and at t2 for the total sample. When performing the hierarchical regression analyses for the alexithymic patients at baseline (n = 80) separately, the TAS-20 score (baseline) did not predict the TAS-20 score at t2 in model 2 (standardized beta = –0.07; $t = -0.69$; $p = 0.50$). GSI at t2 emerged as the only predictor for TAS-20 scores at t2 (standardized beta = 0.69; $t = 6.43$; $p < 0.001$). Analyzing the impact of GSI changes from baseline to t2 on changes of TAS-20 scores from baseline

to t2 by regression analyses the following results emerged. The GSI changes explained 16% of the variance of TAS-20 changes in the total sample ($R^2 = 0.16$; standardized beta = 0.40; t = 7.57; $p < 0.001$), 13% in the nonalexithymic sample (n = 217; $R^2 = 0.13$; standardized beta = 0.36; t = 5.57; $p < 0.001$) and also 13% in the alexithymic sample (n = 80; $R^2 = 0.13$; standardized beta = 0.36; t = 3.36; p = 0.001).

Discussion

The first hypothesis was not confirmed by our data. Patients who stopped treatment within the first 4 weeks were not more alexithymic than patients who continued the treatment program. Although unexpected, this finding is in line with one study that found alexithymia not to interfere with the compliance to psychotherapy in patients referred to a psychiatric consultation-liaison service [37]. Additionally, one experimental study provided evidence that verbalized empathic response from the physician may be especially crucial for the alexithymic patients' postconsultation satisfaction and may thereby become the basis for a solid treatment alliance [38]. The second hypothesis was fully confirmed by significantly higher levels of psychopathological distress in alexithymic patients at the beginning of the therapy [10]. In contrast to our third hypothesis, the psychotherapeutic 'high-care' inpatient setting yielded a significant symptom reduction in alexithymics which was comparable to the relative symptom reduction in the nonalexithymic group. Still, the alexithymics had mean GSI scores at the end of the treatment that were almost identical to GSI scores of the nonalexithymic group in the beginning of the therapy. This corresponds to the finding of residual symptoms in depressed alexithymic patients after short-term psychotherapy [39].

There were modest reductions of TAS-20 scores in the nonalexithymic group. Unexpectedly large reductions of TAS-20 scores were found in the baseline-alexithymic group, indicating a lack of absolute stability of alexithymia during treatment. In contrast to Rufer et al. [29], all three TAS factors decreased significantly during the treatment. However, we found evidence for a high degree of relative stability of TAS-20 scores between t0 and t2 in the total sample which is in line with a large body of evidence [11–16]. Only 13–16% of the variance in the changes of TAS-20 scores was explained by the changes in GSI scores from baseline to t2. Therefore, besides the changes in psychopathological distress, other unmeasured or unknown factors contributed to the majority of changes in the TAS-20 scores.

Acknowledging the significant decrease in TAS-20 scores and the robust symptom reduction of psychopathological distress (GSI) at the end of the treatment in the alexithymic group, we assume that the 'high-care' inpatient setting was very effective in improving the identification, the differentiation and the verbalization of emotions and feelings. Future studies should investigate the efficacy of different treatments in alleviating alexithymia and should use a recently developed interview for the assessment of alexithymia [40]. Prospective follow-up studies are required to evaluate the impact of persistent alexithymia and residual psychopathological symptoms at discharge on long-term outcome.

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