

# Attrition and Outcome in Group Psychotherapy among Traumatized and Non-Traumatized Inpatients

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## Abstract

**Objective:** To examine the impact of correlates of trauma on the appropriateness for group therapy (GT) in 60 participants based on the similarity of the exclusion criteria for GT to the features of posttraumatic disturbances and borderline personality.

**Method:** We assessed the correlates of trauma (PTSD, complex PTSD, dissociation), features of BPD, psychopathological distress and the readiness for GT.

**Results:** There were inverse correlations between the motivation for GT and multiple symptoms, as well as weak associations with the correlates of trauma. Pessimistic expectations of GT and dissociative amnesia were linked to worse outcomes, while phobic anxiety predicted continuation of therapy.

**Conclusion:** Dissociative amnesia and the expectation of GT are potential targets for pre-group preparation for trauma-related disorders.

**Keywords:** Group therapy; Dissociation; Trauma; Outcome; Attrition

## Introduction

Compared to individual therapy (IT), Group therapy (GT) is considered to be the more demanding format [1]. It obviously requires higher levels of interpersonal skills and emotional resources, such as the ability to tolerate self-disclosure and self-exploration, whereas the lack of these skills carries with it the risk of premature termination. Furthermore, interpersonal characteristics of the participant such as interpersonal sensitivity, social competence, likeability and friendliness contribute to therapeutic effectiveness, whereas competitive, domineering and aggressive behaviour may increase group attrition rates [2]. The habit of somaticizing conflicts and the use of heavy denial as a primary defence mechanism also render a client a poor candidate for GT [1]. In GT settings the participants become more susceptible for inhibition, fear of harm or embarrassment than in IT settings [3]. Although GT should be based on a particularly careful indication, it is wide-spread, esp. in Western European countries, where it is the standard care in inpatient psychotherapy. Clinicians and therapeutic institutions estimate GT, because it is both, effective [4] and cost-effective [5]. Notably, GT does effectively improve, for example, attachment security in patients with personality disorders, including borderline personality [6]. In these hospital settings, correlates of trauma are highly frequent among people undergoing inpatient group psychotherapy for several psychiatric and psychosomatic disorders [7]. Trauma is linked to a variety of psychiatric disorders, including severe mental illness, depression, anxiety disorder and somatoform disorders [8], as well as personality disorders [9] and others. Given the extension of institutionalized GT, many of the clients referred to a hospital because of one of these disorders will be finding themselves in a psychotherapeutic group. Tragically, there is a strong probability for these clients of dropping out of the group therapy given the high attrition rates in group therapy found by Bostwick [10] to average at 35%. Attrition would not only affect the departing participant, Yalom [11] and Yalom and Leszcz [12] warned, but also harm those remaining in the group, to whom the group is less complete after someone has dropped out. Hence, each patient leaving the group is a hazard to the group process for the fact of someone departing the group inevitably hinders the formation of a therapeutic alliance and prevents cohesion from unfolding thus impeding the curative function of the

group [13,14]. Research does underscore this disadvantage with regards to small group processes [12,15] and suggests several predictors of low attendance: difficulty trusting and relating to others; angry hostility or social inhibition as personality styles [16]; and attachment avoidance [17].

Positively phrased, the aforementioned explanations implicate that the proper selection of patients suitable for group therapy will improve their therapeutic outcomes. In their article on assessment methodologies regarding small group processes, Strauss et al. [18] have composed a set of evidence-based in- and exclusion criteria for group therapy, which, with regards to inclusion, refer to the ability to relate, and communicate to others (e.g. the client has one or more healthy relationship and is able to discuss his or her feelings with others). As far as exclusion is concerned, the corresponding criteria pertain to personality characteristics (e.g. shyness, isolation, strong denial of issues), certain behaviours (e.g. self-defeating) or interpersonal styles (e.g. overly aggressive, defensive, agitated, or hostile in his or her relationships).

As for making the indication for group therapy, further domains of interest pertain to the specific setting of a group which will typically offer a multitude of transferences to each client, and to certain symptoms considered inappropriate for GT, such as psychotic or somatoform. Interestingly, the inspection of the exclusion criteria reveals a striking similarity to the features of post-traumatic conditions such as complex posttraumatic stress disorder (CPTSD) and borderline personality disorder (BPD), as will be detailed below.

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## Post-traumatic stress disorder (PTSD) and dissociation

Since its introduction, PTSD has served as a unifying construct depicting the core aspects of the devastating results of psychological trauma [19]. Following the experience of a traumatic event the disorder develops [20] if parts of the reaction to the traumatic event have not been fully integrated into the person's store of experience and memory, causing some aspects of the traumatic event to suddenly intrude into consciousness as if they were really happening again. Such intrusive memories can be either physical or emotional and are embedded in a physical state of alertness and fidgetiness causing the individual to avoid any stimuli related to the traumatic event. The diagnosis can only be made if symptoms of re-experiencing, arousal and avoidance are present and a traumatic event is being reported, even though there are clinically relevant posttraumatic syndromes of sub threshold severity. In addition to its genuine symptoms, PTSD is often linked to anxiety disorders, depression and somatoform disorders [21]. Regarding GT for PTSD the drop-out rates have been reported to be <16%, but to increase with comorbidity [22]. Dissociation is defined as a disruption in the usually integrated functions of consciousness, memory, identity and perception of the environment [19] and usually understood as a trauma-related psychopathology [23]. Dissociative symptoms vary and range from the mal-integration of mental contents experienced as dissociative amnesia to a sense of separation from body, self or environment [24]. Through dissociative symptoms, people with dissociative disorders detach themselves from interpersonal relationships, which precipitate rates of attrition in GT of 30% and higher [25].

## Complex PTSD (cPTSD) and borderline personality disorder (BPD)

After the concept of PTSD had been introduced, researchers and clinicians learned that it was not capable of capturing all the psychological and psychosomatic changes seen in the aftermath of trauma and therefore defined a form of posttraumatic distress with associated features they called cPTSD [26]. Unlike PTSD, its derivative cPTSD does not explicitly relate to a single previous traumatic event. Instead, it is based on the assumption that complex and prolonged traumatic experience especially during childhood would result in alterations in self-perception, self-regulation and relationships to others, as well as dissociation and somatisation. Interestingly, these characteristics correspond to the exclusion criteria for GT defined by Strauss et al. [18] quite precisely. The concept of cPTSD, however, has been criticized for several reasons. Case in point, there is remarkable overlap between cPTSD and several other diagnoses/syndromes, including PTSD, depression, anxiety disorders and borderline personality disorder [27]. Moreover, the co-incidence between cPTSD and BPD, which is often regarded as a trauma-related condition [9], has been reported to be 80%, questioning the discriminant validity of cPTSD [28]. Studies on the treatment of cPTSD are scarce, although Dorrepaal et al. [29] encourages group treatment for patients with cPTSD, notwithstanding the reported attrition rates ranging between 16% [29] and 20% [30]. Typically, the studied samples attended trauma programs incl. specific interventions for PTSD such as EMDR, which could have helped keep attrition low.

Despite associations with previous trauma and similarities to cPTSD, but in-line with psychodynamic principles, BPD is also understood as a structural disorder of personality organization. Kernberg [31] coined the term borderline personality organisation (BPO) that refers to a lack of integrated concepts of self and others (identity diffusion) in combination with the predominant use of immature defence mechanisms, such as splitting and projective identification. The failure to integrate

contradictory aspects of self and significant others almost inevitably results in difficulties relating to others and developing empathy for, and anticipation of, other individual's emotional states. As a consequence, people with BPO fare badly in therapeutic groups as becomes evident from the high drop-out rates varying between 44 and 66% [32,33]. Despite the far-reaching clinical overlap between cPTSD and BPD, van der Kolk [34] suggested their distinction by the difference that problems in affect regulation would predominantly characterize cPTSD as opposed to the immaturely developed relational abilities inherent to BPD as a consequence of the core deficit in patients with BPD, namely attachment problems. Essentially, both, affective dysregulation in cPTSD and attachment issues in BPD, likely signify a troublesome indication for GT according to the above mentioned in- and exclusion criteria [18]. This problem poses a dilemma because correlates of trauma are usually associated with pronounced psychiatric and psychosomatic problems and suffering, rendering the respective clients particularly needy of therapy. Given the lack of in-depth understanding of the connections between attrition in group therapies and trauma-related disorders, to which exclusion criteria of GT are virtually defining, the present study uses the Group Readiness Questionnaire (GRQ) to investigate the influence of correlates of trauma incl. PTSD and cPTSD, as compared to BPO, on the adherence to and the outcome of inpatient multimodal GT. Our hypothesis is that these conditions signify higher attrition and poorer outcome as a result of their potential to alter those psychological functions on which the indication for group therapy should be based, in theory. To our knowledge this is the first study to address this particular question.

## Sample and Method

We enrolled 60 consecutively admitted patients of a university clinic in Northern Germany. Mean age was 42.88 years and 54.8% of the participants were females. The patients were diagnosed with depression (n=25), panic disorder (n=22) and somatoform disorders (n=13) as primary diagnoses leading to the treatment. 25 participants reported to be single, five to receive a pension, while 38 had a job and eight attended an apprenticeship or school.

Clients access the ward via a waiting list on condition that they identify with psychoanalytical principles and are willing to uncover and resolve biographical conflicts in order to arrive at emotional, behavioural and relational changes. In this respect, the participants of the present study were selected for their appropriateness for the setting. Psychometric assessments were carried out before the treatment and at scheduled discharge (follow up). Completers were defined as those participants for whom both measures were available, non-completers were those for whom only pre-treatment scores could be collected, because psychometric assessments were not carried out at irregular and premature discharge. The participants received 11 group sessions (4 of psychodynamically oriented talk therapy, 2 each of music, art, concentrative movement and cognitive group therapy, the latter including training of social competences and cognitive therapy of anxiety) and one session of individual therapy per week. 25 participants were single, five participants were pensioners, eight still went to school or were apprentices, 38 were employees, five were self-employed and five had no employment. All participants gave their written informed consent to participate in the study.

The structured interview for disorders of extreme stress (SIDES, [35]) is an observer-rated instrument with good Inter-rater reliability (Kappa=0.81) and internal consistency (Cronbachs alpha ranging from 0.53 to 0.96) and acknowledged a valid measure of the associated features of PTSD. It measures the presence of the following criteria:

problems with self-regulation, problems with information processing as reflected by dissociation, somatisation, problems with personal identity including self-blame and shame, problems in interpersonal relationships and alterations in systems of meanings.

The Borderline Personality Inventory (BPI) was designed to measure Borderline Personality Organisation (BPO). It is subdivided into subscales assessing identity diffusion, primitive defense mechanisms, reality testing and fear of closeness. Internal consistency and retest reliability are satisfactory (Cronbach's  $\alpha=0.68-0.91$ ,  $r_{tt}=0.73-0.89$ ; [36]). The cut-off was set at 20, as is recommended by the author of the scale. The 20 most discriminatory items constitute this cut-off which discriminates those with borderline personality from those without.

The PTSD symptom scale (PTSDS) is a 49-item self-report instrument for the assessment of PTSD with high internal consistency and test-retest reliability, as well as high convergent validity [37]. The PTSDS yields a PTSD diagnosis according to DSM-IV, but also serves as a (dimensional) measure of the severity of PTSD symptoms.

We used the dissociative experiences scale (DES; [38]) to assess dissociative symptoms. The DES is a 28 item self-report questionnaire subdivided into the subscales dissociative amnesia, absorption/imaginative experiences, depersonalisation/derealisation and conversion symptoms. For each item, the participants were asked to indicate their individual degree and frequency of symptom experience on a scale ranging from 1-100. For the German version of the DES, the internal consistency (Cronbach's  $\alpha=0.91$ ), the test-retest reliability ( $r_{tt}=0.82$ ) and the convergent and divergent validity were judged to be good [39].

We used the German version [40] of the Symptom Check List (SCL-90-R). It is a 90-item self-report multi-dimensional psychopathological rating scale, which was used to assess psychopathology (Global Severity Index score; GSI). The GSI at scheduled discharge was used as the follow-up measure.

The GRQ is a 19 item self-rating scale for the assessment of client characteristics considered relevant for the indication for GT. After ten years of usage in clinical settings in the U.S. [41] and Europe [42] the GRQ (formerly known as Group Selection Questionnaire, GSQ) has seen some modifications resulting in the latest version [43], in which the two subscales expectancy and participation as well as the total score

are to be evaluated. The GRQ has good construct [44] and convergent validity [16] and several studies have confirmed its factor structure [42,44]. Each item of the GRQ is scored on a 5 point Likert scale, with high scores indicating the need for pre-group preparation. High scorers tend not to participate in the group, are passive, private, reserved, not open and unlikely to share feelings with others or to participate in a constructive way. Low scorers on the GRQ easily share feelings or information and feel as part of the group. As is recommended by the authors, we analyzed the GRQ on a scale level and also on an item level.

## Statistical methods

We used two-tailed  $\chi^2$  testing to explore the relationships between categorical variables, whereas we employed t-testing to compare continuous variables between groups. We used the Spearman coefficient to investigate the relationships between scores on the GRQ and the subscales of the SCL-90R, the DES and the GSI at follow-up. We selected variables as predictors for the following regression analyses according to their significance in previous tests. Regarding the hierarchical regression analyses, seven variables would have qualified as predictors based on the correlations at  $p \leq 0.05$  between the GSI at follow-up and the symptom scales. This led us to set the level of significance at  $p \leq 0.01$  in order not to include too many independent variables in our model. Given the small group of non-completers, which we wanted to compare to the completers by means of stepwise binary regression analysis, we also allowed one predictor on the basis of a trend ( $p=0.07$ ) for the prediction of attrition.

## Results

15 participants (24.2%) had a diagnosis of PTSD according to the PTSDS. 45 participants (72.6%) had a diagnosis of cPTSD, and 19 (30.6%) fulfilled the criteria of BPD according to the BPI. Of those with BPD, 94.7 % also fulfilled the criteria for cPTSD, whereas 40% of those with cPTSD also received a diagnosis of BPD according to the BPI. 11 participants (18.33%) dropped out. The correlates of trauma were neither associated with the primary diagnoses (PTSD:  $\chi^2=5.94$ ,  $p=0.1$ ; cPTSD:  $\chi^2=6.29$ ,  $p=0.1$ ; BPD:  $\chi^2=3.95$ ;  $p=0.3$ ), nor with gender (PTSD:  $\chi^2=0.81$ ,  $p=0.6$ ; cPTSD:  $\chi^2=0$ ;  $p=1$ ; BPD:  $\chi^2=0.21$ ;  $p=0.8$ ), nor with drop-outs (PTSD:  $\chi^2=0.07$ ,  $p=0.8$ ; cPTSD:  $\chi^2=0$ ,  $p=0.5$ ; BPD:  $\chi^2=0.07$ ;  $p=0.8$ ). The GRQ total score and its subscale participation showed many correlations with the SCL-90 subscales and total score (GSI, Table 1), but neither with the DES – subscales nor total score. However,

| Scale/Subscale                   | SCL-90/GSI (follow-up) | GRQ-participation | GRQ-expectancy | GRQ total score |
|----------------------------------|------------------------|-------------------|----------------|-----------------|
| SCL-90/somatisation              | 0.21                   | 0.08              | 0.20           | 0.17            |
| SCL-90/obsessive-compulsiv       | 0.24                   | 0.25              | 0.08           | 0.35**          |
| SCL-90/interpersonal sensitivity | 0.33*                  | 0.34**            | 0.23           | 0.41**          |
| SCL-90/depression                | 0.15                   | 0.20              | 0.14           | 0.30*           |
| SCL-90/anxiety                   | 0.24                   | 0.26              | 0.10           | 0.26*           |
| SCL-90/hostility                 | 0.30*                  | 0.27*             | 0.31*          | 0.37**          |
| SCL-90/phobic anxiety            | 0.32*                  | 0.43**            | 0.26*          | 0.44**          |
| SCL-90/paranoid ideation         | 0.17                   | 0.28*             | 0.28*          | 0.37**          |
| SCL-90/psychotizism              | 0.23                   | 0.42**            | 0.12           | 0.41**          |
| SCL-90/GSI (admission)           | 0.25                   | 0.33*             | 0.22           | 0.40**          |
| SCL-90/GSI (follow-up)           | -                      | 0.19              | 0.36**         | 0.28*           |
| DES/amnesia                      | 0.39**                 | 0.09              | 0.18           | 0.16            |
| DES/absorption                   | 0.33*                  | 0.11              | 0.03           | 0.14            |
| DES/derealisation                | 0.3*                   | 0.02              | 0.12           | 0.03            |
| DES/conversion                   | 0.16                   | 0.06              | 0.05           | 0.06            |
| DES (FDS) total                  | 0.39*                  | 0.04              | 0.05           | 0.06            |

**Table 1:** Correlations between the SCL-90 and DES subscales and total scores and the GRQ subscales and total score; \*\* denotes  $p \leq 0,01$  (2-tailed); \* denotes  $p \leq 0,05$  (2-tailed)

the GSI at follow-up was correlated to dissociation with the subscale amnesia recording the highest significance. T-testing revealed trends towards higher scores on the GRQ-subscale participation ( $p=0.06$ ) and the GRQ total score ( $p=0.08$ ) among those with cPTSD and a trend towards lower scores on the GRQ subscale expectancy in the remainers as opposed to the drop-outs ( $p=0.07$ ). Regarding those individuals, who did not complete the group therapy, significant differences showed with regards to depression, anxiety and phobic anxiety meaning that higher levels of these symptoms indicate a lower probability of staying in the group. Cross tabulation linked the continuation of therapy to higher educational levels (university vs. craftsmanship;  $\chi^2=17.30$ ;  $p<0.01$ ). T-tests are displayed in Table 2, which shows the associations between correlates of trauma and SCL-90 subscales. On an item level, T-testing revealed significant differences (T; p) for the following groups (mean/SD) and single items of the GRQ (only significant results shown):

Item 2 (*I like to share my feelings with others*) and cPTSD (3.36/0.83) vs. no cPTSD (2.53/0.72):  $T=-3.62$ ;  $p<0.01$ ;

Item 6 (*I hardly ever say what I'm thinking when I'm with a group of people*) and drop-outs (3.09/0.83) vs. remainers (2.42/0.95):  $T= 2.17$ ;  $p<0.05$ ;

Item 12 (*I think that sharing my feelings with others will help me feel better*) and no BPD (2.44/1.05) vs. BPD (3.06/1.17):  $T=-2.01$ ;  $p<0.05$ ;

Item 13 (*I am abrupt with others if I feel strongly about what I am saying*) and drop-outs (1.73/1.01) vs. remainers (2.57/1.01):  $T=2.52$ ;  $p<0.05$ ;

And, Item 16 (*I am an open person*) and no PTSD (2.85/1.18) vs. PTSD (2.20/0.86):  $T=1.97$ ;  $p<0.05$ , as well as no cPTSD (2.18/0.95) vs. cPTSD (2.89/1.15):  $T=-2.27$ ;  $p<0.05$ .

Stepwise binary logistic regression was performed to analyze the impact of several factors on the likelihood of attrition. The model contained the educational level, three SCL-90 subscales (depression, phobic anxiety, hostility) and the GRQ subscale expectancy, along with gender and age as independent variables. The full model containing all predictors was statistically significant ( $\chi^2=10.62$ ,  $p<0.01$ ). The model as a whole explained between 19.5% (Cox and Snell  $R^2$ ) and 33.1% (Nagelkerke  $R^2$ ) of the variance of the dependent variable. Table 3 shows the contributions of the single predictors to the model. Social phobia predicted remaining in the group. We used hierarchical multiple regression to assess the ability of 4 independent variables (gender, age, DES amnesia and GRQ-expectancy) to predict the outcome (GSI at follow-up).

The model explained a total variance of 28%, and the GRQ subscale expectancy explained an additional 13% of the variance in outcome ( $R^2$  change=0.13, Fchange=8.15,  $p<0.01$ ). In the final model, the GRQ-subscale expectancy was the best predictor ( $\beta=0.38$ ;  $p<0.01$ ), followed by amnesia ( $\beta=0.29$ ;  $p=0.04$ ).

|                           | No PTSD      | PTSD          | T (p)         | no cPTSD     | cPTSD        | T (p)         | no BPD       | BPD           | T (p)         | non-completers | completers   | T (p)        |
|---------------------------|--------------|---------------|---------------|--------------|--------------|---------------|--------------|---------------|---------------|----------------|--------------|--------------|
| GRQ-participation         | 39.72 ± 8.47 | 37.13 ± 6.28  | 1.09 (0.3)    | 36.12 ± 7.49 | 40.22 ± 8.01 | -1.83 (0.07)  | 38.86 ± 8.58 | 39.63 ± 6.78  | -0.35 (0.7)   | 40.55 ± 10.02  | 38.78 ± 7.61 | 0.66 (0.5)   |
| GRQ-expectancy            | 7.66 ± 2.94  | 7.07 ± 1.87   | 0.73 (0.5)    | 7.65 ± 2.55  | 7.47 ± 2.80  | 0.23 (0.8)    | 7.35 ± 2.39  | 7.89 ± 3.38   | -0.73 (0.5)   | 6.18 ± 1.94    | 7.80 ± 2.79  | -1.83 (0.07) |
| GRQ-total score           | 53.68 ± 9.01 | 50.60 ± 8.08  | 1.18 (0.2)    | 49.71 ± 9.62 | 54.16 ± 8.30 | -1.80 (0.08)  | 52.58 ± 9.32 | 53.74 ± 7.78  | -0.47 (0.6)   | 52.36 ± 10.06  | 53.06 ± 8.65 | -0.24 (0.8)  |
| DES-amnesia               | 3.91 ± 4.74  | 4.00 ± 4.38   | -0.06 (1)     | 3.07 ± 3.17  | 4.22 ± 5.0   | -0.83 (0.4)   | 4.07 ± 5.05  | 3.63 ± 3.5    | 0.34 (0.7)    | 6.4 ± 8.2      | 3.44 ± 3.44  | 1.12 (0.3)   |
| DES-absorption            | 15.02 ± 9.53 | 17.40 ± 8.93  | -0.85 (0.4)   | 12.33 ± 8.61 | 16.79 ± 9.43 | -1.61 (0.1)   | 15.53 ± 9.70 | 15.89 ± 8.82  | -0.14 (0.9)   | 19.36 ± 11.68  | 14.77 ± 8.64 | 1.48 (0.1)   |
| DES-derealisation         | 3.26 ± 3.95  | 3.80 ± 4.28   | -0.45 (0.7)   | 3.38 ± 3.26  | 3.40 ± 4.27  | -0.02 (1)     | 2.86 ± 3.36  | 4.58 ± 5.06   | -1.36 (0.2)   | 4.30 ± 3.65    | 3.22 ± 4.08  | 0.78 (0.4)   |
| DES-conversion            | 7.12 ± 7.15  | 14.60 ± 14.15 | -1.96 (0.07)  | 9.21 ± 6.67  | 9.05 ± 10.84 | 0.05 (1)      | 8.59 ± 7.50  | 10.17 ± 14.03 | 0.55 (0.6)    | 9.10 ± 6.42    | 9.09 ± 10.58 | 0 (1)        |
| DES                       | 1.0 ± 0.63   | 1.23 ± 0.86   | -1.6 (0.7)    | 0.9 ± 0.51   | 1.01 ± 0.76  | 0.55 (0.6)    | 0.97 ± 0.62  | 1.01 ± 0.88   | -0.21 (0.8)   | 1.23 ± 0.70    | 0.93 ± 0.70  | 1.22 (0.2)   |
| Somatisation              | 1.10 ± 0.67  | 1.99 ± 0.92   | -4.02 (<0.01) | 1.29 ± 0.74  | 1.34 ± 0.87  | -0.22 (0.8)   | 1.33 ± 0.85  | 1.32 ± 0.82   | 0.04 (1)      | 1.19 ± 0.71    | 1.35 ± 0.85  | -0.55 (0.6)  |
| Obsessive-compulsiv       | 1.77 ± 0.78  | 2.04 ± 0.71   | -1.14 (0.3)   | 1.48 ± 0.65  | 1.98 ± 0.77  | -2.33 (0.02)  | 1.75 ± 0.8   | 2.04 ± 0.67   | -1.37 (0.2)   | 1.71 ± 0.83    | 1.86 ± 0.77  | -0.5 (0.6)   |
| Interpersonal sensitivity | 1.48 ± 0.96  | 1.69 ± 0.72   | -0.79 (0.4)   | 1.05 ± 0.79  | 1.72 ± 0.88  | -2.71 (<0.01) | 1.38 ± 0.88  | 1.87 ± 0.89   | -1.96 (0.06)  | 1.14 ± 0.7     | 1.60 ± 0.92  | -1.43 (0.2)  |
| Depression                | 2.0 ± 0.79   | 2.14 ± 0.71   | -0.61 (0.6)   | 1.58 ± 0.69  | 2.24 ± 0.71  | -3.19 (<0.01) | 1.90 ± 0.74  | 2.31 ± 0.78   | -1.93 (0.06)  | 1.54 ± 0.57    | 2.12 ± 0.76  | -2.06 (0.05) |
| Anxiety                   | 1.31 ± 0.71  | 2.05 ± 0.9    | -3.17 (<0.01) | 1.28 ± 0.77  | 1.60 ± 0.84  | -1.33 (0.2)   | 1.52 ± 0.87  | 1.47 ± 0.74   | 0.21 (0.8)    | 1.22 ± 0.81    | 1.56 ± 0.83  | -1.13 (0.3)  |
| Hostility                 | 1.04 ± 0.77  | 1.25 ± 0.93   | -0.83 (0.4)   | 0.66 ± 0.38  | 1.27 ± 0.86  | -3.77 (<0.01) | 0.95 ± 0.79  | 1.43 ± 0.75   | -2.17 (0.03)  | 0.76 ± 0.31    | 1.15 ± 0.85  | -2.47 (0.02) |
| Phobic anxiety            | 0.94 ± 0.79  | 1.50 ± 1.2    | -1.66 (0.1)   | 0.79 ± 0.98  | 1.18 ± 0.89  | -1.42 (0.2)   | 1.0 ± 0.96   | 1.23 ± 0.84   | -0.88 (0.4)   | 0.46 ± 0.66    | 1.18 ± 0.93  | -2.23 (0.03) |
| Paranoid ideation         | 1.16 ± 0.9   | 1.32 ± 0.95   | -0.58 (0.6)   | 0.75 ± 0.78  | 1.38 ± 0.9   | -2.5 (0.02)   | 1.07 ± 0.92  | 0.92 ± 0.81   | -1.73 (0.09)  | 0.94 ± 0.78    | 1.24 ± 0.92  | -0.91 (0.4)  |
| Psychotizism              | 0.85 ± 0.51  | 1.0 ± 0.74    | -0.80 (0.4)   | 0.56 ± 0.38  | 1.02 ± 0.59  | -3.52 (<0.01) | 0.76 ± 0.53  | 1.19 ± 0.57   | -2.80 (<0.01) | 0.64 ± 0.47    | 0.93 ± 0.58  | -1.39 (0.2)  |
| GSI pre-treatment         | 1.36 ± 0.57  | 1.73 ± 0.63   | -1.97 (0.06)  | 1.12 ± 0.43  | 1.58 ± 0.62  | -2.80 (<0.01) | 1.36 ± 0.6   | 1.47 ± 0.4    | -1.87 (0.07)  | 1.16 ± 0.48    | 1.51 ± 0.62  | -1.6 (0.1)   |
| GSI follow-up             | 0.71 ± 0.59  | 0.91 ± 0.48   | -1.07 (0.1)   | 0.7 ± 0.72   | 0.78 ± 0.51  | -0.46 (0.7)   | 0.73 ± 0.6   | 0.81 ± 0.45   | -0.46 (0.7)   |                |              |              |

Table 2: T-tests comparing groups with and without correlates of trauma and BPO, respectively and completers vs. non completers; mean ± SD; T (p)

| Predictor            | Coefficient B | SE   | $\beta$ | T    | p     | CI upper | CI lower |
|----------------------|---------------|------|---------|------|-------|----------|----------|
| Dissociative amnesia | 0.05          | 0.02 | 0.29    | 2.16 | 0.04  | 0.003    | 0.09     |
| GRQ expectancy       | 0.08          | 0.03 | 0.38    | 2.85 | <0.01 | 0.02     | 0.13     |

**Table 3:** Hierarchical multiple regression (dependent variable GSI at follow-up).

| Step | Predictor      | Coefficient B | SE   | Wald | p    | Exponent B | CI upper | CI lower |
|------|----------------|---------------|------|------|------|------------|----------|----------|
| 1    | Phobic anxiety | -1.88         | 0.85 | 4.88 | 0.03 | 0.15       | 0.03     | 0.81     |
|      | GRQ expectancy | -0.12         | 0.17 | 0.5  | 0.5  | 0.89       | 0.63     | 1.24     |
| 2    | Phobic anxiety | -2.04         | 0.84 | 5.82 | 0.02 | 0.13       | 0.03     | 0.68     |

**Table 4:** Stepwise binary logistic regression (dependent variable: non-completers vs. completers).

## Discussion

The present study aimed to investigate the impact of posttraumatic conditions and correlates of trauma on the readiness for group therapy guided by the hypothesis that trauma would affect exactly those interpersonal characteristics known to have a crucial influence on the requirements and outcome of group psychotherapy. On the single-item-level, participants with BPD were convinced that sharing their feelings with others would help them feel better, while those with cPTSD considered themselves more open. Those who terminated prematurely were more reserved, while the remainders occasionally showed even harsh resoluteness possibly protecting them from negative experience in GT. Surprisingly, neither the GRQ, nor any other variable predicted attrition, on the contrary, we found phobic anxiety to predict continuation of therapy. Dissociative amnesia and the GRQ subscale expectancy predicted outcome with higher scores of expectancy and higher levels of amnesia at admission indicating a higher GSI at follow-up. This finding corresponds to the scoring direction of the GRQ, on which lower scores identify better appropriateness for group therapy. The present results also suggest intense interactions of the construct of group readiness with psychopathology in this mixed sample: Higher measures on the GRQ were linked to a broad spectrum of psychopathology, but not to dissociation, which was correlated to a higher GSI at follow-up. Last not least, discontinuation of therapy was linked to lower educational levels. Contradicting the study hypothesis, the trauma correlates did not contribute to the prediction of these dependent variables directly, at all. However, there was an association of cPTSD with the subscale participation, whereas PTSD was not linked to the GRQ.

The drop-out rate in the present study was 17.75%, and thus appears equal to the 16% attrition rate reported by Harper et al. [22] for a sample of traumatized patients. Whether or not individuals with a history of maltreatment complete the GT, to which they have been referred, could depend on their typical self-appraisals with a potential to hinder treatment success, e.g. shame and guilt feelings [45]. Lower levels on the participation subscale of the GRQ, as found for cPTSD in this study, are linked to less cohesion and insight in GT [44]. Apparently, the type of GT also co-determines group member retention, which is indicated by one study reporting a 29% drop-out in a trauma-focused group but only 14% in a present-focused group [46]. Compared to these figures, the present results hold an intermediate position, which may reflect the character of a mixed group and our multimodal setting that integrates cognitive-behavioural and psychodynamic elements. The presence of cognitive elements is known to improve the effectiveness of GT for trauma-related disorders [47]. Yet, for extremely traumatized individuals IT may still be more promising than GT [48]. The therapy for trauma-related conditions is often particularly complicated and long as it has to cover a wide range of reactions to the traumatic experience including anger, shame and guilt, distrust, low self-

esteem, in addition to PTSD and affective symptoms [46]. These complex symptom patterns correspond to the link between a higher GSI at admission and lesser benefit from analytical group therapy in a traumatized sample [49]. Likely, the lack of a trauma focus, the inclusion of cognitive elements and the fairly low levels of dissociation helped the traumatized participants of this study stay attached to the group and improved their outcome.

Generally, individuals with complex posttraumatic problems may fare better in groups that are more structured and based on cognitive-behavioural principles [50], for structure strengthens the feeling of safety and the belief in positive outcome [49].

## BPD

In patients with BPD, higher baseline severity of psychopathological symptoms is associated with greater improvement through group therapy [51], while in sub-threshold borderline personality the baseline severity of borderline-related symptoms is linked to differential treatment efficacy [52]. Chiesa and Fonagy [53] and Chiesa et al. [54], studying people with personality disorders in a multimodal hospital setting reported high rates of premature termination, but found higher educational and occupational status as well as borderline personality to predict continuation of therapy. Against this background of a link between BPD and adherence to GT our finding that people with BPD were interested in sharing their feelings with others seems reasonable. The characteristics of BPO (identity diffusion, primitive defences and fear of closeness) do not per se mean that there is resentment against GT. The finding that people with BPD wish to make others contain their fearful, desperate and strained emotions corresponds to one of Yalom's curative factors in GT, namely catharsis. The hope of catharsis may be as effective a trigger of positive expectations of group therapy as the idealization of others (including the group), which is a defence mechanism on which people with BPD routinely rely [55]. Prior research also suggests that higher scores on the expectancy subscale are linked to a stronger experience of catharsis during early group stages and a longer membership in the group [44]. Moreover, prior research has found positive expectations for treatment success connected to positive outcomes in patients with personality difficulties [56] and social phobia [57].

Soler et al. [58] reporting otherwise higher attrition rates in BPD found skills training in addition to GT to raise adherence. In Soler's study, skills training effectively reduced emotional distress, irritability and instability. These effects obviously interact with the motivation for group therapy, which they may stabilize even after idealization has partly turned into disappointment and this is how skills might encourage continuation when in fact the group member is struggling with doubts and negative feelings towards staying in the group. This could serve as an indication, that practical, action-based interventions may help to substantiate a positive attitude towards group therapy by sharing a

common destiny, building trust and group identity. This might help especially those with BPO to overcome their attachment anxieties and commence the necessary working-through of the underlying conflicts.

Heterogeneous as it is, the spectrum of borderline symptoms is likely not uniformly connected to the motivation for therapy. One study among individuals with personality disorders linked attrition to a forensic history, to personality disorder in more than one cluster and to personality disorder in cluster B, as well as to greater impulsivity scores at baseline. These findings correspond to the present study inasmuch as there were correlations between hostility and the GRQ. This notwithstanding, not externalizing, but rather internalizing symptoms were more strongly correlated to higher measures on the GRQ (indicating poorer suitability for group therapy) in the present study. Another study [59] found that in the presence of personality disorder the effects of (individual) cognitive therapy on depression are weaker than when there was no Axis II-co-morbidity. So one might speculate that the high attrition rates found in personality disorders (up to even 60%, mean 47% according to Gunderson et al. [60] and Waldinger and Gunderson [61]), could result from these internalizing symptoms, brought about by additional psychiatric and psychosomatic disorders such as depression and anxiety disorders.

This is interesting given the curiosity of our patients with borderline features about GT, which seems to be specific for BPO. On the other hand, we see a prediction of continuation by phobic anxiety in the present study, which may correspond to the finding of sudden gain occurring in ET [62] and GT [63] for anxiety disorders. Sudden gain refers to an abrupt reduction of the subjective suffering [62] and its incidence establishes a sound motivation for therapy [64]. Hence, the relationship between phobic anxiety and a better outcome may be mediated by the event of sudden gain which may also change the attitude towards therapy. If this interaction held in both directions, the modification of the cognitive structures involved in the readiness for GT through pre-group interventions might provide an occasion for sudden gain to happen sooner. If sudden or not, relief from symptoms seems to be hampered by the presence of dissociation, especially mal-integrated memories, known to complicate the formation of integrated and coherent images of self [65]. Therefore dissociative amnesia, which refers to gaps in autobiographic memory, may be representing, and a marker of, those unconscious processes, which are underlying to identity diffusion. With regards to dissociative disorders, favourable therapeutic outcomes require the integration of dissociated aspects of self. Given the poorer outcomes of those patients who suffer from dissociation and other co-occurring psychopathology in this study one might wish to offer specific therapies aiming at remembering, tolerating and integrating past memories to these patients, even though dissociation was not their most salient clinical problem. Appropriate strategies involve cognitive re-framing of adverse experiences and work on irrational guilt, shame and other foci, such as loss, grief or mourning (International society for the study of trauma and dissociation [66]).

### PTSD and cPTSD

Not unlike BPD, the complicated and sometimes disappointing course of treatment in PTSD is linked to chronic co-morbidity, especially co-morbid depression. In addition to mood disorder, the possibility of disability compensation [67] favours a chronic course of PTSD. Our study replicates the results of Layne et al. [68], who reported that the GRQ predicted the outcome in patients with PTSD, indirectly by identifying a subgroup within those with posttraumatic problems who showed higher scores on the subscale participation. Burlingame et al. [44] linked exactly this subscale to less improvement in symptoms.

Nevertheless, the present results do not suggest a strong impact of trauma on the GRQ, although trauma does increase the load of symptoms remarkably. It is rather this suffering, which – according to our study – is correlated to higher scores on the GRQ, suggesting indirect effects of trauma and dissociation on the appropriateness for GT. Such indirect influence could be the reason why the individual format may be more promising than GT for specific trauma-related disorders such as PTSD [43]. Kroegel et al. [3], however, suggested screening only those out of GT, whose behaviours are domineering, monopolizing or provocative. For others, including patients with previous traumatization, even if they score highly on the GRQ, a group setting might still provide important curative factors. Pre-group training aiming at the worries of high scorers according to their scoring profile may help them stick to the group. Leaders should express compassion and understanding, encourage support and give in-depth explanations of how GT works, in order to help these individuals overcome their fearful conceptions, negative myths and fantasies about GT.

Newton-Howes et al. [69] and Oquendo et al. [70] found trauma correlates such as dissociation, PTSD or BPD to complicate the treatment of psychiatric and psychosomatic disorders and Cloitre et al. [71] explained this interaction by the potential of trauma to interfere with mechanisms linked to the therapeutic alliance. The therapeutic relationship is held to be coined by the relational imprint of the individual defining her or his interpersonal roles and beliefs about self and others [72]. Conversely, clinical correlates of adverse relational experiences such as posttraumatic syndromes and BPD do not signify a poorer working alliance in interpersonal therapy [73] whereas processes of shared decision making and collaboration, as well as a focus on interpersonal traumas, roles, patterns and conflicts, do stimulate the motivation for change and expectation for successful therapy thus improving the factual outcome of interpersonal therapy.

Taken together, correlates of trauma should not discourage GT, even though those diagnosed with trauma-related disorders may require specific preparation especially if suffering from dissociative amnesia. Furthermore, Panas et al. [74] demonstrated that the intensity of group therapies within multimodal settings (>2/3 of sessions in groups) increases the likelihood of completion. The present findings highlight the potential of the GRQ to predict the outcome of group treatment: We were able to differentiate specific motivational features in BPD and cPTSD which influence the therapeutic outcome of GT by means of the GRQ. These distinct therapy-related cognitive patterns in BPD and cPTSD are even more remarkable remembering the high degree of phenomenological overlap between these diagnoses.

### Limitations

There are several limitations of the present non-randomized longitudinal study. This real-world sample is small, selected and not representative of all people with posttraumatic disorders. However, it does reflect those elevated levels of traumatization, associated pathologies and functional impairment typically seen in clinical populations [7]. These syndromes do not necessarily echo with a single diagnostic category, but rather correspond to the real-world problems of a given disturbance and may therefore better be captured dimensionally than as a category [75].

### Conclusion

The GRQ is subject to further refinement and continuous evolution, causing the different studies that used it in the past, to rely on slightly different versions, as regards the composition of subscales and the

scoring procedures. This and cultural as well as lingual differences between the therapeutic settings and traditions in distinct countries [42] may add to the variance of the complex phenomenon under study.

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