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Phantasy Therapy: Statistical Evaluation of a New Approach to Group Psychotherapy for Stationary and Ambulatory Psychotic Patients

Gary Bruno Schmid Sonja Wanderer

Integrated Psychiatry Winterthur, Switzerland

Key Words
Art therapy · Cognitive deficits · Group psychotherapy · Movement and dance therapy · Fantasy · Psychosis · Schizophrenia

Summary
Background: Since 1995 we have developed a depth-psychological, experience- and expression-oriented approach to group therapy for psychotic patients – 'Phantasy Therapy' – complementary to the main-stream emphasis upon behavioural, learn- and goal-oriented methods. **Aims:** A group psychotherapy for acute and remitting patients suffering from psychosis or schizophrenia is statistically evaluated under treatment-as-usual in a public psychiatric clinic. **Methods:** Phantasy Therapy is compared to an alternative treatment (art therapy = AT) and a placebo group (PG; weekly ward gatherings) via cognitive testing before and after each session. **Results:** (1) Improvement of cognitive deficits over the first 4 sessions: session 1 (effect size d = 0 between all 3 groups) versus session 4 (d = 0.2 and 0.4 of Phantasy Therapy over AT and PG, respectively). Averaged over the first 4 sessions, the cognitive test showed tendential improvements for Phantasy Therapy and AT compared to PG. (2) Self-rating (sum of 4 item scores) averaged over the first 4 sessions showed a small effect. Patients judged themselves more improved after Phantasy Therapy compared to AT (d = 0.2) or PG (d = 0.3); tendential d (0.1) of AT over PG. (3) Psychosocial communication skills considerably improved during Phantasy Therapy, slightly worsened during AT, and remained relatively unchanged during PG. The effect sizes of Phantasy Therapy for values averaged over the first 4 sessions was 0.6 compared to AT and 0.4 compared to PG. **Conclusions:** Phantasy Therapy is better than PG and at least as good as AT. These results should be hardened by further studies.

Schlüsselwörter
Kunsttherapie · Kognitive Defizite · Bewegungs- und Tanztherapie · Fantasie · Psychose · Schizophrenie

Zusammenfassung
Hintergrund: Wir haben seit 1995 eine tiefenpsychologische, erlebnis- und ausdrucksorientierte Form einer Gruppentherapie für Psychosepatienten – «Phantasietherapie» – entwickelt, die etablierte verhaltenstheoretische, lern- und zielorientierte Methoden ergänzt. **Fragestellung:** Eine Gruppenpsychotherapie für akute und remittierte PatientInnen, die an einer Psychose oder Schizophrenie leiden, wurde statistisch unter den üblichen Bedingungen in einer öffentlichen psychiatrischen Klinik evaluiert. **Methoden:** Die Phantasietherapie wurde mit einer alternativen Behandlung (Kunsttherapie = KT) und einer Placebogruppe (PG = wöchentliche Stationstreffen) mittels eines kognitiven Tests vor und nach jeder Sitzung verglichen. **Ergebnisse:** (1) Besserung von kognitiven Defiziten über die ersten 4 Sitzungen: Sitzung 1 (Effektstärke d = 0 zwischen allen 3 Gruppen) gegenüber Sitzung 4 (d = 0,2 und 0,4 von Phantasietherapie gegenüber KT bzw. PG). Gemittelt über die ersten 4 Sitzungen zeigte der kognitive Test eine tendenzielle Besserung für Phantasietherapie und KT im Vergleich zur PG. (2) Das Selbstrating (Summe von 4 Items) gemittelt über 4 Sitzungen zeigte einen kleinen Effekt. PatientInnen schätzen sich nach Phantasietherapie eher verbessert ein als nach KT (d = 0,2) oder PG (d = 0,3); tendenzielle d (0,1) von KT gegenüber PG. (3) Psychosoziale Kommunikationsfertigkeiten wurden durch Phantasietherapie maßgeblich verbessert, durch KT leicht verschlechtert und blieben durch PG relativ unverändert. Die Effektstärke von Phantasietherapie für Werte gemittelt über die ersten 4 Sitzungen war 0,6 verglichen mit KT und 0,4 verglichen mit PG. **Schlussfolgerungen:** Phantasietherapie schneidet besser ab als PG und mindestens so gut wie KT. Diese Ergebnisse sollen durch weitere Untersuchungen erhärtet werden.

KARGER

Fax +49 761 4 52 07 14
E-mail Information@Karger.de
www.karger.com

Accessible online at:
www.karger.com/fok

Gary Bruno Schmid, Ph.D.
Research Position
Integrated Psychiatry Winterthur ipw
Post Box 144, 8408 Winterthur, Switzerland
Tel. +41 76 575 2666
E-mail gbschmid@mac.com

Background

A number of psychotherapy techniques have been developed over the years which have empirical support demonstrating favourable effects in the treatment of severe psychotic disorders, especially, schizophrenia [1–7]. In spite of their diversity, most of these approaches can be classified as being either learn-and-goal or experience-and-expression oriented. The learn-and-goal methods are dominant throughout the world today and can be considered to belong to the mainstream. The most popular amongst these include psychoeducation, cognitive behaviour therapy (CBT), dialectical behaviour therapy (DBT) and integrated psychological therapy (IPT).

Psychoeducation is the main-stream intervention of choice for remitting outpatients and their families. The effectiveness of psychoeducation programmes can not only be assessed by the long-term adherence of patients [8], their impact on the reduction of relapse/readmission rates and health service cost, but also by their contribution to the patients' quality of life [9].

DBT, a popular psychosocial treatment originally conceived for the outpatient treatment of suicidal individuals with borderline personality disorder [10–13], has been proven to be better than treatment-as-usual (TAU) in the community for various personality disturbances. DBT, like psychoeducation, has no specific application to the treatment of acute psychotic patients.

IPT is a structured intervention programme for the group-therapeutic treatment of cognitive and behavioural dysfunctions characteristic of schizophrenia [14–17]. It has been shown to enhance patients' response to standard psychiatric rehabilitation, at least in the short term, in the domain of social competence as well as attention, memory, and executive functioning primarily in the remitting stages of the illness [15].

Psychoeducation, DBT and IPT are brief and inexpensive interventions which makes them attractive to managers and policy makers [18]. They have been found useful in presenting an educational framework for disorders and the treatment rationale for intervention programmes [19]. It is supposed that the increased knowledge and insight provided by psychoeducation, DBT and IPT will enable people with schizophrenia to cope in a more effective way with their illness, thereby improving prognosis.

Since such methods focus upon improving aspects of patients' behaviour and cognition, they are primarily suitable for remitting outpatients and not for inpatients suffering an acute psychotic episode. Here, experience-and-expression oriented approaches such as art, movement, and music therapies have proven to be most suitable for consolidating patients' positive symptoms and for counteracting patients' negative symptoms. Unfortunately however, such therapies are not taught (or even mentioned) in most psychological or medical university programmes: the majority of psychologists and psychiatrists do not encounter them until they begin to work in a psychiatric clinic. Accordingly, these therapies belong more to alternative and complementary medicine (CAM) than they do to evidence-based medicine (EBM). Indeed, the question of whether or not EBM produces better results than its alternatives still remains unanswered [20]. The 'academic gap' between Ph.D.-or M.D.-clinicians and paramedical therapists has, until today, left these therapies in the shadows of research interest. Most notable in this area is the work of Benedetti and Peciccia [21–23]. Unfortunately, there is to my knowledge no controlled EBM study evaluating their method. The present paper represents our own first approach at taking an interdisciplinary, experience-and-expression oriented therapy out of the clinical closet and into the light of EBM.

Phantasy Therapy

Phantasy Therapy is an experience-and-expression oriented approach to the treatment of psychosis. It is capable of consolidating, within 1.5 hours, a large group of acutely psychotic and possibly agitated patients with the employment of just 2 qualified therapists and 1 assistant. During treatment, patients are motivated to focus on a single theme, and to exercise bodily, cognitive, emotional, and social skills (intrapersonal strategic manipulation of objects and body, movement and dance, laughter, speech, and interpersonal 'you-forms' and 'we-forms' of communication). The session finishes up with all patients lying peacefully with their eyes closed on soft mats while listening to a fairy tale.

A purely descriptive study (unpublished) carried out in our clinic during the early development of Phantasy Therapy back in 1996 proved this approach suitable for virtually all diagnosis groups independent of age and sex. Since then, Phantasy Therapy has been popular among patients of all diagnostic groups making it a standard part of our therapeutic repertoire, especially for psychotic and depressive patients. In the present study, we have tried to be more systematic in the collection of data enabling us to arrive at statistically relevant conclusions about the use and effects of Phantasy Therapy. Detailed descriptions of Phantasy Therapy have already been published [24–27]. The challenge of the present work has been to statistically study Phantasy Therapy 'in situ', that is, during TAU within the context of quality control under the extreme and difficult conditions of a public psychiatric clinic with mandatory admittance, roughly 50% legally enforced admissions, locked wards, and short-term hospitalisations (<2 months).

Patients and Methods

For ethical reasons and due to the interdisciplinary nature of treatment at our clinic, this study involves a quasi-experimental, naturalistic design involving non-randomized treatment, comparison, and 'placebo' groups under TAU. As a result, we have had to accept the well-known difficulties inherent to carrying out and analysing such a complex study. The extent to which we did or did not deal with such problems adequately is addressed in the discussion section. We emphasize that the results are mostly descriptive, and the strongest arguments are based entirely upon simple effect sizes.

Tab. 1 Age and diagnosis distribution of patient population

	n	%
Age, years		
<20	10	4.9
20–29	59	28.9
30–39	58	28.3
40–49	42	20.5
≥50	36	17.6
Total	205	100
Diagnosis		
Schizophrenia (F20)	58	28.3
Delusional disturbance (F22)	4	2.0
Psychotic disturbance (F23)	9	4.4
Schizoaffective disturb. (F25)	27	13.2
Neurotic, stress and adjustment disorders (F4)	40	9.8
Personality disturbances / Borderline (F6)	20	7.3
Substance abuse	15	13.7
Other	28	2
Total	205	100

Tab. 2 Distribution for the first treatment in the respective groups. Shown are the number of patients for whom the given group was their first exposure to therapy

	n	%
Phantasy Therapy (treatment group)	42	20.5
Art therapy (comparison group)	86	42.0
Weekly ward gatherings (placebo group)	77	37.5
Total	205	100

Patients

Data was collected on adult inpatients of 3 separate, stationary wards, 1 open and 2 closed, in our clinic, Integrated Psychiatry Winterthur (ipw). The clinic is in a small suburb about 5 km outside the city of Winterthur near Zurich in the German-speaking part of Switzerland. During the time data was collected, the clinic was still located in a village lying 25 km north of Winterthur on the border to Germany.

All patients who entered our clinic between January 1 and November 30, 2004 were included in the study: 489 patients, 265 (54%) males and 224 (46%) females; 45% forced admissions; overall average duration of hospitalisation 4.4 weeks. This encompassed all those with an ICD-10 F2 diagnosis: 'Schizophrenia, schizotype and delusional disturbances' plus all those patients suffering from psychotic symptoms in spite of having a first diagnosis other than ICD-10 F2. There were no exclusion criteria.

To carry out the analysis, we needed 2 comparison groups: a therapy group and a non-therapy, 'placebo' group. As therapy group, we picked the weekly art therapy (AT) session lasting 90 min. AT is a fixed part of our therapy repertoire. No mainstream therapy was taken as comparison group because no such group was being offered as part of our TAU. In addition, there is, in our opinion, no mainstream therapy form to date (including IPT) which has been proven to be suitable for the kind of acute psychotic inpatients found in our clinic. As placebo group (PG), we picked the weekly, obligatory ward gathering lasting 50 min. During this time, general information is presented and patients are asked to volunteer for simple housekeeping duties such as dishing out lunch or emptying ash trays. A certified movement and dance therapist led the Phantasy Therapy group together with the first author as co-leader. A certified art therapist led the AT group. The weekly ward gatherings were led by a clinical psychologist. The second author carried out all testing.

Since all groups belong to the standard repertoire of our clinic, patients were assigned to the respective groups soon after admission. Participation in the weekly ward gathering is mandatory for all inpatients and is excused only for somatic illness or in case of isolation due to self- or third-person endangerment. Attendance to AT and Phantasy Therapy is based upon diagnosis and can be interrupted due to various unavoidable schedule conflicts with somatic treatments, visitations, family sessions etc. Patients are also free to refuse to attend AT or Phantasy Therapy if they can provide a reasonable argument. Accordingly, virtually all patients from one of the two closed wards took part in the weekly meeting. Otherwise, patients from all three wards were selected to participate in AT and Phantasy Therapy at the discretion of their treating physician and not at random, as would be desired for a clean study design. This resulted in a subset of 205 patients entering into our study. To avoid unnecessary 'discrimination' of those patients in the main focus of our study, all patients in a given group were tested regardless of whether or not they had an ICD-10 F2 diagnosis.

Only 12 (5.9%) of the 205 patients entering into the study came from the open ward; the rest came from the closed (acute) wards. 12 (5.9%) patients had been readmitted once and 1 (0.5%) person twice during the study period. The average length of stay was 6.5 weeks (M = 45.5 days, range: 2–305). 95 (46.3%) patients were males, 110 (53.7%) females. The age and diagnosis distributions are presented in table 1.

Chi-square testing showed no statistically significant difference in distributions of sex, age, and educational level between the three groups. Psychotic patients (ICD-10 F2) were overrepresented in the Phantasy Therapy group ($p \leq 0.001$), as was to be expected, since this is our clinic's special group psychotherapy for psychosis. The reason why not all patients included in the study suffered a psychosis has to do with our TAU. Other prognostically relevant and unfavourable factors such as premorbid personality disturbance, long prodrome, hebephrenia simplex, paranoia, acoustic hallucinations, or favourable factors such as early treatment, coenaesthesias and vegetative disturbances [see 28] were not screened. Also not taken into consideration were factors like secondary diagnosis, duration of illness etc., or psychosocial factors such as illness in first-degree relatives and social integration.

116 (56.6%) of the patients were admitted against their will (forced admissions). There was no significant difference in the mode of admittance (forced versus free will) between groups.

The time of entrance into the study after admission (= first group therapy) differed strongly between patients: Only 1.5% of patients entered the study already day 1 after admission, and 60% had entered the study at the latest by day 8 (M = 12 days, maximum 180 days). Because of the specificity of patients selected to participate in Phantasy Therapy (ICD-10 F2 diagnoses or other psychoses), only about one fifth of all 205 patients took part in that group as their first form of therapy. Roughly twice as many patients took part in the PG and in AT group (table 2).

Implicit Sources of Error Inherent to Treatment-as-Usual

The present investigation was carried out under the auspices of quality management and not as a strictly controlled research project. Accordingly, the study population had to be selected under real conditions during TAU. All patients gave their expressed verbal consent to undergo testing.

Multiplicity of Treatment: 95 (46.4%) patients had participated in more than one form of therapy during their stay, whereas 18, 51 and 41 patients took part solely in Phantasy Therapy, AT, and the ward gatherings, respectively. This resulted in a total of 320 'virtual patients': 78 (38% of 205) in the Phantasy Therapy group, 143 (70%) in the AT group, and 99 (49%) in the PG. In other words, because of TAU, it was unavoidable

that several patients participated in one or another combination of two groups (37 = 18.0% of 205 in Phantasy Therapy and AT; 3 = 1.5% in Phantasy Therapy and PG; 35 = 17.1% in AT and PG), or even in all three groups (20 = 9.8%). In addition, a total of 20 patients participated in 4 sequential sessions of either the one or the other of the three groups. Of these, the numbers taking part solely in only one group were too small for a statistical comparison. For a clean experimental design, patients should have been exposed to only one kind of group throughout their stay. Group differences in relevant prognostic factors were neglected under the assumption that, due to the inherent population overlaps between groups, any such differences would be averaged out. An additional sensitivity analysis excluding all patients with multiple treatments could not be carried out since, for ethical reasons, virtually all patients underwent pharmaceutical treatment and multiple group therapies in addition to regular meetings with their respective psychologists, doctors, and nurses.

Unequal Distributions of Psychosis: Of the 78 persons treated in Phantasy Therapy, 77% had an ICD-10 F2 diagnosis. Of the 143 patients participating in AT, 48% had an ICD-10 F2 diagnosis and, similarly, of the 99 attending the ward gatherings, 37% had an ICD-10 F2 diagnosis.

Unequal Group Sizes: The average sizes of the groups of patients who participated in 4 sequential sessions were also somewhat different: 5 in Phantasy Therapy, 8 in AT, and 7 in PG.

First Treatment: 86 patients had AT as the very first therapy they participated in (42%), followed by the ward gatherings (76 patients or 37%) and Phantasy Therapy (42 patients or 21%). Considering each group unto itself, 77% of the patients participating in the ward gatherings experienced the PG as their first group exposure, 60% of the patients taking AT experienced the AT as their first exposure to therapy, whereas only 54% of the patients in Phantasy Therapy had Phantasy Therapy as their first therapy exposure. Under the undesirable condition of multiple treatments and different average group sizes, it would have been better if the same percentage of patients within each therapy form had been exposed to this form of therapy for the very first time. Nevertheless, and most importantly, more than half the patients of any given group did experience that group as their very first exposure to therapy.

Time Span between Admission and Entrance into Study: Again, for a clean experimental design, the time span between admission and the first therapy session (whether it be Phantasy Therapy, AT or PG) should have been comparable for all three groups. Unfortunately, however, there was a highly significant difference between therapy groups in the time span between admittance and first session (Kruskal-Wallis $p \leq 0.003$): Average number of days = 22 (Phantasy Therapy), 15 (AT), and 11 (PG). That patients entered the study via Phantasy Therapy significantly later than those entering the study via AT or the ward gatherings lies in the fact that patients assigned to Phantasy Therapy had the highest degree of illness.

Degree of Illness upon Admission: There was a significant difference in the degree of illness upon admission between therapy groups (first session) as estimated on a 7-point scale by the admitting physician (1 = no disturbance, 7 = very severe disturbance) (Kruskal-Wallis $p \leq 0.017$). With an overall average degree of illness of 4.9 in the study population, the average degree of illness of the patients attending Phantasy Therapy as their first form of treatment was 5.3 (AT: M = 4.9; PG: M = 4.7). This fact, taken together with the fact that the percentage of schizophrenic patients was highest in the Phantasy Therapy group helps explain why the cognitive test scores were lowest in the Phantasy Therapy group. Of course, a research design independent of TAU would have guaranteed that all 3 groups display the same percentage of schizophrenic patients in the same average degree of illness.

Several other TAU 'blemishes' in this design include:

Time of Measurement: Phantasy Therapy took place once a week from 13.30–15.00, AT several times a week from 09.00–10.30, ward gatherings once a week from 16.00–16.50.

Frequency of Measurement: In the case of Phantasy Therapy and the PG, a given patient's n^{th} measurement always meant the n^{th} time this person visited that respective group. However, due to the fact that under TAU, AT routinely occurs several times per week, whereas testing was only carried out once a week, it often happened that a patient frequented AT one or more times in between two successive measurements.

Conditions of Measurement: AT took place in the morning and not in the afternoon like the other two groups. Accordingly, we were able to identify both a (1) morning effect and a (2) medication effect: (1) Patients were generally very tired at the beginning of therapy at 09.00 and more vigilant by the time AT concluded 1.5 hours later; (2) between the time from medication (08.00) to end of therapy (10.30), the effects of medication were able to unfold, again enhancing patients' vigilance as compared to therapy begin. Both effects led to an unavoidable improvement artefact evidenced in the 'Connect-the-Numbers Test'-score. Thus, any objective advantage of the Phantasy Therapy group over the AT group tends to be underestimated in this study.

Length of Measurement: The average length of stay for the patients in this study was roughly 6.5 weeks, so that the course of development could not be followed over several months.

Optimally, all three groups should have taken place at roughly the same time of day, with the same frequency of exposure, under the same conditions of medication for a psychotherapeutically realistic time span of at least 3 months.

Hypothesis

To statistically evaluate Phantasy Therapy, we tested the following hypothesis: Already within a few sessions, Phantasy Therapy is more effective for the treatment of cognitive deficits than either a comparable group psychosis therapy or a placebo group.

Measuring Instruments and their Coding

Three different test instruments were employed immediately before and after each therapy session:

1. Cognitive Deficits: The ZVT (German: 'Zahlenverbindungstest' / English: 'Connect-the-Numbers Test' or CNT [29]) was used in 8 parallel versions. The specific version used for a given therapy session was randomly selected. The raw data from the CNT comprised the actual number N of numbers from 1 to 90 correctly connected sequentially within 1 min. It sometimes occurred that a patient tried out some kind of bizarre 'connect-the-numbers' strategy without being able to connect more than a few, if any, numbers sequentially along the way. In such cases the data was not entered into the study in order to avoid speculative, and, therefore, probably false, interpretations of validity.

2. Self-Rating: In a pilot study [26, 30] the parallel scales Bf-S and Bf-S' [German: Befindlichkeitsskala; 31] had proved to be too difficult for our stationary, acute psychotic patients. Accordingly, we used a simple in-house scale with 5 levels in each of the following 4 dimensions of momentary state: (a) general well-being/life situation (bad, somewhat bad, so-so, rather well, good), (b) relaxation/tension (tense, somewhat tense, neither-nor, rather relaxed, relaxed), (c) sadness/happiness (sad, somewhat sad, neutral, rather happy, happy), (d) wakefulness/tiredness (tired, somewhat tired, normal, rather fresh, fresh). All results pertain to the sum score (total points from 4 to 20).

3. Third-Person Rating: For the third-person estimate, another simple, in-house scale with 6 levels (1 = worst state to 6 = best state, based on patient features described in a printed guideline) was used to estimate the degree of disturbance (end as compared to beginning of each session) in the two dimensions: (1) physical state, and (2) psychosocial communication. Another evaluation of attitude toward therapy involved 5 possible scores (no comment, negative, neutral, positive, euphoric). The questionnaire was filled out in plenum by all involved therapists (majority rule) immediately following therapy. The third-person rating estimated patients in terms of their psychosocial communication skills from 1 (leaving the session early) to 6 (self-motivated participation in therapy).

All three test instruments were so poled that the higher a person scored, the better this person was doing.

Results

Results were judged in terms of the effect size d, i.e. the difference between pretherapy and posttherapy averages divided by the 'pooled' standard deviation SD. The variable scales were so defined that the larger the (positive) value of the effect size is, the better is the outcome for the respective experimental group.

CNT: To avoid contamination of the results due to a learning effect with the CNT, all comparisons are based only on the first 4 sessions for a given group. (Throughout the entire study, no more than 14 patients ever attended a given group beyond the 4th session. For statistical reasons, group sizes of <15 persons generally do not provide significant results.) Insofar as patients were regularly discharged as part of our TAU without previous consultation with any psychotherapists, it was virtually impossible for us to know in advance when a patient might be leaving the study. In general, patients started coming to therapy (1st session) within 7 days of the admission date and stopped coming to therapy (last session) within 7 days of discharge. Since it was not the intention of this study to investigate the influence of Phantasy Therapy upon the length of stay in the clinic but, rather, upon the short-term influence over a few (on the average 4) consecutive sessions, we offer no exact disclosure of how the respective sessions are embedded in the overall course of treatment. The number of patients still in the study at any given time fluctuated. In particular, there was no one group of patients who were together simultaneously for the 1st, 2nd, 3rd, 4th etc. consecutive times.

The problem of repeated measurements was addressed by using 8 parallel forms of the CNT: a different one of each, randomly selected before and after each of the 4 sequential sessions with attention being paid to the fact that no one form was ever used twice by a given patient. The average improvement on the CNT (difference in numbers correctly connected after – before therapy) in all three groups is shown in table 3.

The rank order in the first session is consistent with the rank order of percentage of psychotic patients in each group: PG (37%), AT (48%), Phantasy Therapy (77%). Patients in the Phantasy Therapy group tended to improve the most over time; patients in the AT group showed no consistent change; patients in the PG tended to drop consistently in their improvement. The difference between groups is most pronounced in the 4th session.

The effect sizes for the first session are shown in table 4. (Tables 4–7 can be found online at www.karger.com/doi/10.1159/000106074. All values lie near 0. In other words, the groups do not even tend to differ in effectiveness after the very first session. The effect sizes for the 4th session are shown in table 5. Both Phantasy Therapy as well as AT tend to be more effective than placebo. Taken together with the results from table 4, this means that the greatest improvement after the first 4 sessions was achieved by the patients in the Phantasy Therapy group. Although these simple results do not decisively favour the effectiveness of Phantasy Therapy over AT, they do show that Phantasy Therapy tends to be considerably better (factor of 1.5) than AT when both groups are individually compared to placebo. In view of the fact that the Phantasy Therapy population had considerably more psychotic patients than both the AT population (factor of 1.6) and the PG (factor of 2.1), whereas AT had a factor of only 1.3 more psychotic patients than the PG, these results clearly speak in favour of the effectiveness of Phantasy Therapy. When considering the other above-mentioned biases that give AT a certain implicit advantage over Phantasy Therapy, these positive results in favour of Phantasy Therapy are further strengthened.

Self-Rating: The average improvement on the self-rating of well-being (sum score after – sum score before therapy) is shown in table 6. The problem of repeated measurements does not show up in the kind of simple self-rating test used here. Due to the straight-forewardness of our in-house scale – 5 levels in 4 dimensions with all results pertaining to the sum score –, it can be reasonably assumed that the validity of the test is relatively acceptable. The most important point here is that both Phantasy Therapy and AT always evidence positive values throughout all 4 sessions, whereas the PG manifests 3 out of 4 negative values. Accordingly, patients tend to feel better after 'real' therapy sessions and worse after a non-therapy meeting. Comparing the rank order of the differences of means over all 4 sessions for the three test groups with the Kruskal-Wallis test shows a tendential advantage of Phantasy Therapy over the alternative groups ($p \leq 0.144$). Limiting the analysis to the two emotional questions dealing with mental relaxation (well-being and sadness/happiness) and calculating the effect sizes for the first session only results in a small advantage of Phantasy Therapy over PG ($d = 0.26$) and AT ($d = 0.22$). The advantage of AT over the PG for the first session only was virtually non-existent ($d = 0.04$). There was no difference on the other two, more biological items: relaxation/tension and wakefulness/tiredness. This implies that patients were able to differentiate their emotional states before and after therapy more accurately than they were able to discern the change in their physical conditions. It seems reasonable that patients who feel happier and overall better after therapy as compared to therapy before are also mentally more relaxed. So why don't they also feel bodily more relaxed and awake? Could it be that such physical improvements have been hidden from self-reflection under the veil of medication side-effects?

Third-Person Rating: Again, the average improvement on the third-person rating (score after – score before therapy, psychosocial communication only) is shown in table 7. (The 'third persons' referred to here always comprised the first author, the same movement and dance therapist, plus one postgraduate psychologist and one undergraduate psychologist assisting the group.) There are two interesting points to be made here: (1) the rank order remained stable over all 4 sessions, and (2) the patients in the Phantasy Therapy group consistently improved during each session whereas, in both AT and PG,

Table 3. Average improvement on the CNT. Average posttherapy-minus-pretherapy scores on the Connect-the-Numbers Test (CNT) for the first 4 sessions with all three therapy forms

	Session 1 M (SD)	Session 2 M (SD)	Session 3 M (SD)	Session 4 M (SD)
Phantasy Therapy	3.785 (10.83)	3.364 (8.675)	1.154 (8.465)	4.533 (9.870)
Art Therapy	4.467 (11.43)	2.274 (10.70)	0.969 (8.010)	3.565 (9.029)
Ward Gathering	4.640 (12.47)	4.089 (11.38)	3.815 (9.119)	–0.533 (4.581)

M = Mean; SD = standard deviation.

Table 8. Effect sizes d of all three stationary-patient groups in comparison (schizophrenic patients only: ICD-10 F2) for values averaged over the first 4 sessions

	Pretherapy Test			Posttherapy Test			d
	M	SD	n	M	SD	n	
Cognitive Test[a]							
Phantasy	48.51	18.98	57	51.88	17.34	57	0.10
Placebo	46.53	23.26	32	48.03	23.53	32	
Phantasy	48.51	18.98	57	51.88	17.34	57	–0.04
Art	47.16	19.31	59	51.35	19.91	59	
Art	47.16	19.31	59	51.35	19.91	59	0.13
Placebo	46.53	23.26	32	48.03	23.53	32	
Third-Person Rating[b]							
Phantasy	4.01	0.90	60	4.36	0.96	60	0.44
Placebo	3.96	1.04	37	3.86	1.07	37	
Phantasy	4.01	0.90	60	4.36	0.96	60	0.58
Art	4.22	0.98	69	4.01	1.06	69	
Art	4.22	0.98	69	4.01	1.06	69	–0.13
Placebo	3.96	1.04	37	3.86	1.07	37	
Self-Rating[b]							
Phantasy	13.32	3.53	58	13.94	3.67	58	0.26
Placebo	13.13	4.00	32	12.78	3.92	32	
Phantasy	13.32	3.53	58	13.94	3.67	58	0.18
Art	13.75	3.65	62	13.72	3.84	62	
Art	13.75	3.65	62	13.72	3.84	62	0.08
Placebo	13.13	4.00	32	12.78	3.92	32	

[a]Interval scale: Numbers correctly connected in 60 s, larger values are better results.
[b]Rank scale: The larger the value, the better the patient is doing.

the patients tended on the average to do slightly worse. The problem of repeated measurements does not show up in the kind of simple third-person rating test used here. The problem of inter-rater reliability was circumvented by using the concensus of a group decision involving 3–4 raters under exclusion of the principal investigators. Due to the straightforewardness of our in-house scale – 6 levels to estimate the degree of disturbance in 2 dimensions: (1) body, and (2) mind/social communication –, it can be reasonably assumed that the validity of the test is relatively acceptable. Comparing the rank order of the differences of means over all 4 sessions for the three test groups with the Kruskal-Wallis test shows a significant advantage ($p \leq 0.001$) of Phantasy Therapy over the alternative groups. The effect sizes for the first session ($d = 0.33$) reveals a small advantage of Phantasy Therapy over the PG and a moderate advantage over AT ($d = 0.55$). The advantage of AT over the PG for the first session only was slightly negative ($d = –0.23$).

Global Score: Construction of a global score from all three ratings (individual scores added after t-transformation to $M = 100$ and $SD = 20$) showed a statistically significant (Kruskal-Wallis $p \leq 0.001$) advantage of Phantasy Therapy over the other two groups averaged over the first 4 sessions.

Average Over the First 4 Sessions: Schizophrenic Patients Only: The effect sizes of all three tests manifested by schizophrenic patients and averaged over the first 4 sessions are shown in table 8. For the CNT, the effect sizes of the therapy groups evidence only a minimal effect in the direction of improvement. This result is in sharp contrast to the results from the pilot study. One possible source of error here is the fact that, in the

pilot study, the entire time span used to connect all 90 numbers was measured on an individual basis for each patient whereas, in the full study, practical constraints forced us to specify a time limit of 1 min for the group, and the number of numbers which each patient could correctly sequentially connect during this time was recorded. The latter procedure stressed the patients slightly, leading some patients to 'force' their connections in bizarre ways which were often difficult to interpret. The self-rating showed only a small advantage of Phantasy Therapy over the other two groups. Third-person rating results evidenced a large advantage of Phantasy Therapy over AT, a moderate advantage of Phantasy Therapy over the PG, and virtually no difference in effect between AT and the PG.

Discussion

The present study took place under rather difficult 'in situ' conditions, within the context of quality management in a state hospital with approximately 50% forced admittance and obligatory attendance in therapy groups. Under such restrictions, it would be illusory to expect a reliable test of psychotherapeutic effectiveness of the treatment group or a decisive discrimination between time-tested therapy forms (control group versus treatment group). In other words, the applied statistical design hardly reflects the complexity of the clinical situation at hand: The results are mostly descriptive; the strongest arguments are based entirely upon simple effect sizes. Nevertheless, this study has, within the modest limits of the methods used, indeed shown that Phantasy Therapy is useful and, to some extent, effective. An obvious development toward cognitive improvement was evidenced when evaluated over the course of the first 4 sequential sessions: Session 1 (d = 0 between all 3 groups; see table 4) compared to session 4 (d = 0.2 and 0.4 of Phantasy Therapy over AT and the PG, respectively; see table 5). When averaged over the first 4 sessions, the CNT showed an overall, if only tendential, effect toward improvement for both Phantasy Therapy and AT as compared to the PG (d = 0.1; see table 8). The overall self-rating showed only a small effect. Patients judged themselves to have been effectively more improved after Phantasy Therapy as compared to AT (d = 0.2) or the PG (d = 0.3). In contrast, the effect size of AT over the PG is only tendential (d = 0.1). These results are reflected in the individual items whereby patients judged themselves to be improved emotionally rather than physically. The third-person rating showed the most obvious results. With regard to psychosocial communication skills, patients were judged on the average to have been considerably improved during Phantasy Therapy, to have slightly worsened during AT, and to have remained more or less unchanged during the PG. The effect size of Phantasy Therapy was 0.6 compared to AT and 0.4 compared to the PG.

Phantasy Therapy is a combination of art, movement and dance and psychotherapy. Unfortunately, there is little evidence-based support of the effectiveness of such experience-and-expression oriented approaches to psychotherapy. The tenuous results presented here in support of our Phantasy Therapy do, however, compare favourably with what else is known from the literature about the learn-and-goal oriented treatment options discussed in the introduction. The neuropsychological underpinnings of Phantasy Therapy have already been discussed elsewhere [26, 27].

There is one important difference between experience-and-expression and learn-and-goal oriented psychotherapies worthy of mention. Learn-and-goal oriented approaches focus on getting the patient's world picture and behaviour to better conform with that of his or her caretaker. Experience-and-expression oriented approaches let a person subjectively experience and express emotions like, for example, happiness or anger, in a supervised group with other affected individuals in order to correctly *understand* the cognitive-emotional context of the circumstances in which each member is situated. The latter approaches are treatments the therapist carries out, so that the patient feels better. As opposed to this, one could somewhat provocatively say: Educative, cognitive and behaviour therapies (as well as neuroleptica) are the treatments the patient takes, so that the psychiatrist feels better. Nevertheless, to be taught, objectively, during a psychoeducative, cognitive or behavioural programme, for example, how to recognize from a person's facial gestures that this person is, say, happy rather than angry, can help patients to more or less correctly *evaluate* their momentary psychosocial context. And this is indeed therapeutically helpful. Perhaps patients are best served by being offered both types of approaches.

Due to the specific characteristics of the illness (early age of onset, high degree of psychological invalidity, complex rehabilitation procedures, high rate of rehospitalisation, high percentage of chronification etc.), schizophrenia is the most cost-intensive of all known psychological disturbances. Major financial burdens encompass direct (treatment and rehabilitation), indirect (loss of productivity and income) and non-monetary expenses (social discrimination and isolation, diminished quality of life, pain, suffering and invalidity). For this reason alone, any form of group therapy which might contribute to already established, evidence-based treatments of schizophrenia should be taken seriously, investigated, and improved as well as possible. It has been the purpose of the present study to carry out such an investigation with Phantasy Therapy.

Conclusions

From the standpoint of descriptive statistics and a simple design relying almost entirely upon effect sizes, Phantasy Therapy proves to be better than TAU and at least as good as Art Therapy. These results should be hardened by further

studies employing therapy, comparison and TAU groups which are more independent and better matched than those which were available for this work. This would enable a better, more powerful statistical design. A certain interest has already been expressed for the introduction of Phantasy Therapy in public Swiss clinics other than our own.

Supplemental Material

Table 4. Effect sizes for the CNT of the first therapy session.
Table 5. Effect sizes for the CNT of the 4th therapy session.
Table 6. Average self-rating differences for the first 4 sessions.
Table 7. Average third-person rating differences for the first 4 sessions.

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