Specificity and Pace Variability of Therapists' Interventions under Naturalistic Conditions

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Abstract

The aims of this naturalistic study were twofold: First, to assess how frequently psychotherapists who identified themselves as adherent to one of eight different psychotherapeutic approaches actually employed interventions specific to their approach. Second, to identify types of intervention employed by therapists that engendered the lengthiest (> 120 seconds) interaction units between therapist and patient. 422 audio-recorded sessions between 42 therapists and 92 patients were coded using a Rating Manual (PAP-S-RM) developed by PAP-S researchers. The majority of interventions used were common to all approaches. The total number of common, approach-specific, and specific to other approaches interventions across all of the sessions were tallied. Multilevel modelling analyses revealed that – with one exception – the therapists' professed adherence did not predict which types of intervention were used. The factor *therapist* explained part of the variation of some types of intervention, while the factor *patient* best predicted which interventions were used. Results concerning the second question identified the 10 interventions most likely to set off interaction units lasting longer than 120 seconds. Findings are discussed as supporting an integrative approach to psychotherapy that acknowledges the role of common factors in effective treatments while also considering the usefulness of specific interventions from approaches that are not yet established as evidence-based.

Key words: psychotherapy process, naturalistic design, adherence, common and specific interventions, interventional pace

Spécificité et Variabilité de cadence des interventions de therapeutes en conditions naturalistiques

Résumé: Les objectifs de cette étude naturalistique étaient doubles : Premièrement, pour évaluer à quelle fréquence des psychothérapeutes qui s'identifiaient comme adhérent à l'une des huit approches psychothérapeutiques employaient réellement des interventions spécifiques à leur approche. Deuxièmement, pour identifier les types d'intervention employés par des thérapeutes qui engendraient les plus longues (> 120 secondes) unités d'interaction entre thérapeute et patient. 422 sessions audio enregistrées entre 42 thérapeutes et 92 patients étaient codifiées utilisant un manuel d'évaluation (PAP-S-RM) développé par des chercheurs PAP-S. La plupart des interventions utilisées étaient commune à toutes les approches. Le nombre total d'interventions communes, spécifiques à l'approche, et spécifiques à d'autres

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approches à travers toutes les sessions ont été additionnées. Les analyses des modèles multiniveaux ont révélé que – à une exception près – l'adhésion professée par les thérapeutes ne prédisposaient pas quels types d'intervention ont été utilisés. Le facteur *thérapeute* a expliqué une partie de la variation pour quelques types d'intervention, alors que le facteur *patient* était mieux pour prédire quelles interventions ont été utilisées. Les résultats concernant la seconde question ont permis d'identifier les 10 interventions les plus probables à déclencher des unités d'interaction durant plus de 120 secondes. Les résultats sont discutés en support d'une approche intégrative à la psychothérapie qui reconnaît le rôle des facteurs en commun dans des traitements efficaces tout en considérant l'utilité des interventions spécifiques tirées d'approches pas encore établies comme étant fondées sur des preuves.

Mots clés: Processus psychothérapeutique, design naturalistique, adhésion, interventions communes et spécifiques, cadence interventionnelle.

Spezifität und Rhythmusvariabiltiät von Therapeutenverhalten unter naturalistischen Bedingungen

Zusammenfassung: Die vorliegende Studie untersuchte zwei Fragestellungen: Erstens, wie häufig wenden Vertreter/innen acht unterschiedlicher Psychotherapieverfahren unter naturalistischen Bedingungen methodenspezifische Interventionen ihrer eigenen Richtung an? Zweitens, welche Interventionstypen zogen die längsten (> 120 Sekunden) Interaktionseinheiten zwischen Therapeut/in und Patient/in nach sich. Dafür wurden 422 audiografierte Sitzungen von 42 Therapeut/innen und 92 Patient/innen mit Hilfe eines eigens dafür entwickelten Rating-Manuals (PAP-S-RM) kodiert. Über alle Schulen hinweg wurden Schulen übergreifende, allgemeine Interventionen am häufigsten angewendet. Über alle Sitzungen hinweg wurden prozentuale Summenwerte für methodenspezifische, methodenfremde und allgemeine Interventionen gebildet. Mehrebenenanalysen ergaben, dass die erklärte Schulenzugehörigkeit der Therapeut/innen die Art der Interventionen – mit einer einzigen Ausnahme – nicht vorhersagte, der Faktor *Therapeut/in* erklärte die Auftretensvarianz einiger Interventionstypen. Der Faktor *Patient/in* sagte am besten vorher, welche Interventionen angewendet wurden. Berechnungen zur zweiten Fragestellung identifizierten diejenigen 10 Interventionen, die überzufällig häufig länger andauernde Interaktionseinheiten nach sich zogen. Die Ergebnisse werden als Unterstützung für integrative Psychotherapieansätze aufgefasst, die die allgemeinen Wirkfaktoren in effektiven Behandlungen anerkennen und die gleichzeitig die Nützlichkeit von spezifischen Interventionen in Betracht ziehen, die von bisher noch nicht als evidenzbasiert geltenden Methoden stammen.

Schlüsselwörter: Psychotherapeutischer Prozess, naturalistisches Design, Methodentreue, allgemeine und spezifische Wirkfaktoren, Rhythmusvariabilität des Therapeutenverhaltens.

Специфичность и вариабельность темпа терапевтических интервенций в естественных условиях

Резюме: Данное исследование, проводимое в естественных условиях, преследовало двойную цель. Во-первых, оценить, насколько часто психотерапевты, идентифицирующие себя с одним из восьми различных психотерапевтических подходов, на самом деле используют специфичные для своего подхода интервенции. Во-вторых, выделить типы интервенций, приводящие к наиболее длинным (> 120 секунд) блокам взаимодействия между терапевтами и пациентами. 422 аудиозаписей

сессий 42 терапевтов и 92 пациентов были закодированы с использованием руководства по оценке, созданного исследователями психотерапевтического процесса с натуралистичным дизайном (PAP-S-RM). Большинство интервенций были общими для всех подходов. Было подсчитано число общих, специфических для соответствующего подхода и специфических для других подходов интервенций, использованных во всех сессиях. Многоуровневый анализ показал, что (с одним исключением) несмотря на профессиональную приверженность терапевта тому или иному подходу невозможно предсказать тип интервенции, которая будет использоваться. Фактор *терапевт* объясняет вариабельность некоторых типов интервенций, в то время как фактор *пациент* больше определяет и предсказывает тип будущей интервенции. В результате исследования по второму пункту программы было выделено 10 интервенций, с наибольшей вероятностью приводящие к наиболее длинным блокам взаимодействия между терапевтами и пациентами, длящимся более 120 секунд. Полученные результаты поддерживают идею интегративного подхода в психотерапии, в котором признается роль общих факторов в эффективности лечения, а также принимается во внимание польза специфических интервенций, заимствованных из подходов, пока не получивших свое научное признание.

Ключевые слова: психотерапевтический процесс, натуралистичный дизайн, приверженность, обычные и специфические интервенции, темп интервенции

Introduction
Extending the Scope of Effective Approaches to Psychotherapy

By large and on average, psychotherapy has proven to be effective (e.g., Smith, Glass, & Miller, 1980; Lambert, 2013), with no or only minor differences between different approaches (Wampold, 2001; Luborsky et al., 2002; Lambert, 2013).

A large naturalistic multicenter process outcome study, a Field Study on the Effectiveness of Outpatient Psychotherapy in Switzerland (PAP-S) (Tschuschke et al., 2010; von Wyl et al., 2013), carried out between 2007 and 2013, predominantly included approaches (see Table 1) that are not very widely known and usually not associated with "evidence based" approaches (see Chambless & Hollon, 1998), but are approved by Swiss health departments and European professional organizations. Graduates of institutes teaching these approaches are trained according to extensive and well-elaborated curricula (see Schlegel, 2002; Schlegel, Meier & Schulthess, 2011). Therapists participating in PAP-S were clearly affiliated with specific types of psychotherapy, but treatments were not manualized. Systemic, Rogerian, and Cognitive Behaviour therapists from several Swiss institutes were invited, but declined to participate.

On average, all the psychotherapeutic approaches that participated in PAP-S – namely, Analytical Psychology (Jung, 2000), Psychoanalysis (Freud, 1895-1940), Bioenergetic Analysis (Lowen, 1958), Existential Analysis and Logotherapy (Frankl, 1956-1999), Gestalt Therapy (Perls, Hefferline, & Goodman, 1951), Integrative Body Psychotherapy (Rosenberg, Rand, & Asay, 1996), Art and Expression Oriented Psychotherapy (Knill, Nienhaus Barba, & Fuchs, 1995), Process Oriented Psychotherapy (Mindell, 1998), and Transactional Analysis (Berne, 1961) – resulted in positive treatment outcomes, as measured by the Brief Symptom Inventory (BSI) (Franke, 2000), the Outcome Questionnaire (OQ-45) (Lambert et al., 2004), the Global Assessment Functioning Scale (GAF) (American Psychiatric Association, 1989), and Beck's Depression Inventory (BDI) (Hautzinger, Keller, & Kühne, 2006). Effect sizes were moderate to large, $0.78 \leq d \leq 0.99$, following Cohen (1988).

No significant differences in effectiveness between approaches were found (Crameri et al., submitted.; Crameri et al., 2014). Design and results of the PAP-S have been, and will be, published in several reports (von Wyl et al., 2013; Tschuschke et al. 2013; Tschuschke et al., 2015; Berglar et al., in print; Crameri et al., 2015; and others). Our results are therefore in line with a majority of studies and meta-analyses (Smith et al., 1980; Luborsky et al., 2002; Lambert, 2013), extending the result of effectiveness and the absence of differences between approaches to a number of different types of psychotherapy, which had not provided this evidence so far.

Going Beyond the Measurement of Outcome: Therapeutic In-Session Behaviour

The declared affiliation of therapists with different types of psychotherapy does not tell us enough about their 'in-session' behaviour. The general finding of 'no' or 'very little' difference in the outcome of diverse therapies could be due to common curative factors, such as the therapeutic alliance, exploration, support, empathy, and advice, which are used in several or all types of psychotherapy but not emphasized in their theory of change.

This possibility was first hypothesized by Rosenzweig (1936), (for common factors, see also Castonguay, 1993; Ablon & Jones, 2002). *Common factors* refer to elements that are shared across most, if not all, therapeutic modalities. *Specific factors* are theory-specified techniques that proponents of a particular type of psychotherapy have declared as 'central' to their theory of change (for specific factors, see DeRubeis, Brotman, & Gibbons, 2005).

Weinberger (1995), Castonguay et al. (1996), Boswell, Castonguay, and Wasserman (2010), Pfammatter and Tschacher (2010), and Pfammatter, Junghan, and Tschacher (2012) all report on and discuss the relative contributions of common and specific factors.

According to Lambert (2013), there is growing evidence that there are some specific technique effects and many common interventions across treatments (see also Orlinsky, Rønnestad, & Willutzki, 2004) and that the vast majority of therapists have become eclectic in their orientation. Having reviewed the available empirical research, Lambert (1992) summarized that 30% of the outcome variations were due to "common" and 15% were due to "specific" factors (see also Lambert, 2013, p. 200).

There have been several attempts to collect active, curative factors in psychotherapy by looking beyond the boundaries of the various schools (e.g., Orlinsky & Howard, 1987; Orlinsky, 1994; Revenstorf, 1992; Orlinsky et al., 2004; Grawe, Donati, & Bernauer, 1994; Grawe, 1995; Crits-Christoph, Connolly Gibbons & Mukherjee, 2013). Orlinsky et al. (2004) proposed a "generic model of psychotherapy". Grawe (1995) advocated a general theory of psychotherapeutic change ("*Allgemeine Psychotherapie*") on the basis of empirically-validated active factors. If it is true that psychotherapy is effective and that diverse approaches are equally effective, we still do not know really why.

At present, three types of psychotherapy are officially recognized in Germany, 23 in Austria, and 60 in Switzerland. These examples demonstrate that researchers and politicians are far from unanimous with respect to what is worthwhile providing insurance coverage for or teaching to students of psychotherapy.

Adherence under Naturalistic Conditions

For comparative studies, the value of using treatment manuals to train therapists and verify their adherence has been strongly advocated by Perepletchikova, Treat, and Kazdin (2007) and Perepletchikova (2009), advocated and questioned by Orlinsky et al. (2004), and questioned by Miller and Binder (2002) and Castonguay et al. (2013).

Adherence means the degree to which therapists deliver the theory-specified techniques. Our study used a "bottom-up-approach" of practice-oriented research, with mutual collaboration between clinicians and researchers. We wanted to examine the interventional behaviour of therapists who had finished their training in a given modality and who worked as clinicians in outpatient settings with as little interference or directives from the research team as possible. According to Lambert (2013), our goal – as therapists – should be to match techniques with client dispositions, personality traits, and other diagnostic variables (see also Norcross & Wampold, 2011). However, very few studies have checked what therapists really did in their sessions.

If at all, many studies used rather global measures of treatment adherence for total sessions (e.g., Hollon, DeRubeis, & Evans, 1987; Butler, Henry, & Strupp, 1995; Barber & Crits-Christoph, 1996; Hilsenroth et al., 2005; Barber et al., 2006, Hogue et al., 2008; Martino et al., 2009; McCarthy & Barber, 2009).

In PAP-S, we used a recently developed multi-method Rating Manual (PAP-S-RM) (Tschuschke, Koemeda-Lutz, & Schlegel, 2014) that allows external 'raters' (blind for therapists' affiliations and blind for the attribution of intervention categories to approaches) to judge single therapeutic interventions from audio-recordings of complete sessions. Before data collection started, we had asked proponents from different theoretical orientations to name and define their specific intervention techniques and to name and define what they believed to share with other orientations. We were interested in exploring therapists' naturally occurring adherence to their own types of psychotherapy as compared to the amount of eclecticism. In a recent meta-analytic review of 32 studies, Webb, DeRubeis, and Barber (2010) found no overall significant relationship between adherence and outcome.

Naturally Occurring Variations in Interventional Pace

In addition, we were interested in investigating naturally-occurring variations in the pace of therapists' interventional behaviour. We found only very few other studies that had investigated temporal aspects of patient-therapist interactions. Duncan (1972) identified and described signals and rules for taking speaking turns. Rochet-Capellan and Fuchs (2014) examined the relationship between respiratory functions and turn-taking. Langs and Badalamenti (1990), and Badalamenti and Langs (1991), made efforts to characterize stochastically the dynamics of switching the speaker role and of the amount of time spent in the speaker role. Early on, during the data collection, we found that the intervals between interventions vary considerably within sessions. In some parts of sessions, the pace of therapists' interventional behaviour followed faster rhythms, whereas in other parts, time lags between interventions increased. We therefore included the measurement and analysis of time intervals between therapeutic interventions, assuming that their duration was indicative of the complexity of processing that each intervention triggered.

Our question was: *"Are there types of intervention that systematically engage patients in more complex processing? And if so, what are they?"* From studies of memory (e.g. Sternberg, 1966, 1975, as cited in Kintsch, 1982), we know that reaction latencies increase with increasing complexities of the task. According to Elliott, Greenberg and Lietaer (2004) and Elliott et al. (2013, p. 515), the *"depth of experiential self-exploration is seen as one of the pillars of psychotherapy process and change"* and has been consistently related to positive outcome. Or, as Roth (1994, pp. 219 ff.) elaborates, tasks for which we have no automated routines (e.g., recognizing an unknown object, comprehending an irritating statement, solving an unfamiliar problem, etc.) require reorganization of neuronal networks. They involve

cognition and consciousness and are time and energy consuming. This could be a crucial ingredient for therapeutic change to occur.

Hypotheses

For the present report, we tested the two following hypotheses:

1. H^0: Under naturalistic conditions in outpatient settings there is no difference in the types of intervention used by therapists affiliated with different types of psychotherapy.
2. H^0: On average, therapists' pace of interventional behaviour varies independently from types of interventions used.

Method:

Context: Field Study on Outpatient Psychotherapy in Switzerland (Praxisstudie Ambulante Psychotherapie – Schweiz: PAP-S)

Participating in the Field Study on Outpatient Psychotherapy in Switzerland (PAP-S) (Tschuschke et al., 2010, 2013; von Wyl et al., 2013; Crameri et al., 2014) were 362 patients, 81 therapists, and 10 training institutes/types of psychotherapy. The data was collected from 2007 to 2013. Starting in March 2007, cooperating therapists invited all new patients to participate. Patients were informed that they would receive therapy whether or not they agreed to take part in the study. All participating patients signed an informed consent form, and agreed to have their sessions audio-recorded. They were also told that they would be free to drop out of the study at any time, and/or to have audio-recordings of their sessions deleted, if they so wished. Prior to data collection, the ethical committees in all Swiss cantons in which therapists participated had approved the study design and proceedings. The project was funded by the participating institutes and, to a larger part, by an anonymous donor mediated through the Department of Health of the Canton of Zurich, Switzerland. The training institutes signed a contract agreeing to refrain from influencing the scientific evaluation of the data.

To validate the therapists' diagnoses and make them comparable within our total sample, patients agreed to participate in additional diagnostic interviews, conducted by specially trained and independent clinicians: These included the Structured Clinical Interview for DSM-IV (SCID I and II) (First et al., 2012), the Operationalized Psychodynamic Diagnostics (OPD Task Force, 2001), and the Global Assessment of Functioning Scale (GAF) (American Psychiatric Association, 1989). The interviews were conducted at assessment centres in nine major cities in Switzerland, at the beginning, at the end, and one year after termination of therapy. At each of these assessments, patients filled out a number of self-report questionnaires on depression (BDI), overall symptoms (BSI, OQ-45), and other variables relevant to outcome (see: von Wyl et al., 2013).

Sub-sample for this Partial Study: Sessions, Patients, and Therapists

For this study, out of a total of 13,531 sessions audio-recorded in PAP-S, we analyzed therapists' in-session verbal behaviour in 422 sessions, from 42 (out of 81) therapists, and 92 (out of 362) patients. The rationale for session selection was to cover all types of the participating psychotherapies, and the number of therapists should reflect the amount of contribution of each institute. Ideally, we would have wanted at least three patients from each therapist, and three sessions from each treatment, one from the beginning, one from the middle, and one towards the end. From long-term treatments, more than three sessions were drafted. However, as is foreseeable in a naturalistic study, a considerable number of patients who had agreed to participate dropped out, and some therapists contributed less than three cases, or delivered incomplete data. Some of the selected audio-recordings lacked sufficient acoustic quality for

analysis. Our sample therefore fell short of the intended distribution of variables.

What we actually obtained were: 25 sessions from six patients and from three psychodynamic psychotherapists (PSZ, DAS, C.G. Jung Institute Zurich); 16 sessions from four patients, and from three Logotherapists (GES, ILE); 65 sessions from 12 patients and from seven Gestalt therapists (SVG); 58 sessions from 12 patients and from five psychotherapists affiliated with Transactional Analysis (SGTA, ASAT); 49 sessions from 10 patients and from six psychotherapists affiliated with Bioenergetic Analysis (SGBAT, DÖK); 102 sessions from 22 patients and from 7 Process Oriented psychotherapists (IPA); 36 sessions from 8 patients and from 3 Art and Expression Oriented psychotherapists (EGIS); and 74 sessions from 18 patients and from 8 Integrative Body psychotherapists (IBP) (see Table 3).

The therapists' average age in this study was 48.9 years (SD = 8.5, as compared to M = 51.0 years, SD = 8.5, in the total PAP-S sample), and 59.5% were women (66.7% in the total sample). The patients' average age was 40.6 years (SD = 11.5, as compared to 39.6 years, SD = 11.8, in the total sample); 59.3% were women (66.0% in the total sample). Concerning therapists' sex and age, the subsample can be taken as representative of the total PAP-S sample (therapists: t *age* (1; 37) = - 0.54; p = 0.59; Chi^2 *Sex* (2) = 3.78; p = 0.44; patients: t *age* (1;85) = 0.76; p = 0.45; Chi^2 *Sex* (2) = 0.49; p = 0.49).

Patients' DSM-IV diagnoses as assessed by external experts were (percentage of total sample in brackets): Axis I: 32.2% (38.5%) affective disorders; 21.8% (23.5%) anxiety disorders; 23.0% (15.5%) adaptive disorders; 8.1% (11.1%) other disorders; 14.9% (11.4%) no Axis I disorder; axis II: 1.1% (2.5%) cluster A; 16.9% (12.5%) cluster B; 25.8% (30.9%) cluster C; 56.2 % (54.1%) no Axis II disorder. Regarding diagnoses, the sub-sample can be taken as representative of our total sample (Chi^2 *SKID I* (4) = 22.90; p = 0.12; Chi^2 *SKID II* (3) = 12.84; p = 0.17).

Audio-Recordings: Therapists were asked to routinely audio-record all sessions with patients who participated in the study. After termination of therapy, three sessions (or more for longer treatments) out of each treatment were randomly selected by the study group, so that neither patients nor therapists knew in advance which sessions would be selected.

Rating Manual: For the categorization of therapists' interventions by external raters a rating manual was constructed (Tschuschke et al., 2014). Proponents of 13 different theoretical orientations cognitive behaviourists, systemic therapists and Rogerians included were asked (prior to the beginning of data collection) to each name and define categories of interventions that they believed were specific to their type of psychotherapy (specific interventions). We asked these same people to name and define additional intervention categories that they believed were also important, but not specific to their type of psychotherapy (common interventions). For common intervention techniques, we also queried the existing literature (see e.g. Castonguay, 1993; Grawe, 1995; Orlinsky et al., 2004). Each category was operationally defined. Distinctions from similar categories were included as well as a list of prototypes of therapists' interventions representing that category (for an example, see Table 2b). Some types of psychotherapy share specific techniques (specific but not unique): We therefore ended up with 100 intervention categories; 25 were common to all types of psychotherapy participating, and 75 were specific (see Table 2a).

Ratings: Five postgraduate psychology students, not trained in any type of psychotherapy, were trained to code audio-recordings, using our rating manual. Units of analysis were therapists' interventions and the time intervals between onsets of therapists' interventions. The 'raters' knew neither the type of psychotherapy that therapists were affiliated with, nor the attribution of intervention categories to types of psychotherapy. Frequency counts for each intervention category and percentages of the total number of interventions in each session were

computed. The percentages of *common* interventions, interventions *specific to therapist's type of psychotherapy*, and interventions *specific to other types of psychotherapy* were added to yield sum scores for these three types of categories (for methodological considerations in collecting and coding observational data, see Floyd, 1989; Markman et al., 1995; Margolin et al., 1998).

Observer agreements: Eighty sessions were coded twice, and independently, by two different raters. The average inter-rater-reliability on a single intervention basis was Cohen's kappa = 0.68. According to Landis and Koch (1977, p. 165), this can be qualified as "substantial strength of agreement".

Category types and interval duration: Early on during the data collection, we found considerable variation in interval duration between therapists' interventions. We defined five classes of time intervals (int < 10 sec.; 10 sec. < int < 30 sec.; 30 sec. < int < 60 sec.; 60 sec. < int < 120 sec.; 120 sec. < int). To uncover whether all types of intervention were equally distributed across these five interval classes, or if certain types of intervention tended to cumulate in interval classes of longer duration, a cross tabulation of time intervals and the frequencies of each type of intervention in these five classes was set up. Positive (more frequent) and negative (less frequent) deviations from the expected values as well as cell chi-square values were computed.

Results:

Natural Occurrence of Different Types of Intervention

The external raters identified, on average, 43 interventions (range: 8 to 173; SD = 17.7) and 15 different categories of intervention per session (5 to 28; SD = 4.0). Only 13.9% of all interventions were specific to the therapists' type of psychotherapy (range: 0 to 56.9; SD = 14.1), 66.0% were common (range: 11.1 to 98.2; SD = 15.6), and 20.1% were interventions specific to other types of psychotherapy (range: 2.4 to 78.1; SD = 10.8). The number of interventions (8 to 173) and their specificity (0 to 56.9%; 2.4 to 78.1%) varied considerably from session to session. A little more than one third of all interventions were specific (34.0 %), 1.4 times as many from other approaches than from therapists' own.

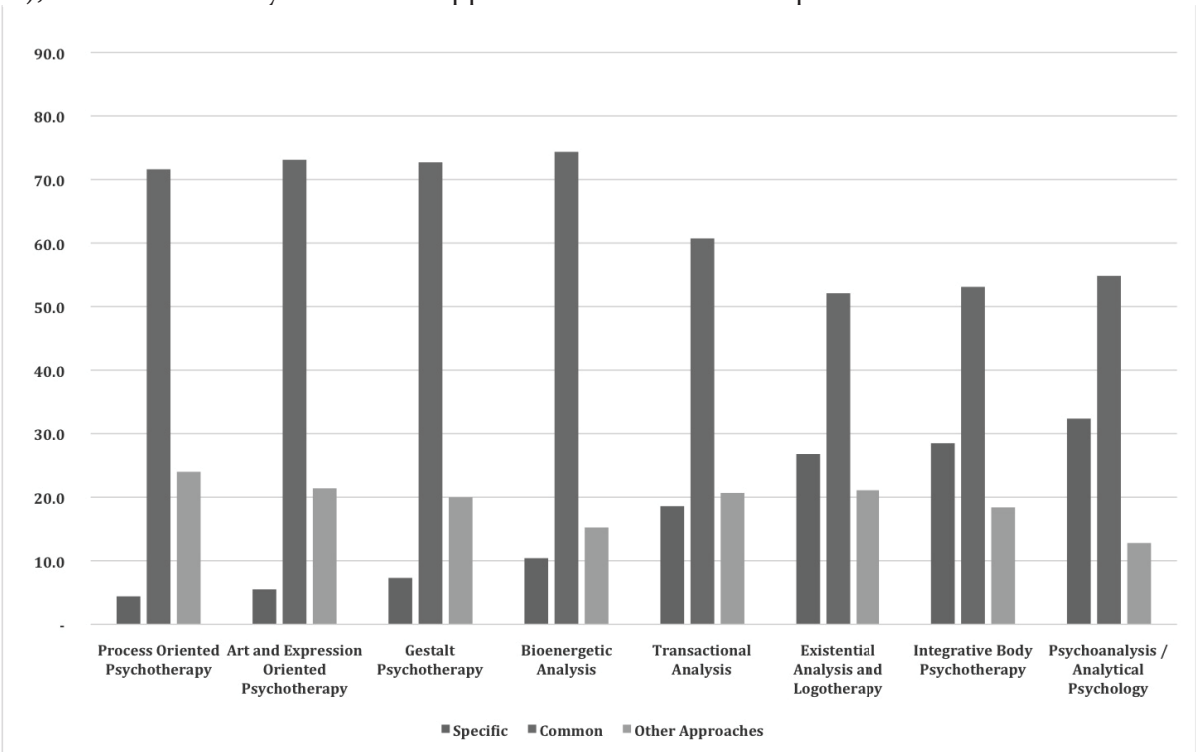

Figure 1. Types of interventions, mean frequencies (%)

In all types of psychotherapies investigated, three categories of intervention played a dominant role (category number (PAP-S-RM) in parentheses): *clarifying inquiry* (55), *information / advice* (52), and *support* (46). These three categories added up to 37.2% of all interventions. All three are common categories, shared by a variety of types of psychotherapy. Among the 10 most frequently used interventions, there were four more common categories, totalling 21.2%: *promoting insight for change* (30), *expressing empathy* (31), *directing attention to unconscious emotions (19),* and *emotional experiencing* (8). Only three specific interventions ranged among the 10 most frequently used: *confrontation* (60), *interpretation* (27), and *somatic experiencing* (56), adding up to 10.7% (see Table 4). Ten categories of intervention made up 69.1% of the total of 18,544 interventions identified in 422 sessions, seven of them common and three specific (see Table 4, left columns).

Significant differences between types of psychotherapy were found concerning the sum scores of specific and common interventions used: F *specific to own* (1; 8) = 63.7; $p < 0.0001$; F *common* (1; 8) = 28.5; $p < 0.0001$; F *specific to other* (1; 8) = 4.23; $p < 0.0001$. Process Oriented psychotherapists' interventions were, on average, the least and Integrated Body psychotherapists' the most specific to their own approach (see Figure 1).

Multi-level Modelling

Results from the above-mentioned analysis of variance seem to recommend a rejection of our first hypothesis: that therapists affiliated with different types of psychotherapy do differ significantly in their overt verbal behaviour. This is true for sum scores of specificity as defined by proponents of these approaches. Focusing on single intervention categories we obtained a different answer. Two multi-level Poisson regression models (e.g., Bryk & Raudenbush, 1992) were computed, excluding intervention categories that were used in less than 10% of all sessions. The first model included 3 (*approach*, *therapist*, *patient*); the second model two random effects (*therapist*, *patient*). A comparison of the results was carried out by the likelihood ratio test. Table 5 lists the p values. Except for category 32 (*working with boundaries and gradients of distance*), preferentially used by Process Oriented, Integrative Body psychotherapists, and Bioenergetic psychotherapists (2.6, 1.6, 1.1 %), the use of interventions varied independently of therapists' affiliations to certain types of psychotherapy.

To quantify the random effects of the factors of *therapist* and *patient*, two additional models were computed. Both models included two random effects: One included *approach* and *patient*, and the other included *approach* and *therapist*. Both were compared with the above-mentioned model including three factors: *approach*, *therapist*, *patient*, and again the results were compared using the likelihood ratio test. The factor *therapist* predicted the variability of intervention frequencies for the intervention categories 19 (*unconscious emotion*), 27 (*interpretation*), 46 (*support*), 52 (*information/advice*), 55 (*clarifying inquiry*), 72 (*reframing*), and 89 (*addressing therapy goals*). The factor *patient* was most informative for the variance of intervention frequencies, i.e., for all intervention categories (having been used in at least 10% of all investigated sessions) except 42 (*purposeful frustration*) and 65 (*working with metaphors*) (for error probabilities see Table 5).

Temporal Aspects of Therapeutic Interventions

From an interactional point of view, therapists' "interventions" could, of course, at the same time have been "responses" to what a patient had just said. But, for simplicity's sake in this report, we called therapists' utterances "interventions" and patients' utterances "responses."

Since we only tracked the onset of interventions, for further analyses we considered intervals between onsets of interventions, each one representing one interactional unit between patient and therapist.

The same 10 intervention categories as the 10 most frequently used (69% of all interventions) also filled 71% of the total session time investigated (432.5 hours) (Table 4, three columns in the middle). Seven are common and three are specific interventions. The more frequently a given type of intervention was applied, the higher the percentage of the total time of sessions spent by therapist and patient with this type of intervention. Nevertheless, we observed that the duration of time intervals between interventions varied considerably within sessions (see three examples in Figure 2 (at end)).

To answer our second hypothesis (the duration of time lags between interventions varies independently of types of intervention), we set up a contingency table including five categories of time lags (int $\leq$ 10 sec.; 10 sec. < int $\leq$ 30 sec.; 30 sec. < int $\leq$ 60 sec.; 60 sec. < int $\leq$ 120 sec.; 120 sec. < int) and we only considered intervention categories that were used at least 20 times ($f \geq 1$ ‰) in our sample. We found that 10.2% of all interaction units lasted up to 10 seconds; 26.7% longer than 10 and up to 30 seconds; 27.2% longer than 30 and up to 60 seconds; 22.4% longer than 60 seconds and up to 120 seconds; 13.6% longer than 120 seconds. The overall chi-square resulted in 1602.3 ($p < 0.0001$), which means that types of intervention were not equally distributed across interval classes. Hypothesis 2 must therefore be rejected.

Some interventions were systematically succeeded by longer time intervals than others. Intervention categories for which the observed frequency clearly exceeded the expected frequency in the class of longest time intervals ($\geq$ 120 sec; cell chi-square in descending order) were: *clarifying inquiry/exploration* (55) (C, GES, PSA), *activating aesthetic responsibility* (62) (EGIS), *teaching a body exercise* (58) (BAT), *providing information/giving advice* (52) (C, IBP), *taking history information* (5) (C), *teaching relaxation techniques* (33) (IBP, CBT), *working on preconscious material* (11) (PSA), *stimulating creativity* (14) (C. G. Jung, EGIS), *perceptual sensitization concerning the created piece of art* (95) (EGIS), *finding meaning while creating* (67) (EGIS) (5.67 $\leq$ chi-square $\leq$ 230.03; see Table 6, right side; also see the 10 categories with the most significant deviations from expected frequencies in the interval class *60 sec. < int $\leq$ 120 sec.* 3.07 $\leq$ chi-square $\leq$ 16.67)(Table 6).

We found 10 interventions that were followed by the on-average longest time intervals, their prevalence summing up to 4.3%. Nine of them were specific; only one was an intervention category shared by all approaches (common) (Table 4, three columns on the right). These interventions were more or less the same as the ones with the most significant deviations from expected values in the contingency table (Table 6).

Excerpts from 3 sessions and rhythmicity of therapeutic activity

To illustrate what long durations of time lags between interventions could mean, three sessions from therapists affiliated with three different types of psychotherapy were selected (codes were assigned only to complete sentences). They included intervals between onsets of therapeutic interventions of long duration. Table 7 (A-C) shows transcripts of therapist and patient utterances around these interaction units. In our opinion, these texts support the conjecture that certain interventions (e.g., *teaching a body exercise* (58) or *activating aesthetic responsibility* (62)) offer patients the opportunity to open up to new experiences. This takes time. In the case of the Integrative Body Psychotherapy session, the patient's experiencing was frequently interrupted by the therapist having to reassure his patient and

renewing his instructions. The patient in the Bioenergetic Analysis session seemed to be more familiar with somatic experiencing and was able to tolerate a much longer sequence. To convey an impression of the variability of time lags between interventions (the rhythmicity of therapeutic activity), Figure 2 shows intervention onsets as horizontal lines along the time line of whole sessions. These were the same sessions from which the excerpts were taken.

Discussion

This report replicates and extends earlier findings from smaller – and different – samples of sessions in which the specificity of interventions to therapists' own type of psychotherapy was comparably low (Tschuschke et al., 2015; Koemeda-Lutz et al., in print). No adherence differences between successful and unsuccessful treatments were found, as already reported by Webb et al. (2010). And the correspondence between therapists' retrospective self-reports and external ratings concerning adherence to their own type of psychotherapy was, following Cohen (1988), only of medium effect size ($r = 0.31$; $p < 0.01$).

Especially because PAP-S investigated types of psychotherapy not yet internationally established as "evidence-based," it seemed insufficient to rely on therapists' self-declared affiliations with types of psychotherapy and their retrospective accounts concerning their interventional behaviour. We therefore had all sessions audio-recorded, developed a multi-method rating manual, and trained external raters to code category and temporal aspects of therapists' verbal in-session behaviour. Compared to other studies on adherence (e.g., Hollon et al., 1987, Butler et al., 1995, Barber & Crits-Christoph, 1996, Hilsenroth et al., 2005, Barber et al., 2006, Hogue et al., 2008, Martino et al., 2009, McCarthy & Barber, 2009) in which global judgments about whole sessions were compared, our analyses were based on ratings of single interventions. Through descriptive analyses, we tried to capture some of the complexity of our observational data. In addition, we tried to quantify the effects of the nested factors *type of psychotherapy*, *therapist*, and *patient* by multi-level modelling.

It turned out that, under naturalistic conditions, therapists applied a variety of interventions with varying frequencies from session to session. Overall, about two-thirds were common interventions, and one-third were specific interventions, roughly one and a half times as many from other as from therapists' own types of psychotherapy.

Eclecticism was clearly present. Three types of common interventions added up to 37% of all interventions across sessions; these together with patients' responses filled 44% of the total session time. In 422 sessions, patients were asked questions and were listened to; they were given advice or information and received support and encouragement. Among the 10 most frequent categories were also these common interventions: *promoting insight into the necessity for behaviour change, providing empathy, directing attention to unconscious emotion,* and *focusing on emotional experiencing*, as well as the specific interventions *confrontation*, *interpretation*, and *somatic experiencing.* Common interventions amounted to 66% and specific interventions from therapists' own and other types of psychotherapy to 34%. At maximum, specific interventions from a therapist's own type of psychotherapy, as detected by external raters, reached 57% in a single session. On average these interventions were applied more rarely. But the ratio of 66%:34% for common to specific interventions that we found corresponds well with the ratio reported by Lambert (1992), namely, 30%:15%.

Proponents of some approaches claimed interventions as specific to their type of psychotherapy, whereas in fact these were shared by all types investigated in our study; e.g., Psychoanalysis and Logotherapy claimed *clarifying inquiry*; Transactional Analysis claimed *support*; and Integrative Body Psychotherapy claimed *providing information/giving*

advice as interventions specific to their approach. These four approaches have higher scores of "specific" interventions than the rest. In this light, differences in specificity between approaches seem to be largely due to different conceptualizations of specificity in different types of psychotherapy.

What cannot be observed are the concepts and strategies that therapists have in mind while they are interacting with their patients. Possibly these are relevant all the same. And from an external perspective, therapists' concept orientation may have been underestimated. Common interventions may have prepared the ground for the attainment of type of psychotherapy-specific goals. For instance, if a Gestalt therapist asked questions (common intervention) aiming at an increase in congruence in the information that the therapist received from the patient (specific intervention), external raters could not know what was on the therapist's mind; they only rated the therapist's manifest verbal behaviour, which in this example was *clarifying inquiries*. In the transcript from the Bioenergetic Analysis session, quite some time (33:41 minutes) was spent with *somatic experiencing* (56), but the identified interventions are *changing the topic* (87), *clarifying inquiry* (55) (5 times), *encouraging associations related to specific issues*, (16) (2 times), *information/advice* (52) and *promoting somatic experiencing* (56) (2 times).

Although the authors of the rating manual spent a lot of time and effort to operationally define and distinguish the categories from one another, verbal statements are basically ambiguous. Communication researchers pointed this out decades ago (e.g. Watzlawick, Beavin & Jackson, 2011). If a systemic therapist opens a session by asking "What may I do for you today?", this could be categorized as *clarifying inquiry* and, at the same time, as a *good parent message* (saying: "I am here for you; I am listening"). When we constructed our multi-method rating manual, we tried to delineate categories that were mutually exclusive. Empirically, i.e., as measured by inter-rater reliability and deviations from perfect matches (Tschuschke et al., 2014), some of them, in fact, overlap.

Multi-level analyses revealed that therapists' affiliations with different types of psychotherapy did not predict the variance in interventional behaviour – with one exception: Integrative Body Oriented, Process Oriented, and Bioenergetic Analysis therapists worked more often with *gradients of distance and boundaries* (32) than other psychotherapists. The different frequencies of intervention categories in some instances systematically co-varied with the factor *therapist* and were strongly influenced by the factor *patient*. This supports the assumption that therapists under naturalistic conditions predominantly attune their interventional behaviour to their patients' needs and the immediate requirements of each session.

Since temporal patterns of therapists' interventional behaviour also varied considerably across and within sessions, we examined whether time lags between interventions varied contingently with types of intervention. In almost all sessions, there were sections in which the pace of patient-therapist interactions slowed down. Interventions that were followed by exceptionally long intervals to the next intervention were frequently specific interventions.

The common category *clarifying inquiry* (55) was, more frequently than expected, part of interactional units lasting longer than 120 seconds. We interpret this as indicative of a therapist's ability to ask "good" questions and listen carefully. Other interventions that also tended to slow down the pace of therapists' interventional behaviour were interventions specific to certain types of psychotherapy. Although their prevalence was not very high, we think that these are worth investigating more closely. We know of no previous studies that explored contingencies between category and temporal aspects of psychotherapists' interventional behaviour.

Transcripts from audio-recordings illustrate in what way these interventions engaged patients. We suspect that in interactional units lasting up to 120 seconds (which made up 86% of all intervention-response units), patients and therapists used routines in the service of building trust, exchanging information, etc. However, when therapists invited patients to explore new inner or outer realms for which they had no routine, this took more time; patients had to search their brains for an answer or had to create a novel one. Maybe they had to find words for previously unmentalized sensations, emotions, or body states, or opened themselves up to previously repressed memories or shifted their attention from the therapeutic interaction to an inner awareness, or mobilized resistance. Three randomly selected examples (Table 7, a-c) illustrate this assumption.

Clearly, a shortcoming of this study is that we did not track onsets of therapists' interventions and onsets of patients' responses separately. Our text examples can only illustrate our proposition that patients' prolonged responses may be crucial for change. Future studies should undertake an in-depth quantitative examination of such interactional units of long duration in order to systematically investigate what makes patients and/or therapists use more time.

The prevalence of 34% of specific interventions from different approaches, although eclectically applied, does not advise discarding the variety of different types of psychotherapy existing at present. On the contrary, the existing wealth of concepts and techniques should be acknowledged, carefully investigated, and integrated in therapeutic practice.

More than one third of therapists' verbal behaviour turned out to consist in encouraging the flow of communication, supporting patients in their exploration and self-esteem, asking questions, and providing information – independently of the type of psychotherapy. Proponents of different psychotherapeutic approaches should be aware and appreciative of the common ground on which psychotherapy operates. In addition, though, specific categories of intervention seem to exist that - under optimum conditions and in certain moments and after long preparatory sequences - suspend routine responses. They make patients either mobilize resistance and fall silent or hold on, think, sense and feel, query different modules of their brains to contribute elements to a new and creative response. We believe that this is how change and growth come about. Some of these specific intervention categories may have been elaborated by mainstream psychotherapy approaches, whereas others originated in types of psychotherapy that have been marginalized in past decades. These specific interventions, as our data recommend, deserve further investigation.

If there are no differences in outcome, and if therapists' affiliations to different types of psychotherapy do not predict their in-session behaviour, one could conclude that different types of psychotherapy were obsolete. Without knowing the effect of the concepts and strategies that therapists bear in mind, and - at the same time - acknowledging that more than one third of all observed interventions were specific to certain types of psychotherapy, this conclusion would be premature. If we were to strive towards adopting a generic model of psychotherapy, the model should not be based exclusively on what is considered "evidence-based" to date but should be as integrative as possible, i.e. should consider marginalized approaches and their specific techniques for inclusion.

The results of our whole study demonstrate that therapists affiliated with approaches that lacked "empirical validation" (in the sense of Division 12 of the APA) were also effective. The results of this study advise that if we were striving for a generic model of psychotherapy in the sense of Grawe (1995) or Orlinsky & Howard (1987), as wide a diversity of different approaches as possible should be considered for integration. This is recommended, because the investigation of temporal patterns revealed remarkable changes in the rhythms of

therapists' activity that were especially connected to specific interventions from different approaches. Before we are ready to adopt a generic model, we think that considerable language barriers between different approaches will have to be overcome.

Conclusion

Although clinicians in outpatient settings were clearly affiliated with specific types of psychotherapy, this affiliation was mostly insignificant with regard to predicting their interventional behaviour as identified by external observers. Therapists seemed to prefer certain types of interventions (personal style) but predominantly seemed to attune themselves to their patients' needs and the requirements of the single session. With certain specific interventions, the regular pace of therapeutic interventions sometimes slowed down.

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Figure 2, and Tables 1, 2, 2a, 2b, 3, 4, 5, 6 & 7 are on the following pages:

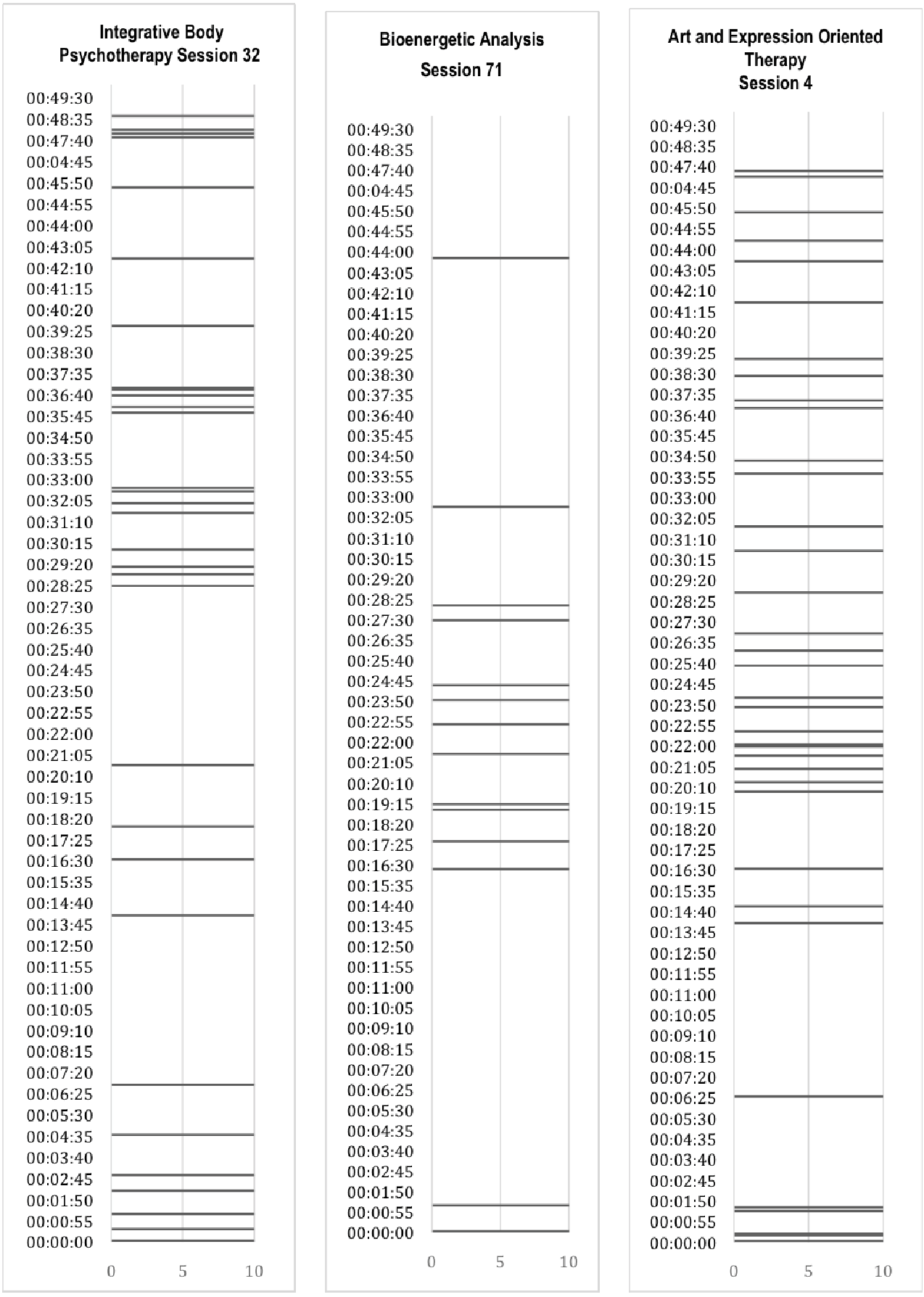

Figure 2. Varying pace of therapists' interventional behaviour in different sessions.

Table 1
Types of Psychotherapy Investigated

Type of psychotherapy	Participating institutes	Founders	Main approach
Analytical Psychology	C. G. Jung Institute, ISAP, SGAP	C. G. Jung	Psychodynamic
Art and Expression Oriented Therapy	Europäische Gesellschaft für Interdisziplinäre Studien (EGIS)	P .J. Knill	Integrative
Bioenergetic Analysis	Schweiz.Gesellschaft für Bioenergetische Analyse und Therapie (SGBAT, DÖK)	A. Lowen	Body oriented, psychodynamic
Existential Analysis and Logotherapy	Institut für Logotherapie und Existenzanalyse (ILE, GES)	V. E. Frankl	Humanistic
Gestalt Therapy	Schweizerischer Verein für Gestalttherapie (SVG)	F. Perls	Humanistic
Integrative Body Psychotherapy	Integrative Body Psychotherapy (IBP)	J. L. Rosenberg	Body oriented, integrative
Process Oriented Psychotherapy	Institut für Prozessarbeit (IPA)	A. Mindell	Psychodynamic
Psychoanalysis (PSZ)	Psychoanalytisches Seminar Zürich (PSZ)	S. Freud	Psychodynamic
Transactional Analysis	Schweizerische Gesellschaft für Transaktionsanalyse (SGTA, ASAT)	E. Berne	Humanistic

Table 2a
Common and Specific Interventions

Common Interventions
5. Taking history information
8. Emotional experiencing
12. Using humor
18. Task assignment
19. Directing attention to unconscious emotions (SVG)
21. Exploration of behavioral patterns and beliefs (SVG, TA)
24. Biographical work (IBP, GES)
30. Promoting insight into the necessity of behavior change (GES)
31. Empathy (Rogerian)
36. Working from the patient's feedback
43. Setting limits
46. Providing support (TA)
52. Providing information / giving advice (IBP)
55. Clarifying inquiry / exploration (GES, PSA)
63. Inclusion of external material (EGIS)
64. Discussing basic anthropological concepts (GES)
70. Developing a problem solution
71. Discussing medication
75. Resource activation (GES)
78. Self-disclosure by the therapist
85. Addressing symptoms
86. Addressing self-acceptance (GES)
87. Changing the topic
88. Referring to the therapy contract (TA)
89. Addressing therapy goals (TA)

Types of psychotherapy that also claim this intervention as specific to their concept in brackets; numbers follow the rating manual	
Art and Expression Oriented Therapy (EGIS)	Integrative Body Psychotherapy (IBP)
Bioenergetic Analysis (SGBAT)	Process Oriented Psychotherapy (IPA)
Existential Analysis and Logotherapy (GES)	Psychoanalysis/Analytical Psychology (PSZ, SGAP, ISAP, C. G. Jung Institute)
Gestalt Therapy (SVG)	Transactional Analysis (SGTA/ASAT)

Specific Interventions	
Analytical Psychology (SGAP, ISAP, C.G. Jung Inst.)	**Gestalt Therapy (SVG)**
13. Focus on emotions in dysfunctional relationships	2. Affect regulation (BAT)
14. Stimulating creativity (EGIS)	19. Directing attention to unconscious emotions (C)
16. Encouraging associations related to specific issues (GES)	20. Directing attention to communication style

40. Countertransference (BAT, PSA)
50. Stimulating imagination
51. Promoting the individuation process
80. Creating meaning
84. Working with symbols
90. Discussing transference (PSA, BAT)

Art and Expression Oriented Therapy (EGIS)

4. Recognizing analogies
14. Stimulating creativity (C. G. Jung)
62. Activating aesthetic responsibility
63. Inclusion of external material (C)
66. Inquiring about the experience of creating
67. Finding meaning while creating
95. Perceptual sensitization concerning the created piece of art
96. Survey of patient's process while creating one or several pieces of art
97. Suggesting an expansion of a creative work

Bioenergetic Analysis (SGBAT, DÖK)

2. Affect regulation (SVG)
17. Breath work (IBP)
27. Interpretation (PSA)
35. Experimenting with novel behavior (SVG, TA, CBT)
40. Countertransference (C.G. Jung, PSA)
56. Promoting somatic experiencing SVG, IBP)
57. Focusing on physical impulses (SVG, IBP)
58. Teaching a body exercise
21. Exploration of behavioral patterns and beliefs (C, TA)
35. Experimenting with novel behavior (BAT, TA, CBT)
42. Purposeful frustration
49. Promoting identification
56. Promoting somatic experiencing (BAT, IBP)
57. Focusing on physical impulses (BAT, IBP)
61. Congruence, sensing incongruence (BAT, Rogerian)
76. Initiating role play (IPA)
94. Behavior analysis and exploration (CBT)

Integrative Body Psychotherapy (IBP)

3. Teaching the activation and deactivation model
17. Breath work (BAT)
24. Biographical work (C, GES)
25. Teaching about agency (character defenses)
32. Working with boundaries, gradients of distance
33. Teaching relaxation techniques (CBT)
45. Providing good parent messages
52. Providing information / giving advice (C)
56. Promoting somatic experiencing (BAT, SVG)
57. Focus on physical impulses (BAT, SVG)
77. Teaching or suggesting the use of mental health tools

Process Oriented Psychotherapy (IPA)

10. Working at the process boundary
23. Exploration of experiences remote of consciousness
34. Making the essence of experiences remote of consciousness palpable

61. Congruence, sensing incongruence (SVG, Rogerian)
90. Discussing transference (C.G. Jung, PSA)

Existential Analysis and Logotherapy (GES, ILE)

7. Medical counseling

9. Working on existential questions

16. Encouraging associations related to specific issues (C.G. Jung)
24. Biographical work (C, IBP)

26. De-reflection

28. Raising consciousness of intra- and interpersonal dialogues
30. Promoting insight into the necessity of behavior change (C)
55. Clarifying inquiry / exploration (C, PSA)

64. Discussing basic anthropological concepts (C)
68. Paradoxical intention (SYST, CBT)

74. In vivo confrontation (CBT)

75. Resource activation (C)

79. Addressing issues of meaning

86. Addressing self-acceptance (C)

98. Value imagination and dialoguing with sub-selves
99. Value orientation

47. Addressing hierarchy, status, or privileges
53. Promoting integration of new experiences and insights
54. Exploration and interaction with the inner critic
76. Initiating role play (SVG)

Psychoanalysis (PSZ)

1. Confronting defenses

11. Working on preconscious material

15. Encouraging free associations

27. Interpretation (SGBAT)

29. Working through painful insights, irretrievable losses, etc.
40. Countertransference (C.G. Jung, BAT)

55. Clarifying inquiry / exploration (C, GES)
60. Confrontation

90. Discussing transference (C.G. Jung, BAT)

Transactional Analysis (SGTA, ASAT)

21. Exploration of behavioral patterns and beliefs (C, SVG)
35. Experimenting with novel behavior (BAT, SVG, CBT)
44. The life positions concept

46. Providing support (C)

48. Addressing ego-states

59. Elaborating the communication diagram
81. Script work

82. Game or racket analysis

88. Referring to the therapy contract (C)

89. Addressing therapy goals (C)

Table 2b

Intervention Category from Rating Manual (Tschuschke et al., 2014)
Category 8: **Focus on emotional experiencing**

Definition
Therapist's questions aim at exploring patient's quality of experiencing, sensations, feelings. Beliefs, appraisals, explanations or assumptions are not areas of inquiry. Therapist guides patient to focus on her/his present experiencing, sensations, feelings (to which the patient supposedly has conscious access).

Operationalization
Therapist
- asks about present state of being
- asks about present quality of experiencing
- clarifies on an emotional level

Differentiation
↔ (19) shifting focus of attention to present emotion, of which the patient supposedly is unconscious
↔ (55) clarifying inquiry: exploration of facts, events, cognitions, not emotions

Examples
1) How do you experience this? How do you feel about it?
2) You explained to me the way this happened and why Mr. F. did what he did, but I would like to know how you feel about it.

Table 3
Sample

type of psychotherapy	**Psychoanalyis/Analytical Psychology**					
founders	S. Freud, C.G. Jung					
therapist code	A				B	C
patient code	a1	a2	a3	a4	b1	c1
no.analyzed sessions	3	3	3	10	3	3

type of psychotherapy	**Existential Analysis and Logotherapy**			
founders	V.Frankl			
therapist code	K	L		M
patient code	k1	l1	l2	m1
no.analyzed sessions	4	3	3	3

type of psychotherapy	**Gestalt Therapy**											
founders	F. Perls											
therapist code	D					E		F	G	H	I	J
patient code	d1	d2	d3	d4	d5	e1	e2	f1	g1	h1	i1	j1
no.analyzed sessions	14	9	3	3	3	3	3	15	3	3	3	3

type of psychotherapy	**Transactional Analysis**											
founders	E.Berne											
therapist code	N	O	P		Q				R			
patient code	n1	o1	p1	p2	q1	q2	q3	q4	r1	r2	r3	r4
no.analyzed sessions	3	3	13	15	3	3	3	3	3	3	3	3

type of psychotherapy	**Bioenergetic Analysis**									
founders	A. Lowen									
therapist code	S			T	U		V	W		X
patient code	s1	s2	s3	t1	u1	u2	v1	w1	w2	x1
no.analyzed sessions	19	3	4	3	3	3	5	3	3	3

type of psychotherapy	**Process Oriented Psychotherapy**																					
founders	A. Mindell																					
therapist code	Y				Z				AA	AB			AC					AD	AE			
patient code	y1	y2	y3	y4	z1	z2	z3	z4	aa1	ab1	ab2	ab3	ac1	ac2	ac3	ac4	ac5	ad1	ae1	ae2	ae3	ae4
no.analyzed sessions	11	17	3	3	3	3	3	3	3	3	4	3	3	3	3	3	16	3	3	3	3	3

type of psychotherapy	**Art and Expression Oriented Therapy**							
founders	P.J.Knill & B.H.Nienhaus							
therapist code	AN			AO			AP	
patient code	an1	an2	an3	ao1	ao2	ao3	ap1	ap2
no.analyzed sessions	3	3	3	3	3	15	3	3

type of psychotherapy	**Integrative Body Psychotherapy**																		total
founders	J.L. Rosenberg																		
therapist code	AF				AG	AH		AI		AJ				AK		AL		AM	42
patient code	af1	af2	af3	af4	ag1	ah1	ah2	ai1	ai2	aj1	aj2	aj3	aj4	ak1	ak2	al1	al2	am1	92
no.analyzed sessions	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	16	11	422

4 nested factors: type of psychotherapy, therapist, patient, session

Table 4

The 10 Most Frequently Applied; the 10 Most Time Consuming; and the 10 Types of Interventions Followed by Intervals of On-Average Longest Duration

N = 422 sessions

10 most frequently applied interventions	%		**10 interventions filling most of the time, patients' responses included**	time	% time		**10 interventions succeeded by longest intervals to next intervention (f ≥ 10)**	average duration	%	
55: clarifying inquiry / exploration	15,02		55: clarifying inquiry / exploration	74:21:59	21,71		62: activating aesthetic responsibility (EGIS)	00:04:00	0,2	*
52: providing information / giving advice	11,26		52: providing information / giving advice	45:44:40	13,35		33: teaching relaxation technique (VT, IBP)	00:03:53	0,1	*
46: providing support	10,88		46: providing support	30:27:38	8,89		58: teaching a body exercise (SGBAT)	00:02:32	0,5	*
30: promoting insight	7,91		30: promoting insight	25:44:29	7,51		14: stimulating creativity (SGAP, EGIS)	00:02:17	0,1	*
31: empathy	6,12		31: empathy	16:32:31	4,83		25: teaching about agency (character defences) (IBP)	00:02:01	0,5	*
60: confrontation (PSZ)	4,81	*	60: confrontation (PSZ)	12:11:06	3,56	*	77: teaching or suggesting mental health tools (IBP)	00:01:52	0,1	*
19. directing attention to unconscious emotions	3,84		27: interpretation(PSZ)	10:05:51	2,95	*	95: perceptual sensitization (EGIS)	00:01:49	0,4	*
27: interpretation(PSZ)	3,68	*	19. directing attention to unconscious emotions	9:58:52	2,91		11: working on preconscious material (PSZ)	00:01:43	0,4	*
8: emotional experiencing	3,34		56: somatic experiencing (BAT, SVG, IBP)	9:19:03	2,72	*	67: finding meaning while creating (EGIS)	00:01:41	0,2	*
56: somatic experiencing (BAT, SVG, IBP)	2,25	*	8: emotional experiencing	8:58:39	2,62		5: taking history information	00:01:37	1,8	
% of all interventions	69,11		% of total session time		71,06		% of total session time		4,30	

* specific interventions (abbreviations for types of psychotherapy in parentheses)

Psychoanalysis/Analytical Psychology (PSZ, SGAP, ISAP)
Transactional Analysis (SGTA/ ASAT)
Art and Expression Oriented Therapy (EGIS)
Existential Analysis and Logotherapy (GES)
Bioenergetic Analysis (SGBAT, DÖK)
Integrative Body Psychotherapy (IBP)
Gestalt Therapy (SVG)
Process Oriented Psychotherapy (IPA)

Table 5

Comparison of Four Poisson Regression Models

No.	**Intervention category**	**Error probabilities and levels of significance**					
		approach	p	**therapist**	p	**patient**	p
1	Confronting defenses (PSA)	1,0000		0,6575		0,0207	*
5	Taking history information (C)	0,9998		0,9994		0,0000	***
8	Emotional experiencing (C)	0,9993		0,1470		0,0003	***
11	Working on preconscious material (PSA)	1,0000		0,9999		0,0000	***
12	Using humor (C)	0,9999		0,0003		0,0000	***
19	Directing attention to unconscious emotions (C, SVG)	0,9999		0,0226	*	0,0000	***
21	Exploration of behavioral patterns and beliefs (C, SVG, TA)	0,9998		0,4652		0,0012	**
22	Unconditional positive regard (Rogerian)	0,9986		0,9998		0,0000	***
24	Biographical work (C, IBP, GES)	0,6724		0,2774		0,0038	**
27	Interpretation (PSA, SGBAT)	0,9999		0,0163	*	0,0000	***
30	Promoting insight into the necessity of behavior change (C, GES)	0,9267		0,1936		0,0000	***
31	Empathy (C, Rogerian)	0,8266		0,0801		0,0000	***
32	Working with boundaries, gradients of distance (IBP)	0,0277	*	0,3176		0,0000	***
40	Countertransference (C.G. Jung, PSA, SGBAT)	0,9978		0,9999		0,0000	***
42	Purposeful frustration (SVG)	0,3587		0,8835		0,1225	
46	Providing support (C, TA)	1,0000		0,0000	***	0,0000	***
52	Providing information / giving advice (C, IBP)	0,6859		0,0090	**	0,0000	***
55	Clarifying inquiry / exploration (C, GES, PSA)	0,4627		0,0007	***	0,0000	***
60	Confrontation (PSA)	0,9998		0,3444		0,0000	***
65	Working with metaphor (systemic)	1,0000		1,0000		0,0833	
69	Positive reinforcement (CBT	0,9996		0,1527		0,0000	***
72	Reframing (systemic)	0,9229		0,0239	*	0,0001	***
75	Resource activation (C, GES)	1,0000		0,4486		0,0109	*
78	Self-disclosure by the therapist (C)	0,3146		0,0668		0,0000	***
80	Creating meaning (SGAP, ISAP, C. G Jung Institute)	0,9989		0,9027		0,0017	**
85	Addressing symptoms (C)	1,0000		0,7267		0,0000	***
87	Changing the topic (C)	0,9999		1,0000		0,0323	*
88	Referring to the therapy contract (C, TA)	1,0000		0,9999		0,0000	***
89	Addressing therapy goals (C, TA)	1,0000		0,0001	***	0,0075	**

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Art and Expression Oriented Therapy (EGIS)
Bioenergetic Analysis (SGBAT)
Cognitive Behavior Therapy (CBT)
Existential Analysis and Logotherapy (GES)
Gestalt Therapy (SVG)
Integrative Body Psychotherapy (IBP)
Process Oriented Psychotherapy (IPA)
Psychoanalysis/Analytical Psychology (PSZ, SGAP, ISAP, C. G. Jung Institute)
Transactional Analysis (SGTA/ASAT)

Table 6

Cell Chi-Square Values in Descending Order for Intervention Categories with Larger Frequencies Than Expected in Interval Classes > 60 and 120 Seconds

60 sec < int ≤ 120 sec	Cell χ^2	120 sec < int	Cell χ^2
5. Taking history information	16,670	55. Clarifying inquiry / exploration	230,02
55. Clarifying inquiry / exploration	14,508	62. Activating aesthetic responsibility (EGIS)	49,770
76. Initiating role play (IPA, SVG)	9,6309	58. Teaching a body exercise (SGBAT)	43,126
88. Referring to therapy contract (TA)	7,7154	52. Providing information / giving advice	32,742
85. Addressing symptoms	6,3854	5. Taking history information	30,870
53. Promoting integration of new experiences and insights (IPA)	5,8457	33. Teaching relaxation techniques (IBP, CBT)	14,050
25. Teaching about agency (character defenses) (IBP)	4,1184	11. Working on preconscious material (PSZ)	11,777
30. Promoting insight into the necessity of behavior change	3,9795	14. Stimulating creativity (SGAP, EGIS)	8,8853
56. Promoting somatic experiencing (SGBAT, SVG, IBP)	3,8080	95. Perceptual sensitization concerning the created piece of art (EGIS)	7,1492
23. Exploration of experiences remote of consciousness (IPA)	3,0655	67. Finding meaning while creating (EGIS)	5,6721

Art and Expression Oriented Therapy (EGIS)

Bioenergetic Analysis (SGBAT)

Existential Analysis and Logotherapy (GES)

Gestalt Therapy (SVG)

Integrative Body Psychotherapy (IBP)

Process Oriented Psychotherapy (IPA)

Psychoanalysis/Analytical Psychology (PSZ, SGAP, ISAP, C. G. Jung Institute)

Transactional Analysis (SGTA/ASAT)

Table 7
Transcripts (Excerpts) from Three Randomly Selected Therapy Sessions
Intervention category numbers in parentheses; only complete sentences were rated.
Repetitions or continuations of the same intervention category were rated only once.

A: Session 32 Integrative Body Psychotherapy (IBP) – "Teaching a Body Exercise" (58)

(Session excerpt: minute 00:31:08 – minute 00:39:50 = 00:08:42 minutes; 3:12 minutes of teaching a body exercise, followed by three sequences of the patient doing it by herself, each lasting less than 1 minute: 34:40 – 35:08; 37:07 – 38:07; 38:19 – 39:18. Commentary: This patient is very agitated in the first part of the session, hardly able to focus her thoughts; she speaks fast, but her thoughts appear blurred; she needs a lot of support and reassurance and tolerates somatic experiencing only for short sequences).

31.08: PATIENT:	I don't know what this means, well, um … I do feel that there would be a lot, which also in my head … well, in my head … yeah, there was such a lot going on in that L. with stuff that went on, which I needed to look at and be present with my head and, um …
31:32: THERAPIST:	Would you like to bring it all back together? (*incomprehensible*). **(55)**
31:34: PATIENT:	I don't know.
31:35: THERAPIST:	Mhm.
31:36: PATIENT:	I don't know what it means for me to stand …
31:56: THERAPIST:	You would like to find out what it means? **(92)**
32:01: PATIENT:	Well, it simply ... Okay, it's somehow special, well … that it, um … it was more, well, the toothache was on the left side, well it was more on the left side. I don't know either what this means.
32:27: THERAPIST:	My suggestion would be, that you do a cross-crawl. **(58)**
32:32: PATIENT:	W …?
32.33: THERAPIST:	Cross-Crawl, this exercise, which connects from above and the left and right sides. In order to come a bit more into your whole body. I can show you standing upright. Well it's that, where on one hand with your arms … exhale … well, inhale, your arm goes up, exhale, arm down, you follow your hand with your eyes, and then crawl crosswise, because then your leg comes along crosswise (*the therapist demonstrates this; his breathing can be heard*).
33:11: THERAPIST:	Don't know this yet? So we just start … can you just start with your arms first?
32:16: PATIENT:	Sitting or standing?
32:17: THERAPIST:	Stay lying. And you can … two little flags …
32:27: PATIENT:	(*laughs*)
32:29: THERAPIST:	It helps. You can just take them in your hands. And follow them with your eyes. Exactly. Well this serves your eyes to follow, or to concentrate on the little flags. And then you can start to lift your right arm and at the same time inhale, up above your head, exactly, and down again and exhale. And then your left arm … exactly … and right … exactly … and the more liveliness you want, the more you may inhale … well, with your inhale you also regulate a bit … your alertness and vibrancy, which you build up. With your eyes. Exactly, actually you can relax and let your head rest, only follow these flags with your eyes, as far as it goes … somewhere it disappears, and then reappears, and then disappears again …
34:40: THERAPIST:	*(the therapist supports actions with soft-spoken "mhms" and "exactlys")*
35:08: THERAPIST:	Possibly, it will become a flowing movement, well … inhale, exhale … if you should become dizzy, or the like, you can pause … this sometimes … when you breathe more than you are used to … that this makes you dizzy in the beginning.

35:35: PATIENT: Yeah, this is, um …
35:36: THERAPIST: You see? Yeah, take a break then.
35:39: PATIENT: I have problems with my circulation anyhow
35:51: THERAPIST: Trace it a bit. Now … does this have any effect in your body? Has this exercise changed anything now? **(56)**
36:04: PATIENT: I feel relatively warm. Well, I had felt warm before.
36:06: THERAPIST: Sure, it warms you, of course, when you breathe and move. Converting energy, of course, heats. **(52)**
36.18: PATIENT: I am not stiff (inflexible) otherwise, actually, meaning … (*patient and therapist speak simultaneously, incomprehensible*).
36:35: THERAPIST: Do you feel your feet? **(56)**
36:37: PATIENT: I do.
36:39: THERAPIST: Oh. Where are they?
36:41: PATIENT: (*incomprehensible*).
36:43: THERAPIST: Are they warm or cold?
36:45: PATIENT: Warm.
36:49: THERAPIST: Mhm, okay. Would you like to also involve your legs? **(58)**
36:52: PATIENT: How?
36:54: THERAPIST: You don't know how? If you, well, if you lift your right … could you actually stretch your legs … and if you lift your right arm, then your left leg comes along.
37.06: PATIENT: Then it works?
37:07: THERAPIST: Exactly, like this. And while going down, at the same time, it goes down again. Exactly, that's good. Mhm. Exactly. Mhm.
38.07: PATIENT: It hurts.
38.08: THERAPIST: Where?
38.11: PATIENT: Well, my lower back.
38:13: THERAPIST: Mhm, well, when you include your leg.
38.15: PATIENT: Well, slightly.
38:19: THERAPIST: Could we try out a variant, namely, that you don't lift your leg, you just simply put it on the floor, well, bend your knee and lay down again, so that your back will be more relieved. Would you like to try it like this once? **(58)**
39.18: THERAPIST: Okay, take a short break. And feel into it. What is going on with your eyes?
39:30: PATIENT: I am having problems, lying like this, then …
39:34: THERAPIST: Do you feel how tired you are? **(56)**
39:36: PATIENT: Yes. I haven't had enough sleep.
39:48: THERAPIST: Is it mainly in your eyes that you feel your tiredness?

B: Session 71 Bioenergetic Analysis – "Somatic experiencing" (56)

(Session excerpt: minute 00:09:12 – minute 00:46:05 = 00:36:53; 20:00 and 13:41 minutes of silent somatic experiencing). Intervention category numbers in brackets; only complete sentences were rated.

09:12: THERAPIST: Well, um, I would like to propose we continue our work. Or have you formulated any other wishes meanwhile? **(87; 55)**
09:26: PATIENT: No, I have also been wondering, what will be when we meet again, um, but maybe also, well, to make contact again, that we carry on a little.
09:37: THERAPIST: Exactly. Okay.
09:39: PATIENT: Yeah?
09:40: THERAPIST: All right. I'll put this aside and you … tell me, what you need … pillows … ? **(55)**

09:52: PATIENT: Ah, this piece of fur, which I've been using.
09:54: THERAPIST: Yes, that's right, exactly. Mhm. Like this?
10:06: PATIENT: Okay.
10:07: THERAPIST: Mhm.
10:12: PATIENT: Ha.
10:14: THERAPIST: I'll put my hands underneath here?
10:15: PATIENT: Mhm.
10:15: THERAPIST: Are you hot? Or is it okay? **(55)**
10.19: PATIENT: It's alright.
10:20: THERAPIST: Alright. Now we want to … (*incomprehensible*) Alright like this, to start with?
…
15:13: PATIENT: This … is as if (*incomprehensible*) …
15:20: THERAPIST: Mhm.
…
30:20: PATIENT: This is another one of these spots.
30:21: THERAPIST: Mhm. We always come back to this one, correct? Mhm. What do you sense here? How (*incomprehensible*) deep or how painful? **(56)**
30.30: PATIENT: No, it's okay. Well, it is like, as if it could (*incomprehensible*) there.
30:35: THERAPIST: Mhm, mhm. It could be (*incomprehensible*).
30:40: PATIENT: Well, like … or some sort of outlet, more that kind of thing.
30:45: THERAPIST: Yes.
30:48: THERAPIST: Is it okay that we always come back to this? And tackle it (*incomprehensible*) … Isn't it curious that in the moment you tell me this, it sometimes disappears again. These are quite subtle things, to really hit the right (*incomprehensible*), aren't they? **(55, 52)**
31.08: PATIENT: Yeah. I don't know; it's maybe different every time, because it's maybe like a band, where we, which has different spots.
31:20: THERAPIST: Yes, which are addressed, aren't they? Exactly.
31:23: PATIENT: Mhm
31:26: THERAPIST: Okay. So. We go back to searching for them again. **(56)**
…
35:10: THERAPIST: (*bumps into something*) Sorry.
…
36.10: THERAPIST: Okay like this?
…
45:07: THERAPIST: I would be interested if you have any special images or ideas connected to your feet. My feeling is that they are sometimes a bit resistant while being moved. **(16)**
45:19: PATIENT: That's interesting. You mean, when you bend them like this?
45:22: THERAPIST: Yes.
45:23 PATIENT: Okay.
45:28: THERAPIST: Well, are there any feelings or thoughts coming up, or nothing at all? **(16)**
45:35: PATIENT: I must watch it a bit. Yeah. Because, in a sense, well, when you move them like this, it is … (*incomprehensible*). I never ... Well, I actually happened to constantly having strained ligaments, because I played a lot of basketball in the past, well just physiologically …
45:58: THERAPIST: Oh, from injuries …
46:01: PATIENT: Well, it doesn't hurt. Nothing at all hurts.
46:03: THERAPIST: But you had injuries? **(55)**
46:05: PATIENT: Yes, and it could be, that my ligaments there are a bit, um …

C: Session 4: Art and expression oriented therapy (EGIS) - "Activating aesthetic responsibility" (62)

(Session excerpt: minute 00:00:16 – minute 00:21:35 = 00:21:19 minutes: 7:33, 1:51 and 2:43 minutes of silent creative work)

00:16: THERAPIST: Well, what are we going to do? **(55)**
00:18: PATIENT: I thought we could begin right away as we did last time.
00:22: THERAPIST: Wonderful! Let's see …. I have some paint left over. I thought it would be good for you if there were some paint left. But you may also say: No, I don't want this, I would rather have a different palette. Anything would be okay, you understand (*incomprehensible murmur between patient and therapist in the background; they partly speak simultaneously; material is being prepared*). **(62)**
01:19: THERAPIST: Well, and now, you also wanted a candle to be lit.
01:22: PATIENT: Mhm.
01:31: THERAPIST: It's a bit … well, it's also already … (*lights the candle*) … great. Now I let you … The volume is somewhere down there.
02:00: PATIENT: Mhm. You pushed the '1.' There, the '1' should be coming, yeah.
02:06: THERAPIST: (*music is starting to play*).
…
05:00: THERAPIST: (*turns off the music*).
05:02: PATIENT: Mhm. Now you … (*incomprehensible*) … me …
05:11: THERAPIST: Mhm. (*tears off adhesive tape*).
06:23: THERAPIST: How much time do you want me to watch? That I show up? **(55)**
06:29: PATIENT: Um, 10 minutes.
06:32: THERAPIST: 10 minutes, okay.
…
14:05: THERAPIST: If you need more of any color, there is more. **(52)**
14:08: PATIENT: Yeah, yes.
14:50: PATIENT: Oh!
14:51: THERAPIST: That doesn't matter; just wait; it's all washable; let it just spread, just let it flow. **(52)**
…
16:32: THERAPIST: It is 10 minutes now. Do you need extra time? **(55)**
16:35: PATIENT: A little extra time, yes.
16:36: THERAPIST: How much?
16:38: PATIENT: Um, about 5 minutes.
16:42: THERAPIST: Okay, good.
…
19:25: PATIENT: So …
19:40: PATIENT: (*incomprehensible*)
19:41: THERAPIST: Yeah.
19:54: THERAPIST: So? How was that? Everything? The music? Or the painting? **(66)**
20:11: PATIENT: Um, difficult, but somehow … I think … somehow I …
20:22: THERAPIST: Just your feeling? How does it feel? Everything … listening to the music, going there, painting, the picture? How was that? Quite a lot, wasn't it? **(66)**
21:35: PATIENT: Quiet … and difficult.