

**Assessing Alliance Ruptures and Resolution:  
Reliability and Validity of the Collaborative Interactions Scale–Revised  
Version**

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## Abstract

Objective: This study presents the revised version of the Collaborative Interactions Scale (CIS; Colli & Lingardi, 2009), an observer-rated measure for the assessment of therapeutic-alliance ruptures and resolutions. Intensive use of the previous scale resulted in three criticisms: (1) excessive time required to perform evaluations, (2) the low occurrence of some items, and (3) the scale's low capacity to capture some patient–therapist interactions in fine detail. In this study, we aimed to describe the scale revision process and evaluate interrater reliability and scale validity by comparing sessions of patients with and without personality disorders (PDs). Method: Three raters conducted a blind evaluation of a sample of 60 sessions (180 segments; 3,607 narrative units) with 30 patients (15 had a PD diagnosis and 15 had a *DSM–5* clinical syndrome diagnosis without a PD). Results: Interrater reliability results ranged from acceptable to excellent and were comparable with those of the former version. Patients with PDs showed a greater number of alliance ruptures and a smaller number of collaborative processes than patients without PDs. Moreover, therapists presented more negative interventions with the PD sample than the non-PD sample. Conclusions: The results indicate that the revised CIS is a reliable rating system that is useful for both empirical research and clinical assessments.

*Clinical and methodological significance of this article:* The CIS–R is a reliable rating system that is suitable for both empirical research and clinical assessment. It is useful for recognizing rupture and resolution processes, both in clinical everyday practice and in psychotherapists' training. Application of the CIS-R promotes clinical reflection on the therapeutic action used to manage ruptures in a session.

*Keywords:* alliance ruptures and resolutions, Collaborative Interactions Scale, personality disorders

## **Assessing Alliance Ruptures and Resolutions:**

### **Reliability and Validity of the Collaborative Interactions Scale–Revised Version**

Over the last 20 years, we have observed a change in therapeutic alliance research with a growing interest in the process aspects of therapy and in therapists' techniques that may affect the quality and formation of the alliance (Ackerman & Hilsenroth, 2001, 2003; Hilsenroth, Cromer, & Ackerman, 2012). This emerging field, which is called the "second generation of alliance research" (Safran, Muran, & Eubanks-Carter, 2011, p. 80), investigates how patients and therapists construct the therapeutic relationship together, with an increased awareness of the fact that therapeutic alliance represents an emergent quality of mutual collaboration (Horvath, Del Re, Flückiger, & Symonds, 2011). Therapeutic alliance ruptures and resolution processes represent a cornerstone construct of this new trend in empirical research (Lingiardi & Colli, 2015; Lingiardi, Holmqvist, & Safran, 2016; Safran & Muran, 2000), and several studies have provided evidence regarding their relevance in relation to therapy outcomes (Constantino et al., 2008; Eubanks-Carter, Muran, Safran, & Hayes, 2011; Muran, Safran, Samstag, & Winston, 2005; Safran et al., 2011).

The concept of rupture and repair implies a redefinition of the therapeutic alliance as an ongoing process of intersubjective negotiation (Safran & Muran, 2000). Generally, the term "therapeutic alliance rupture" refers to an impairment or fluctuation in the quality of the alliance between the therapist and patient. The quality of the therapeutic alliance can be defined as a function of the degree of agreement about the goals and tasks of psychotherapy that is mediated by the quality of the relational bond between the therapist and patient. The term indicates both severe disruption in the therapeutic alliance and even momentary, subtler fluctuation in the quality of the

therapeutic relationship (Safran, Crocker, McMain, & Murray, 1990).

Starting from the premise that every perspective and methodology has its strengths and limits and that the evaluations from different perspectives are the gold standard for psychotherapy research (Norcross & Wampold, 2011), we will compare the CIS with other comparable measures and strategies to assess alliance ruptures and resolutions.

One strategy to assess alliance ruptures is the use of traditional therapeutic-alliance self-report measures, such as WAI (Working Alliance Inventory; Horvath & Greenberg, 1989) or CALPAS (California Psychotherapy Alliance Scales; Marmar & Gaston, 1988), to detect the presence of alliance ruptures and resolutions by inferring them from the analysis of alliance fluctuation scores across sessions (Kivlighan & Shaughnessy, 2000; Stevens et al., 2007; Stiles et al., 2004; Strauss et al., 2006). Compared to these research strategies, which evaluate the therapeutic alliance at the session level and are more suitable for assessing therapeutic alliance as a general factor related to the outcome, CIS seems to have an advantage insofar as it “depict[s] the idiosyncratic interactional patterns that unfold between patient and therapist” (Charman, 2004, p. 18). Since these measures can only study shifts in alliance, but do not directly examine in-session transactions, some rupture events may go undetected (Stevens et al., 2007). Moreover, the statistical criteria used to establish whether a fluctuation can be considered a rupture or resolution vary across studies, which could lead to a situation in which the same phenomenon is considered an alliance rupture in one study, but not in another because of the use of different statistical parameters (Eubanks-Carter, Gorman, & Muran, 2012).

Another strategy to assess alliance ruptures is evaluation through direct self-report measures for therapeutic-alliance ruptures and resolution assessment using items based on a Likert scale to ask patients and therapists whether alliance ruptures have occurred in the session, the kinds of ruptures that have occurred, and how they felt

during the session (Doran, Safran, & Muran, 2016a, 2016b; Eubanks-Carter, Muran, & Safran, 2009). The major advantages of these types of measures include the fact that they enable the gathering of information based on patients' and therapists' perspectives, and they are quite economical to administer. These strategies, as in the case of traditional TA measures, do not allow researchers to grasp the interaction between the patient and the therapist at the microlevel.

This article is made up of two studies. Study 1 presents the CIS revision process and its revised version (CIS-R), as well as data on the reliability of the CIS-R scale. In Study 2, the validity of the CIS-R is tested by comparing the session ratings of PD versus no-PD patients.

### **Study 1: Scale revision process and reliability**

In the first study, we aimed to present a revised version of the CIS and the scale revision process and present data on the reliability and validity of the CIS-R scale. We tested scale reliability by measuring the IRR for evaluations on a Likert scale regarding the presence of each item of the scale and we hypothesized that the IRR of the revised scale would be at least comparable to that of the former version with less time required for evaluations.

In 2009, as a result of 10 years of ongoing transcript-based investigation of therapeutic-alliance and rupture/repair processes, we developed the Collaborative Interactions Scale (CIS), a measure for the assessment of alliance ruptures and resolutions based on transcript evaluations (Colli & Lingardi, 2009). The CIS is derived from relational theory, in which it is important to differentiate disagreement and agreement from noncollaboration and collaboration. This differentiation may be related to two opposite ways of conceptualizing alliance ruptures and resolutions: the rational view and the relational view. If we adopt a rational point of view, we might view a rupture or breakdown in the collaboration process as the patient disagreeing with the

therapist about a therapeutic task (e.g., “I don’t think it is important for me to speak about my childhood”). Conversely, if we adopt a relational point of view, the content of the communication (i.e., the disagreement) is less important than the way the patient communicates the disagreement and negotiates the issue with the therapist. Following a rational approach, we might consider the patient always agreeing with the therapist as a sign of collaboration. However, conversely, from a relational perspective, this agreement could be interpreted as a sign of the patient’s acquiescence. As a consequence, the patient’s communication of disagreement with the therapist could be interpreted as the patient’s need to negotiate, rather than as a sign of alliance deterioration (Lingiardi & Colli, 2015).

The CIS has been applied in several studies (Colli & Lingiardi, 2007; Di Riso et al., 2011; Locati, Rossi, & Parolin, 2017; Rocco, Gennaro, De Bei, Zanelli, & Condino, 2013). In the first validation study, the average interrater agreement measured with Cohen’s kappa ranged from substantial (min = .66; max = .72) to almost perfect (.81). Criticism from researchers who had used the CIS and our own intensive use of the scale led us to realize that some limitations had to be addressed:

1. The time taken to perform evaluations was excessive. With the original version of the CIS, the mean time for rating a session was 2.5 hr. This problem was attributed to the scoring procedure (raters had to evaluate the presence or absence of every item for every patient and therapist’s utterance and assign an intensity score on a 7-point Likert scale for each utterance). Moreover, an excessive number of items had to be evaluated for each unit of analysis (41 items).
2. There was low occurrence of some items.
3. The scale had a low capacity to capture some patient–therapist interactions in fine detail: For example, the former version of the scale did not distinguish between patient or therapist communications that explicitly addressed the regulation of the therapeutic relationship (Hill et al., 2008; Hill & Knox, 2009; Kasper, Hill, &

Kivlighan, 2008) and communications that did not explicitly address the regulation of the therapeutic relationship.

Based on these critiques, we developed a revised version of the scale (Colli, Gentile, Condino, & Lingiardi, 2014a, 2014b). The aims of this revision process were as follows: (1) to create a quicker measure, (2) to maintain a balance between the microanalysis and the macroanalysis of the psychotherapy process, and (3) to improve the scale's capacity to describe different psychotherapy process dynamics.

## Methodology

### Sample

**Patients.** We evaluated 60 session transcripts (180 segments; 3,607 narrative units) from 30 Italian patients (10 men, 20 women; mean age = 29.91 years,  $SD = 10.12$ ) in psychotherapy. Nine patients were from a low educational level (10 years), 13 from a middle educational level (13 years), and 8 from a high educational level (18 years). The majority ( $n = 22$ ) were middle class (annual income = between 15,000 and 30,000 euro), three were working class (annual income = 15,000 euro), and five professionals (annual income = 30,000 euro). Seven participants were married, 21 were single, and two were divorced. None claimed to be from an ethnic or religious minority. The patients and sessions were chosen randomly from our database of session transcripts. First, we randomly selected 15 cases from our clinical database in which patients did not present a PD diagnosis and 15 in which patients did; then, we randomly selected two sessions for each case. Before entering psychotherapy, all patients received a *DSM-5* diagnosis by their treating clinicians (American Psychiatric Association [APA], 2013). PDs have been diagnosed by using a checklist ad hoc based on the *DSM-5* criteria for the assessment of the PD disorders: clinicians rated each criterion, randomly ordered, for each of the *DSM-5* personality disorder diagnoses (American

Psychiatric Association, 2013) as present or absent. This procedure provided both a categorical diagnosis (by applying DSM-5 cut offs) and a dimensional measure (number of criteria met for each disorder); in previous studies, this procedure proved adequate in terms of internal consistency and convergent validity (Betan, Heim, Zittel-Conklin, & Westen, 2005; Blais & Norman, 1997; Bradley, Heim, & Westen, 2005; Westen, Shedler, Durrett, Glass, & Martens, 2003).

A total of 15 patients had at least one PD diagnosis: seven patients from cluster B (four patients with borderline PD, two with narcissistic PD, one with histrionic PD), six patients from cluster C (three with dependent PD, two with avoidant PD, one with obsessive-compulsive PD), and two patients with a PD diagnosis of comorbidity (one with histrionic and borderline PDs and another with histrionic and narcissistic PDs). Fifteen patients had a clinical syndrome diagnosis without PD (five patients with dysthymia, two with obsessive-compulsive disorder, five with anxiety disorder, two with somatic disorder, and one with sexual disorder).

**Therapists.** We also evaluated 30 Italian therapists (seven cognitive, nine psychodynamic, six eclectic, and eight interpersonal), each with at least 10 years of clinical experience (males = 18, females = 12; mean age = 44,  $SD = 8.5$ ). Eighteen were psychologists and 12 were psychiatrists. Twenty-one therapists practiced in a private setting and 9 in mental health institutions, and the average time spent per week practicing psychotherapy was 24.13 hours ( $SD = 2.92$ , range 18–32). All psychotherapies were administered once a week and lasted for a mean of 35 sessions (minimum = 14, maximum = 90;  $SD = 23$ ). The mean number of coded sessions was 20.71 ( $SD = 4.57$ , range: 6–75).

**Raters.** Three raters rated the sessions independently by using the CIS–R. The raters were Italian postgraduate clinical psychology students trained in the use of the CIS. The training, which we conducted, consisted of studying the coding manual, participating in group discussions and consensus rating of five session transcripts, and



completing homework. Classroom training lasted for 8 hr, including 2-hr sessions twice a month in addition to homework. The sessions used for training were not included in the study. To partially reduce some rater biases (e.g., preferences for a specific psychotherapeutic approach, expectations of a better or worse session in relation to the diagnosis or phase of therapy), we gave no information about therapies and patients (phase of therapy, outcome, diagnoses, etc.).

## **Procedure**

To reduce and revise the items of the scale, we implemented several procedures based on statistical analysis and group consensus. First, we analyzed the co-occurrence of items: We used a sample of 126 sessions (12497 narrative units, defined as each patient–therapist turn speaking) to calculate the contingency coefficient and Cramers’s  $V$  to identify the items that co-occurred in a significant way. Those items have been discussed by the authors of the scale to understand if the co-occurrence was related to overlapping item content or to problems in the definition of the items in the coding manual. We joined items that were overlapping in content and redefined coding rules for the rest. Second, we conducted a descriptive item analysis and eliminated items with zero variance. Third, we excluded items with fair IRR (kappa values  $< .40$ ). Finally, using a 5-point Likert scale, a pool of seven clinicians (males = 3, females = 4; mean age = 41,  $SD = 2.5$ ; psychodynamic = 3; cognitive–behavioral = 2; integrative = 2), each with at least ten years of clinical experience and with a consolidated experience in therapeutic alliance assessment, evaluated the items in terms of clarity and face validity. The participants rated the items’ relevance from 1 (*not relevant*) to 4 (*very relevant*) and their clarity from 1 (*not clear*) to 4 (*very clear*). A content validity index (CVI; Yaghmaie, 2003) was calculated by identifying the percentage of experts who rated an item as both relevant and clear. Items with a CVI over .75 remained; the rest were discarded. At the end of this revision process, we obtained a set of 29 items (12 items

less than the former version). Finally, we refined and rewrote the coding manual.<sup>1</sup>

### **Statistical Procedure**

Statistical analyses were performed using SPSS (version 22 for Windows). We used intraclass correlation (ICC; single measure, absolute agreement) to identify the agreement between different judges. The IRR was calculated for each item of the scale by using raters' evaluations with a Likert scale (Shrout & Fleiss, 1979).

## **Results**

### **Collaborative Interactions Scale–Revised (CIS–R): Structure and Coding**

#### **Procedure**

The CIS–R is a coding system to evaluate therapeutic alliance ruptures and collaborative/resolution processes from an observer's perspective. The scale can be applied to audio or video recordings of therapeutic sessions or verbatim transcripts of psychotherapy sessions.

The CIS–R is divided into two scales (Figure 1; Appendix I): One is used to evaluate therapeutic alliance ruptures and collaborative processes of the patient (CIS–P), and one is used to evaluate the therapeutic alliance ruptures and collaborative processes of the therapist (CIS–T). The CIS–P is further divided into four subscales: Direct Rupture Markers (DRMs; three items), which are explicit, hostile, and confrontational patient rupture communications; Indirect Rupture Markers (IRMs; four items), which are communications in which patients implicitly communicate their discomfort about the therapeutic relationship and/or the therapy in general; Direct Collaborative Processes (DCPs; three items), which are communications in which the

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<sup>1</sup> The CIS-R coding manual can be requested by the authors, Vittorio Lingiardi (vittorio.lingiardi@uniroma1.it) and Antonello Colli (antonello.colli@uniurb.it).

patient explicitly refers to the therapeutic relationship, the therapy itself, or the therapeutic process and that indicate positive collaboration with the therapist; and Indirect Collaborative Processes (ICPs; three items), which are communications in which the patient indicates an active (although not explicitly stated) collaboration with the therapist (Appendix I). The distinction between direct and indirect patient rupture markers is strictly derived from the work of Safran and Muran (2000a) and Harper (1989a, 1989b), which have organized patient ruptures into two main subtypes: withdrawal and confrontation (Harper, 1989a, 1989b). We preferred to use the terms direct/indirect instead confrontational/withdrawal to put more emphasis on the communicative aspects of the interaction. In this manuscript, we use the term *collaborative process* as a synonym for repairing/resolution, but we prefer the term *collaborative* because it is broader and can include both processes that can occur inside and outside the context of a rupture.

The CIS-T is composed of four subscales: Direct Collaborative Interventions (DCIs; four items), which are the therapist's collaborative interventions that explicitly focus on the relationship with the patient or some aspect of the therapy; Indirect Collaborative Interventions (ICIs; three items), which are the therapist's interventions that are not explicitly directed toward the therapeutic relationship or the therapy in general, but may contribute positively to the relationship; Rupture Interventions (RIs; five items), which are the therapist's interventions that negatively contribute to the therapeutic process; and Therapist Interventions (four items), which describes the four principal types of therapist interventions: supportive, explicative, explorative, and expressive. Supportive interventions aim to support the patients and include interventions that include validation or empathic reflection; explicative interventions are aimed at explaining something to the patient such as, for example, psychological mechanisms and/or a symptom, the theoretical basis of the treatment, rules of the setting, or the goals of the therapy; explorative interventions are aimed to develop a deep

elaboration in the patient and include interventions such as clarifications, re-wording and open-ended questions; expressive interventions include interventions such as interpretation, confrontation, and observation.

The distinction between direct and indirect therapist interventions is derived from the literature on therapist metacommunication strategies (Kiesler, 1996) and therapeutic immediacy (Hill et al., 2014; Hill & O'Brien, 1999; Kuutmann & Hilsenroth, 2012; Mayotte-Blum et al., 2012).

Before starting the CIS-R coding process, it is necessary to read the transcript of the entire session hour at least once. In this phase, the rater should try to understand the emotional and interpersonal climate and the quality of the relationship between the therapist and patient. First, the rater has to divide the entire session into narrative units that correspond to every patient-therapist exchange and then divide the sessions into three equally sized macrosegments (the segments should represent the same number of narrative units if the rater is working on session transcripts or the same number of minutes if the rater is working on audio or visual recordings).

The coding procedure has two main steps. First, the rater has to identify the presence (or absence) of, in every narrative unit, one or more of the 12 patient collaboration and rupture markers and one or more of the 14 therapist collaboration and rupture interventions. Codings are not mutually exclusive, and the rater should not necessarily assign a category for each utterance. When this identification process has been completed, the rater summarizes his or her evaluation, assessing all three macrosegments for the presence of each patient and therapist item on a 5-point Likert scale (from 0 to 4). At the end of the evaluation, CIS-R furnishes a great deal of information about the way patients and therapists construct their collaboration. At the microlevel of analysis, patient-therapist exchanges can be divided into collaborative interactions in which the patient produces a direct or indirect collaborative process and the therapist engages in direct or indirect collaborative interventions; rupture

interactions refer to situations in which both participants produce a rupture process (for the patient, a direct or indirect rupture marker, and for the therapist, a rupture intervention) or disjointed interactions in which the patient produces a rupture marker and the therapist responds with a collaborative intervention or vice versa. The consecutive occurrence of these kind of interactions determines the presence, respectively, of rupture phases (with more than one rupture interaction), collaborative phases (with more than one collaborative interaction), and disjointed phases (with more than one disjointed interaction). These phases may vary in duration (from small phases that consist of two interactions to larger phases that consist of many interactions), and they can also alternate during a session. At the macrolevel of analysis, each segment can be deemed as: (a) collaborative, in which both the patient and therapist produce collaborative markers; (b) conjoint rupture, in which both participants produce rupture processes; (c) disjointed rupture, in which patient produces exclusively rupture markers and therapist collaborative interventions (or viceversa); and (d) repairing segment, in which the patient produces both collaborative and rupture processes and therapist positive interventions.

The scale also provides information about the characteristics of the collaboration: the patient's use of specific typologies of rupture or a particular therapist's style of intervention, the occurrence of specific rupture markers in response to therapist intervention, and so on. This kind of data can be analyzed in different ways, but sequential analysis seems to be the most useful approach because these methodologies provide the means to describe the idiosyncratic interaction of every patient–therapist dyad.

At the macrolevel of analysis, three global scores of the patient–therapist interaction for each segment can be coded. These include: (1) the collaboration score (i.e., the sum of the patient's direct and indirect collaborative processes and the therapist's direct and indirect collaborative interventions); (2) the rupture score (i.e., the

sum of the patient's direct and indirect rupture markers and the therapist's rupture interventions); and (3) the global patient–therapist score (i.e., the difference between the collaboration score and the rupture score). It is also possible to describe the collaboration trend of a session by comparing the global patient–therapist score for the three segments.

[Add Figure 1 here]

### **Occurrence of Patient and Therapist Ruptures and Collaborative Processes**

We calculated the mean presence of each item and subscale by averaging the three raters' ratings across the 60 sessions and 180 segments (Table 1). The mean evaluation time was 70 minutes (min = 45, max = 90, SD = 15.56), 80 minutes faster than the original version. The results show that patient and therapist collaborative processes are more present than patient and therapist rupture markers. For both patients and therapists, the mean presence of indirect collaboration was higher than that of direct collaboration. Patients' IRMs were more frequent than their DRMs. We did not find significant differences in relation to therapist orientation for the DRM scale ( $F_{(3, 59)} = 1.138, p = .344$ ), for the IRM scale ( $F_{(3, 59)} = 1.118, p = .352$ ), for the DCP scale ( $F_{(3, 59)} = 2.122, p = .111$ ), for the ICP scale ( $F_{(3, 59)} = 2.490, p = .072$ ), for the DCI scale ( $F_{(3, 59)} = 1.521, p = .222$ ), for the ICI scale, ( $F_{(3, 59)} = 4.009, p = .113$ ), for the RI scale ( $F_{(3, 59)} = 1.605, p = .201$ ). We took into consideration the absence/presence of PD diagnosis as control variable.

[Add Table 1]

### **Interrater Reliability**

The mean overall interrater agreement was .77 (range .55–.90). All items resulted in ICC values ranging from fair to excellent (< .40 = poor; .40–.59 = fair; .60–.74 = good, and > .74 = excellent; Shrout & Fleiss, 1979; Table 2). Specifically, the ICC was .77 for the DRM scale, .73 for the IRM scale, .66 for the DCP scale, .89 for the ICP scale, .77 for the DCI and ICI scales, and .87 for the RI scale.

[Add Table 2 here]

## Discussion

The main aim of the Study 1 was the revision of the CIS. When comparing CIS–R to traditional observer-rated methods to assess therapeutic alliance, such as the WAI-O for example (Horvath & Greenberg, 1989), CIS has two main advantages. First, with traditional observer TA measures, the presence of a rupture or a resolution can be only inferred by analyzing score fluctuations inside or across session; with CIS–R, the rater directly assess the presence of a rupture or a resolution process. Second, CIS–R gives detailed information about the way in which patients and therapists contribute to a rupture or resolution, specifying different ruptures and collaborative processes both for patient and therapist. Finally, comparing CIS–R to the 3RS (Rupture Resolution Rating System; Eubanks-Carter et al., 2009), an observer-rated measure to assess alliance ruptures and resolutions, it is possible to recognize two relevant differences between the two measures: First, unlike the 3RS, the CIS–R evaluates and specifies the different therapist’s interventions that contribute to alliance ruptures and, second, it describes the different ways that the patients contribute to the resolution process.

We tested the reliability and validity of the CIS–R. First, we investigated the occurrence of alliance ruptures and collaboration markers: Of the patient ratings, 39% were coded as rupture markers, a result that confirms the findings of previous studies along with the fact that alliance rupture markers are quite frequent across sessions (Colli & Lingardi,

2009; Eames & Roth, 2000; Eubanks-Carter et al., 2010a; Muran et al., 2009). Similar to the findings of a previous study on the occurrence of withdrawal and confrontation ruptures in session transcripts (Sommerfeld et al., 2008), our results indicated that indirect ruptures were the most frequent type of therapeutic alliance rupture for all patients. This result matches the findings of previous qualitative research studies based on post-session interviews suggesting that patients tend to hide their negative reactions toward therapists' interventions (Hill, Thompson, Cogar, & Denman, 1993; Hill, Thompson, & Corbett, 1992; Regan & Hill, 1992). Regarding the occurrence of therapist interventions, we find it interesting that therapist communications that directly and explicitly focus on the therapeutic relationship (DCIs) represent 39.5% of all therapist interventions. This result confirms the findings of a previous study suggesting that therapist "immediacy" is a frequent event in therapy (Mayotte-Blum et al., 2012); in our sample, clinicians tended to focus on the here and now of the therapeutic relationship despite their different theoretical orientations.

The second aim of the Study 1 was to investigate the scale's reliability. Overall, the IRR results were good, with mean ICC values ranging from fair to excellent (Shrout & Fleiss, 1979). Although it is not possible to make a detailed comparison between the IRR of the present version of the scale and the former one because of several changes in scale composition and the use of different indices to evaluate IRR (ICC coefficient vs. Cohen's kappa), the IRR of the revised version of the scale is comparable and, on several occasions, superior to the former version of the scale.<sup>2</sup>

Of the CIS subscales, the patient's DCPs resulted in the lowest ICC values. This result seems unexpected at first because one might assume that the raters would find it easier to evaluate patients' direct and explicit communications of collaboration as

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<sup>2</sup> In the CIS, IRR was rated as almost perfect for the Direct Rupture Marker Scale (.81) and substantial for the Indirect Rupture Marker Scale (.66), the Collaborative Process Scale (.72), and the Positive Intervention and Negative Intervention Scales (.67 and .66, respectively).



opposed to their indirect ones. One reason for this might be that it is sometimes difficult for raters to distinguish between direct patient communications of disagreement with the therapist that are expressed in a collaborative way (DCPs) and patient communications in which disagreement is expressed in a noncollaborative way (DRMs).

For example, a patient may, in a collaborative fashion, express that he or she felt abandoned by the therapist (*P: I just felt abandoned. I know this is not the case and that you were sick, but that's the way I felt about it*) or, conversely, in a noncollaborative fashion (*P: You abandoned me. You care about yourself and do not think that you left me alone; you were sick, but I'm sick, too*). In these two examples, it is quite easy to distinguish between a collaborative (the first example) and noncollaborative stance (the second), but, sometimes, especially when the patient's expression of aggression is less intense, it can be hard to distinguish between the two stances (Colli et al., 2014a). This result also suggests that, in future studies, it will be necessary to conduct additional research on the definition and conceptualization of the differences between rupture markers and other processes that represent healthy self-assertion by the patient.

## **Study 2: Alliance Ruptures and Resolutions and Personality Disorders**

Aim of the Study 2 was to assess differences in the presence of alliance ruptures and resolutions in relation to patient diagnosis. The clinical and empirical literature suggest that patients with personality disorders (PDs) tend to manifest greater problems in the maintenance of the therapeutic alliance than patients characterized by lower levels of personality pathology (Bender, 2005; Lingardi, Filippucci, & Baiocco, 2005; Smith, Hilsenroth, Fiori, & Bornstein, 2014) and that patients with PDs pose great challenges to psychotherapists, especially with regard to the negotiation of the therapeutic alliance. We evaluated the validity of the measure by comparing the session ratings of patients with PDs to those of patients without PDs. We hypothesized that patients with PDs will show a greater number of alliance ruptures and a smaller number of collaborative

processes than patients without PDs and that therapists treating patients with PDs will show a greater presence of rupture processes.

**Sample** (see Study 1)

### **Statistical procedure**

To compare the mean presence of alliance ruptures and resolutions between PD and non-PD patients, we applied analysis of variance (ANOVA; Table 3).

### **Results**

[Add Table 3 here]

ANOVA indicated that PDs patients produced a higher number of direct rupture markers than those without PDs. Specifically, PDs patients were characterized by a major frequency of DRM1 ruptures related to task and goal ( $F = 4.713, p = .031$ ) and DRM3 discouragement ( $F = 4.025, p = .046$ ). PDs patients presented a major number of indirect rupture markers relative those without PDs ( $F = 8.618, p = .004$ ). In particular, PDs patients expressed more IRM3 self-esteem regulation strategies ( $F = 4.773, p = .030$ ).

Direct collaborative processes were more frequent in non-PD patients than in patients with PDs ( $F = 15.586, p = .000$ ). Moreover, therapists treating PDs patients produced a higher number of rupture interventions than therapists treating non-PD patients ( $F = 17.307, p = .000$ ). Specifically, RI3 hostility ( $F = 12.635, p = .000$ ) and RI4 perseveration ( $F = 14.756, p = .000$ ) were the most frequent rupture interventions used by therapists with PDs patients.

### **Discussion**

Aim of the Study 2 was to assess the presence of alliance ruptures and collaboration in patients with and without PDs. Our results confirm the notion that patients with PDs tend to manifest greater problems in terms of maintaining therapeutic alliances (Bender, 2005; Lingardi et al., 2005). The greater presence of DRMs among PDs patients suggests that these patients tend to manifest strains in the alliance in a more explicit, confrontational, and aggressive way than patients without PDs. Conversely, patients without PDs tend to manifest a greater capacity for expressing disagreement in a collaborative way than patients with a PD diagnosis.

Disagreement about the tasks, goals, or parameters of therapy (DRM1) expressed in a noncollaborative way was the most frequent rupture marker for PDs patients; this result confirms the notion that patients with PDs manifest problems from the first phase of therapeutic-alliance formation, the contractual/behavioral phase (Gunderson, 2000).

PDs patients presented a major number of IRMs relative to patients without PDs; this result confirms the idea that these patients are emotionally inhibited and adverse to interpersonal conflict and that they tend to be overly compliant, thereby foreclosing possibilities of building an authentic therapeutic relationship (Tufekcioglu et al., 2013). Moreover, PDs patients tend to produce more self-regulation strategies (IRM3), such as idealization or devaluation of the self, than patients without PDs. The therapeutic relationship with these patients seems to be a minefield in which the therapist's interventions may represent a wound to the patient's fragile self-esteem, and patients may experience the therapist as critical and devaluing (Bender, 2005; Gabbard, 1989; Lingardi et al., 1996; Rønningstam, 2012).

Therapists treating patients with PDs tend to produce a greater number of rupture interventions, especially hostile interventions (RI3)—in which the therapist manifests hostility, devalues the patient, or is sarcastic—and interventions in which the therapist seems to excessively press the patient on a specific topic (RI4). Several clinical researchers have noted that because personality-disordered patients present with long-

standing and inflexible patterns of emotional and interpersonal difficulties (Benjamin, 1993; Livesley, 2001; Millon & Davis, 1996), therapists are more likely to encounter problems forming an alliance with such patients (Muran, Segal, Samstag, & Crawford, 1994). Moreover, patients' emotional lability makes it difficult for clinicians to empathize, and their restricted range of interpersonal behavior exerts a strong pull on certain behavioral responses from the therapist that, in turn, may confirm and perpetuate the patient's pathogenic beliefs (Kiesler, 1996). From this point of view, our results confirm the findings of previous research studies suggesting that therapists may respond to client hostility with counterhostility, especially in the context of a weak alliance (Coady, 1991; Henry, Schacht, & Strupp, 1986, 1990; Kiesler & Watkins, 1989; Tasca & McMullen, 1992; von der Lippe, Monsen, Rønnestad, & Eilertsen, 2008); this is likely related to the fact that therapists treating PDs patients may feel mistreated, criticized, and overwhelmed and, as a consequence, they could show more countertransference reactions (Colli et al., 2015; Colli, Tanzilli, Dimaggio, & Lingardi, 2014; Lingardi, Tanzilli, & Colli, 2015; Tanzilli, Colli, Muzi, & Lingardi, 2015; Tanzilli, Muzi, Rønningstam, & Lingardi, 2017). These data also suggest that the CIS Rupture Interventions Scale can also provide a glimpse on some negative countertransference reactions (as manifested by problems in the timing of interventions, technical errors, and difficulties in fine-grained attunement with the patient). From an assessment point of view, classic self-report CT tools, such as the Therapist Response Questionnaire (TRQ; Zittel Conklin & Westen, 2003) or the Feeling Word Checklist (Dahl, Røssberg, Bøgwald, Gabbard, & Høglend, 2012), identify specific countertransference reactions of which the clinicians are immediately aware. However, instruments such as the CIS-R or other observational measures that describe interpersonal dynamics between the patient and therapist, such as the PQS (Jones, 2000), tend to intercept the clinician's responses that the clinician do not immediately consider to be countertransference responses (Colli & Ferri, 2015; Kächele, Erhardt, Seybert, &

Buchholz; 2013). For this reason, the CIS–R is also a useful device for supervision and training.

The present study has two main limitations. First, the sample size and composition limited the possibility of generalizing the results. In this study, for example, we could not explore the relationship between patient personality characteristics and specific patients' manifestations of strains in the alliance: In future research, it is important to address this issue to improve specific resolution strategies in relation to specific patient personality diagnoses.

The second limitation is that we did not evaluate outcomes; thus, we could not investigate the relationship between alliance-rupture processes and other outcome variables at the in-session or therapy level.

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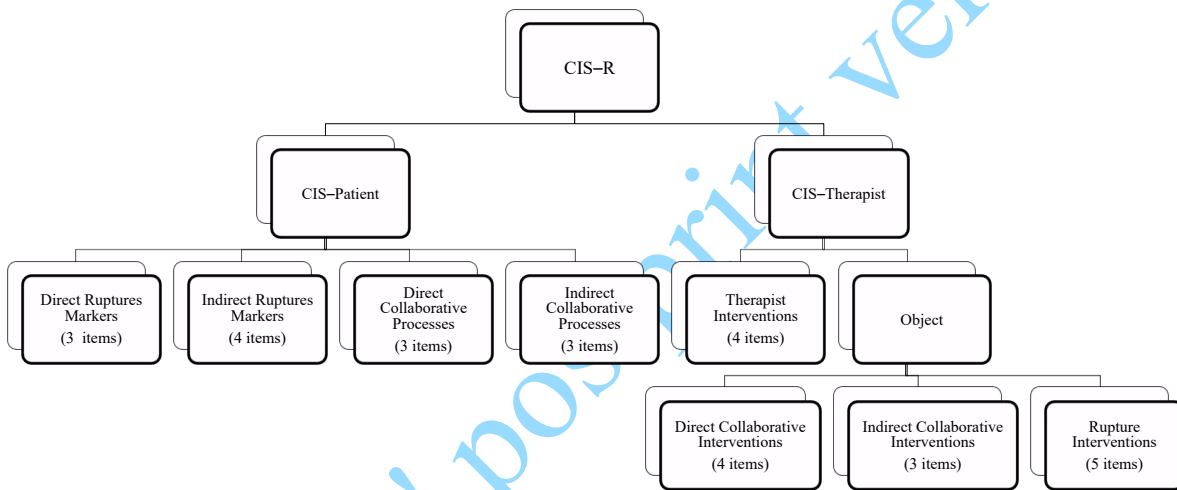
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Figure 1. The Collaborative Interactions Scale – Revised



*Table 1. CIS–P and CIS–T item’s descriptive statistics<sup>1</sup> and frequency*

	Min	Max	M	SD	Frequency	%
DRM1 Tasks/Goals/Parameters	0	4	.66	1.01	29	4.78
DRM2 Relationship	0	4	.39	.94	16	2.64
DRM3 Discouragement	0	4	.41	1.00	14	2.31
DRM scale	0	4	.49	.89	59	9.73
IRM1 Linguistic avoidance	0	4	.91	1.11	56	9.24
IRM2 Affective avoidance	0	4	.95	.96	63	10.40
IRM3 Self-esteem regulation strategies	0	3	.50	.77	33	5.45
IRM4 Acquiescence	0	3	.30	.62	19	3.13
IRM scale	0	4	.67	.60	171	28.22
DCP1 Task/Goal	0	3	.51	.67	45	7.42
DCP2 Affects	0	4	.63	.98	33	5.45
DCP3 Significant patterns	0	3	.31	.77	19	3.13
DCP scale	0	4	.49	.63	97	16.01
ICP1 Facts	0	4	2.65	1.20	116	19.14
ICP2 Affects	0	4	1.97	1.24	110	18.15
ICP3 Significant patterns	0	3	0.66	.68	53	8.74
ICP scale	0	4	1.76	.67	279	46.04
DCI1 Task/Goal	0	3	1.25	.93	81	15.61
DCI2 Relationship	0	3	.83	1.04	48	9.25
DCI3 Significant patterns	0	3	.54	.88	34	6.55
DCI4 Metacommunications	0	3	.71	.87	42	8.09
DCI scale	0	3	.84	.68	205	39.50
ICI1 Facts	0	4	1.46	1.49	69	13.29
ICI2 Affects	0	4	2.26	1.05	114	21.96
ICI3 Significant patterns	0	4	1.38	1.12	88	16.95
ICI scale	0	4	1.70	.71	271	52.21
RI1 Linguistic avoidance	0	2	.11	.33	8	1.54
RI2 Affective avoidance	0	1	.05	.18	6	1.16
RI3 Hostility	0	3	.33	.66	21	4.05



RI4 Perseveration	0	2	.16	.46	8	1.54
RI5 Lack clarity	0	2	.12	.48	0	0
RI scale	0	3	.15	.35	43	8.28
TI1 Supportive interventions	0	2	.47	.67	33	12
TI2 Explicative interventions	0	2	.38	.56	28	10.18
TI3 Explorative interventions	1	4	3.30	.94	134	48.72
TI4 Expressive interventions	0	4	1.28	1.18	80	29.09

Note. N = 180 segments

<sup>1</sup> We reported the mean scores by three raters. DRM: Direct Rupture Marker; IRM: Indirect Rupture Marker; DCP: Direct Collaborative Process; ICP: Indirect Collaborative Process; DCI: Direct Collaborative Interventions; ICI: Indirect Collaborative Interventions; RI: Rupture Interventions; TI: Therapist Interventions.

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Table 2. Intraclass correlation CIS–P and CIS–T items

CIS–Patient items	ICC*	CIS–Therapist items	ICC*
DRM1 Tasks/Goals/Parameters	.79	DCI1 Task/Goal	.70
DRM2 Relationship	.77	DCI2 Relationship	.81
DRM3 Discouragement	.78	DCI3 Significant patterns	.86
DRM scale	.77	DCI4 Metacommunications	.72
IRM1 Linguistic avoidance	.81	DCI scale	.77
IRM2 Affective avoidance	.74	ICI1 Facts	.87
IRM3 Self-esteem regulation strategies	.55	ICI2 Affects	.81
IRM4 Acquiescence	.90	ICI3 Significant patterns	.64
IRM scale	.73	ICI scale	.77
DCP1 Task/Goal	.80	RI1 Linguistic avoidance	.89
DCP2 Affects	.62	RI2 Affective avoidance	.72
DCP3 Significant patterns	.73	RI3 Hostility	.85
DCP scale	.66	RI4 Perseveration	.79
ICP1 Facts	.86	RI5 Lack clarity	.83
ICP2 Affects	.81	RI scale	.87
ICP3 Significant patterns	.85	TI1 Supportive interventions	.81
ICP scale	.89	TI2 Explicative interventions	.80
		TI3 Explorative interventions	.66
		TI4 Expressive interventions	.73
		TI scale	.72

Note. N = 180 segments

\* Intraclass correlation (Shrout & Fleiss, 1979), two way random effects, absolute agreement, single measures (< .40 = poor; .40–.59 = fair; .60–.74 = good, and > .74 = excellent; Shrout & Fleiss, 1979).

Table 3. Differences between PD and not-PD patients. Descriptives and one-way analysis of variance (ANOVA)

Items	not-PD patients (n = 90)		PD patients (n = 90)		F	p value
	Mean	SD	Mean	SD		
DRM1 Tasks/Goals/Parameters	.24	.74	.54	1.08	4.713	.031
DRM2 Relationship	.28	.72	.18	.57	1.065	.303
DRM3 Discouragement	.09	.39	.27	.75	4.025	.046
DRM scale	.20	.42	.33	.69	2.172	.142
IRM1 Linguistic avoidance	.69	1.03	1.35	1.62	10.791	.001
IRM2 Affective avoidance	.93	1.30	.97	1.22	.056	.813
IRM3 Self-esteem regulation strategies	.31	.68	.62	1.17	4.773	.030
IRM4 Acquiescence	.14	.41	.29	.71	2.804	.096
IRM scale	.52	.54	.81	.77	8.618	.004
DCP1 Task/Goal	.72	1.14	.37	.66	6.535	.011
DCP2 Affects	.93	1.37	.37	.87	10.968	.001
DCP3 Significant patterns	.43	.95	.08	.34	11.182	.001
DCP scale	.70	.88	.27	.52	15.586	.000
ICP1 Facts	2.44	1.64	2.97	1.42	5.212	.024
ICP2 Affects	1.83	1.49	2.47	1.35	8.952	.003
ICP3 Significant patterns	.42	.82	.73	.98	5.326	.022
ICP scale	1.57	.86	2.05	.72	17.003	.000

Items	not-PD patients (n = 90)		PD patients (n = 90)		<i>F</i>	<i>p</i> value
	Mean	SD	Mean	SD		
DCI1 Task/Goal	1.06	1.30	1.37	1.45	2.296	.131
DCI2 Relationship	.98	1.33	.55	1.13	5.246	.023
DCI3 Significant patterns	.74	1.25	.23	.72	11.297	.001
DCI4 Metacommunications	.69	1.18	.42	.96	2.775	.097
DCI scale	.87	.78	.67	.61	3.624	.059
ICI1 Facts	1.20	1.70	1.95	1.65	9.022	.003
ICI2 Affects	1.94	1.45	2.72	1.36	13.735	.000
ICI3 Significant patterns	1.29	1.44	1.41	1.41	.330	.566
ICI scale	1.49	.90	2.16	.58	21.550	.000
RI1 Linguistic avoidance	.06	.23	.08	.27	.354	.553
RI2 Affective avoidance	.04	.30	.08	.31	.547	.461
RI3 Hostility	.11	.38	.45	.84	12.635	.000
RI4 Perseveration	.00	.00	.18	.44	14.756	.000
RI5 Lack clarity	.00	.00	.20	.60	9.889	.002
RI scale	.04	.12	.07	.15	17.307	.000
TI1 Supportive interventions	.23	.54	.73	1.19	5.301	.022
TI2 Explicative interventions	.16	.42	.58	1.12	10.514	.001
TI3 Explorative interventions	3.43	.98	3.51	1.01	.476	.491
TI4 Expressive interventions	1.07	1.44	2.31	1.66	9.487	.002

Appendix  
CIS–R items

CIS–Patient

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*Direct Rupture Markers (DRM)*

- DRM1 The patient does not agree with the therapist about therapeutic tasks and/or goals and/or is impatient about the therapeutic parameters (e.g., schedule and frequency of sessions, payments).
- DRM2 The patient criticizes the quality of the therapeutic relationship and/or the therapist as a person and/or his/her skills.
- DRM3 The patient is doubtful about feeling better and/or about continuing psychotherapy. The patient complains about the lack of improvement.

*Indirect Rupture Markers (IRM)*

- IRM1 The patient tends to shift rapidly from topic to topic, spends a lot of time talking about other persons or non-significant events, is excessively redundant, answers tangentially to therapist's interventions or gives short answers to the therapist's open questions.
- IRM2 The patient uses emotional withdrawal strategies (denies some evident affective state, intellectualizes the inner experience).
- IRM3 The patient tries to enhance his or her own self-esteem or, on the contrary, is hypercritical toward self.
- IRM4 The patient interacts in a acquiescent manner.

*Direct Collaborative Processes (DCP)*

- DCP1 The patient talks about goals and/or tasks of the psychotherapy in order to negotiate them with the therapist.
- DCP2 The patient talks about his or hers needs and feelings toward psychotherapy and/or the therapist, and/or clarifies the intensity and/or the quality of the feelings and/or attitude towards psychotherapy and/or the therapist.
- DCP3 The patient talks about the meaning of an event that has occurred in the therapeutic relationship, connects something that happened with the therapist to other episodes that occurred outside psychotherapy, or recognizes schemas and recurring models.

*Indirect Collaborative Processes (ICP)*

- ICP1 The patient talks about some significant event or introduces a new topic or element in psychotherapy.
- ICP2 The patient talks about his/her feelings and/or thoughts or clarifies the intensity and the quality of his/her feelings.
- ICP3 The patient talks about the meaning of events or connects a theme to another or to a schema/pattern/model.

CIS–Therapist

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*Direct Collaborative Interventions (DCI)*

- DCI1 The therapist is focused on the tasks and goals of the therapy.
- DCI2 The therapist is focused on feelings and/or thoughts and helps the patient clarify the intensity and/or the quality of feelings; the therapist is focused on the attitude of the patient toward therapy and/or on desires/affects of the patient toward the therapy and/or the therapist.
- DCI3 The therapist is focused on the meaning of an event with the patient, connects something that happened in psychotherapy to another theme, or identifies a pattern in the relationship with the patient.
- DCI4 The therapist gives the patient a meta-communication in order to get through an impasse, repair a therapeutic alliance rupture, or improve the collaboration with the patient.

*Indirect Collaborative Interventions (ICI)*

- ICI1 The therapist focuses on significant facts and/or introduces themes or elements of a theme.
- ICI2 The therapist focuses on the patient's feelings and thoughts or helps the patient to clarify the intensity or the nature of the feelings.
- ICI3 The therapist talks about the meaning of an event or connects a theme to another or to a recurrent pattern, etc.

*Rupture Interventions (RI)*

- RI1 The therapist abruptly changes the topic of the conversation.
- RI2 The therapist uses technical jargon or intellectualizes. Interventions are not focused on the actual experience of the patient.
- RI3 The therapist is hostile, sarcastic, and/or seems to compete with the patient.
- RI4 The therapist seem to excessively insist on a specific topic. The therapist is not attuned to the patient's answers.
- RI5 The therapist's interventions are confused in their form or in meaning. Interventions are not easy to understand.

*Therapist Interventions (TI)*

- TI1 Supportive interventions are those meant to support and reinforce some aspects of the patient's behavior or functioning, interventions that may reflect the willingness of the therapist to identify with the patient, or that are directed toward some positive behavior or attitude or that express opinions on themes that may be preoccupant either for therapist or patient (e.g., advice, praise, empathic validation, mirroring).
- TI2 Explicative interventions aim to explain something to the patient (e.g., specific information about the professional curriculum of the therapist, or about the patient's problem or about treatment modalities, etc.).
- TI3 Explorative interventions aim to explore and promote the patient's elaboration. Raters shall consider as explorative interventions open-ended clarifications and reformulations. Encouraging the elaboration is also an explorative intervention.
- TI4 Expressive interventions are communications in which the interpretative stance is predominant; the therapist may connect affects, themes of the past or present experience of the patient, point out a behavior without giving an explanation or making connections, or shift the attention onto themes that the patient tends to avoid. This scale comprises interventions such as interpretations, confrontations, observations.