

A Pilot Study of the Reliability and Validity of the Turkish Cognitive Therapy Adherence and Competence Scale

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Abstract

Objective: The aim of this study was to investigate the reliability and validity of the Turkish Cognitive Therapy Adherence and Competence Scale (CTACS) (Liese, Barber, and Beck, 1995). The scale is based on the evaluation of video taped therapy sessions using a certain coding system.

Method: In the content validity study, 4 judges placed items within the intended theoretical construct with a high degree of consensus. In the following part of the study, 2 judges coded 20 video taped therapy sessions randomly selected from a pool recorded at the Hacettepe University Psychotherapy Research Laboratory.

Results: The internal validity of the scale was $\alpha = 0.84$ for adherence and $\alpha = 0.83$ for competence. The intra-class correlation (ICC) coefficients were calculated using the absolute consensus method to determine inter-judge reliability coefficients for the data obtained from 2 judges. Mean ICC was 0.70 for the adherence dimension and 0.60 for the competence dimension. The relationship between adherence and competence was examined using Pearson's correlation coefficients, which were $r = 0.95$ ($n = 20$, $P < 0.001$) for the first judge, $r = 0.97$ ($n = 20$, $P < 0.001$) for the second judge, and $r = 0.95$ for both judges.

Conclusion: As preliminary evidence our findings suggest that the Turkish CTACS has acceptable levels of content validity and inter-judge reliability for use in clinical and research settings.

Key Words: Psychotherapy Research, The Turkish Cognitive Therapy Adherence and Competence Scale

INTRODUCTION

In clinical practice and research, adherence refers to the extent to which a particular psychotherapy approach or method is practiced in accord with its original tenets. The degree of competence in the use of an approach or method—in other words, the quality of application—is referred to as competence (Barber et al., 2003). According to Barber et al. (2003), one has to meet minimal levels of both adherence and competence in order to carry out effective psychotherapeutic treatment. Adherence is necessary, but not sufficient alone to result in competent therapeutic work.

Specifically, when researchers aim to examine the effectiveness of a psychotherapeutic approach and thus conduct outcome studies, they need to satisfy the adher-

ence condition in order to control for confounding variables that are related to therapist variables. Conducting therapy without adhering to the therapy protocol might be one of the reasons for the limited effectiveness of therapy (Barber et al., 2003); therefore, approach-specific treatment manuals have been widely used since the beginning of psychotherapy research. However, treatment manuals are not a sufficient solution to the standardization of practices and maintaining adherence (Moncher and Prinz, 1991). Thus, researchers have reevaluated the factors that are common across different approaches (particularly, therapeutic alliance) that predict therapeutic effectiveness (Lambert, Shapiro, and Bergin, 1986; Horvath and Greenberg, 1989; Horvath and Symonds, 1991). We have to consider the interaction between technical variables and client characteristics, in addition

Author Notes: 1) Our study was supported by Hacettepe University (grant HU-BAB 03G009) and TÜBİTAK (grant TÜBİTAK-SOBAG104K082). 2) We adhered to the ethical guidelines highlighted in the Turkish Psychologists Association Code of Ethics during the research project. Our study was approved by the Hacettepe University Ethical Committee for Medical, Surgical, and Drug Research.

Acknowledgement: We would like to thank our graduate students that were in the clinical psychology program at HU Psychology Department between 2003 and 2006, and our colleagues for their suggestions and comments.
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to the quality of the therapeutic alliance in order to understand the mechanisms of psychotherapeutic change (Castonguay and Beutler, 2006).

There is growing interest in developing new scales that measure the extent to which a psychotherapeutic approach is reflected in its application (the internal validity of the therapy processes). In this respect, researchers have primarily investigated the quality of application of cognitive therapies by evaluating the level of adherence and competence (DeRubeis et al., 1982; Luborsky et al., 1982; Barnackie et al., 1992; Hill et al., 1992; Blagys and Hilsenroth, 2002). Moreover, the contributions of adherence and competence, as well as the relationship between relational variables and specific therapy techniques to therapeutic outcome, were recently studied (Paivio, et al., 2004; Leob et al., 2005; McIntosh et al., 2005). Similarly, therapists' attitudes toward treatment manuals and structured treatments were recently studied (Addis and Krasnow 2000; Najavitz et al., 2000; Najavitz et al., 2004; Barber et al., 2006).

Various scales were developed to measure the level of adherence to cognitive therapy. One of these measures is the Cognitive Therapy Scale (CTS) (Young and Beck, 1980), which has been widely used for last 25 years. Despite its strengths, CTS has some psychometric limitations (Whism, 1993; Barber et al., 2003). According to Barber et al. (2003), the scale cannot measure either the adherence or the competence dimension and thus falls short to new developments in cognitive psychotherapy area. Regarding these limitations, Barber et al. (2003) developed the Cognitive Therapy Adherence and Competence Scale (The CTACS). The present study aimed to investigate the reliability and validity of CTACS with Turkish sample.

Cognitive Therapy Adherence and Competence Scale (CTACS)

Liese et al. (1995) developed CTACS in order to overcome the limitations of CTS and provide a measure that would be more reliable. In the reliability and validity study of CTACS (Barber et al., 2003), the internal consistency measure (Cronbach's alpha level) of the total scale was 0.92 for adherence and 0.93 for competence. These results indicated that the total scale provided a good representation of the responses to each scale item. The inter-judge reliability coefficients for CTACS were higher than the coefficients for other adherence-competence measures (Vallis et al., 1986; DeRubeis and Feeley, 1990; Hill et al., 1992). Moreover, the inter-judge reli-

ability was calculated with intra-class correlation coefficients (ICC). Items that had ICC < 0.40 (items 12, 13, 14, and 21) were excluded from the scale. For adherence and competence total scores of the 21 item version of the scale, ICC level was 0.67 ($n = 92$) and 0.73 ($n = 92$), respectively. Inter-judge reliability high for items that were related to therapeutic structure, but low for items of collaboration and case formulation in general. Since cognitive therapy (CT) is a highly structured psychotherapy approach, researchers found these results to be statistically significant. Moreover, Barber et al. (2003) showed that inter-judge reliability was also influenced by patient-related variables and session agenda. Results showed that CTACS is a psychometrically appropriate measure for psychotherapy research (Barber et al., 2003).

With the present preliminary study, we sought to investigate the reliability and validity of CTACS with a Turkish sample. We aimed primarily to obtain a measure of adherence and competence that could be utilized in future studies of the variables involved in brief cognitive psychotherapy. There is growing interest in the study and application of CT in Turkey and we predicted that this scale would therefore be used in various settings. We thought that this scale would be very useful for standardizing the use of CT and for objectively evaluating the training processes.

METHOD

Pilot study

Translation

Three clinical psychology doctoral students initially translated CTACS into Turkish. They reexamined the translation with the help of an additional 3 doctoral students from the same department. The 6 doctoral students reached a consensus on the translated form, which was then sent, along with the original English version of the scale, to 5 judges. The judges were experienced clinical psychologists, each with 15 years of experience conducting cognitive behavioral therapy. They were asked to evaluate the overall quality of translation, as well as its language, fluency, cultural sensitivity, and appropriateness to clinical practice, using a structured evaluation form. We revised and finalized the form in light of judges' comments.

The Clinical Applicability Study

CTACS is based on the evaluation of the audio-visual records of cognitive behavioral therapy sessions using a

Table 1. Classification of each item by dimension (%).

	Dimension 1 (%)	Dimension 2 (%)	Dimension 3 (%)	Dimension 4 (%)
Dimension 1: Cognitive Therapy Structure				
1. Agenda	100	0	0	0
2. Mood check	75	25	0	0
3. Bridge from previous visit	100			
4. Inquired about ongoing problem	75	0	25	0
5. Reviewing previous homework	25	0	0	75
6. Assigning new homework	0	0	0	100
7. Capsule summaries	75	0	0	25
8. Patient summary and feedback	75	25	0	0
9. Focus/structure	75	0	0	25
Dimension 2: Development of a Collaborative Therapeutic Relationship				
10. Socialization to the CT model, concepts, process, or structure	100	0	0	0
11. Warmth/genuineness/congruence	0	100	0	0
12. Acceptance/respect	0	100	0	0
13. Attentiveness	0	75	25	0
14. Accurate empathy	0	100	0	0
15. Collaboration	0	100	0	0
Dimension 3: Development and Application of Case Conceptualization				
16. Eliciting automatic thoughts	0	0	0	100
17. Eliciting core beliefs and cognitive schemas	0	0	0	100
18. Eliciting meaning/understanding/attributions	0	0	75	25
19. Addressing key issues	0	0	75	25
20. Case conceptualization: linking the past to the present	0	0	100	0
21. Sharing therapist's conceptualization with the patient	25	0	75	0
Dimension 4: Cognitive and Behavioral Techniques				
22. Guided discovery	0	0	0	100
23. Asking for evidence/alternative views	0	0	0	100
24. Use of alternative cognitive and behavioral techniques	0	0	0	100

*Item 25 is related to overall performance and was not included in the content reliability, and is therefore not shown in the table.

specific coding system. Therefore, following the translation we conducted a preliminary study to test the clinical applicability of the form and the strength of the coding process. In this preliminary study we utilized the audio-

visual records of cognitive behavioral therapy sessions of supervised graduate students in the Hacettepe University Clinical Psychology Masters Program. We randomly selected 6 therapy records of 3 therapists and used them

Table II. Means, standard deviations, and intraclass correlations between the CTACS adherence and competence items.

Item	Adherence			Competence		
	ICC	M	SD	ICC	M	SD
1	0.76	4.93	1.02	0.58	4.35	0.75
2	0.69	4.40	1.02	0.53	3.87	1.42
3	0.76	4.21	1.61	0.86	3.68	2.44
5	0.94	4.92	1.62	0.89	3.70	2.68
6	0.73	5.44	0.63	0.40	4.62	1.79
7	0.54	5.45	0.56	0.60	4.78	0.60
8	0.50	5.22	0.73	0.58	4.60	0.75
9	0.68	5.15	0.88	0.66	4.68	0.89
10	0.87	5.58	0.89	0.52	4.75	2.14
11	0.66	5.70	0.70	0.68	5.03	0.68
12	0.37	5.75	0.62	0.59	5.13	0.58
13	0.62	5.65	0.56	0.48	4.78	0.57
14	0.25	5.58	0.56	0.49	5.10	1.13
15	0.54	5.58	0.73	0.70	5.08	1.24
16	0.83	4.65	1.56	0.84	3.95	1.42
17	0.86	2.75	1.56	0.73	2.68	3.34
18	0.64	4.79	0.77	0.58	4.06	2.07
19	0.13	5.13	0.57	0.26	4.28	1.18
20	0.84	3.77	1.68	0.82	3.40	2.99
21	0.67	4.82	0.67	0.71	4.25	0.66
22	0.79	4.95	1.04	0.64	4.34	1.35
23	0.65	4.23	1.29	0.70	3.49	2.59
25	0.62	4.91	0.61	0.53	4.31	0.60

The scores of 2 judges were averaged for means and standard deviations (n = 20).

*The excluded items (i.e. item 4 and 24) are not included in the table.

for educating 3 judges (PhD clinical psychologists) for the main study. Two of them had 5 years of experience and other had 15 years of experience in CT.

These 3 judges coded the audio-visual records of 4 CT sessions of 3 therapists within the education group. We analyzed the judges' coding and found that the inter-judge reliability coefficients of the Turkish CTACS

were as follows: Session 1: ICC = 0.9059; Session 2: ICC = 0.5848; Session 3: ICC = 0.8915; Session 4: ICC = 0.6443. The ICC of 2 sessions was approximately 0.90 and for the other 2 sessions it ranged between 0.58 and 0.64. Considering 0.70 as the level of statistical significance for ICC, these results showed inadequate consensus among the judges in the preliminary study. Basing

our observations on group meetings in which the judges did not reach a significant consensus, we found that as the content of the therapy sessions was similar to the CT approach, coding became easier which resulted in increased ICC. Coding was also influenced by the clients' problems. For some specific problems, such as Axis-I obsessive-compulsive disorders, the coding was easier and inter-judge reliability was high, whereas for nebulous problems (e.g. those that could not be included within a diagnostic criterion, those that weren't related to self development) inter-judge reliability was low. A user handbook and CTACS guidelines should be developed in order to increase reliability and inter-judge consistency. We decided to develop a handbook that included standard guidelines for the judges.

The Main Study

Sample

Patients

Our patient group consisted of 10 patients that presented to the Hacettepe University Psychotherapy Research Laboratory (HU-PRL) between 2004 and 2006. Their ages ranged between 19 and 24 years. Their initial evaluations were conducted at the Hacettepe University Psychiatric Outpatient Clinic or at the Hacettepe University Health Center. Since our study focused on brief cognitive behavioral therapy, those patients with a diagnosis of an Axis-I mood disorder or anxiety disorder, and those that did not have a thought disorder or any Axis-II disorders were identified. Patients that satisfied this criterion read and signed the informed consent form. Then, we further evaluated them in respect to their appropriateness for CT using the Scale of Case Selection to Brief Cognitive Behavioral Therapy (Soygüt and Dürü, 2006). We included the session records of volunteer patients in the research pool. We conducted individual therapy sessions with these clients once a week for about 4-5 months.

Treatment and Therapists

HU-PRL was founded as a research- and education-based laboratory within the Hacettepe University Psychology Department. Process variables in psychotherapy are extensively studied in this lab, while graduate students in clinical psychology conduct therapy as part of their education. The therapist sample consisted of 7 of these graduate students. They were all female and aged between 24 and 25 years. Each therapist was extensively educated in the theoretical background of CT and its

various applications 1 year prior to the study. During this research their therapy sessions were supervised via the audio-visual records of their sessions. In this way we attempted to control the confounding variables rooted in differences in the educational background, experience, and supervision process of the 7 therapists. In order to structure the therapy sessions, therapists utilized the Turkish version of Cognitive Therapy: Basics and Beyond as a CT handbook.

Judges

Judges in Content Reliability Analysis: Four PhD clinical psychologists were judges.

Judges in Reliability Analysis: Two clinical psychologists (with 5 and 15 years of clinical experience) were judges in the reliability analysis. They each had at minimum a doctorate degree and cognitive behavioral therapy orientation. Prior to their participation they had nearly 10 hours of training on the application of CTACS.

Data Collection Instruments

Visual Records

One main tool of this study was audio-visual session records that were coded by the judges. We obtained the records of 14 sessions, on average, from each patient. First and second sessions usually involved intake interviews, while those following the tenth session fell within the termination phase of the therapy. Therefore, we excluded the records of these sessions from the study and included 68 session records in the analysis. We grouped the session records of each patient and randomly selected 2 records from each group in order to deter over or under representation of the patients. In total, 20 session records constituted the session sample, which was provided to the judges for individual evaluation.

Cognitive Therapy Adherence and Competence Scale (CTACS)

We used the 25-item version of the scale that was corrected for the coding system. Each item was scored on a scale of 1-7, in terms of the adherence and competence dimensions. For the adherence dimension, a score of 1 represented the lack of application of a particular item, whereas a score of 7 indicated the precise application of the item. For the competence dimension, a score of 7 indicated perfect ability to administer the therapy, while the inability to use the therapy method was scored as 1 (for individual items see Table I).

1. Agenda: Identified important target problems: prioritized and followed agenda.

1 2 3 4 5 6 7

Cognitive Therapy Adherence and Competence Scale (CTACS) Instructions

As mentioned before, following the observations during the preliminary study, we developed an instruction manual to standardize the coding system. This manual involved a detailed explanation of the specific score ranges that corresponded to each CTACS item. For example, we developed a scoring sheet for the agenda item as follows:

1. Agenda

Score 6-7	Therapist formed an agenda at the beginning of the session. Therapist and patient formed an appropriate agenda by identifying target problems and prioritizing (The problems or events the patient wanted to work out in the therapy were identified. Therapist provided his/her own views on the possible areas that could be worked out in the therapy). The agenda was then followed precisely during subsequent sessions.
Score 4-5	All criteria were satisfied, but the patient's views were not explored in detail or there was no clear consensus on the agenda.
Score 3-2	Agenda was formed in subsequent sessions. Agenda was not put forward in clear and open way. Agenda was formed, but not followed.
Score 0-1	Agenda was not formed. Topics of discussion were not consistent.

A similar strategy of instruction was used for each item of the scale.

RESULTS

Content Validity

In all, 4 judges (PhD clinical psychologists) were requested to evaluate the Turkish CTACS with a standard evaluation form, in terms of the distribution of items within the scale, and the degree of correspondence between all the items and cognitive behavioral therapy sessions. Based on the judges' evaluations, the classification of each item, in terms of sub dimension of the scale, are given in Table I.

As illustrated in Table I, items 1, 2, 3, 4, 7, 8, and 9, which were in Dimension 1 were classified with consensus under Dimension 1: Cognitive Therapy Structure by the judges. Items 5 and 6 (related to homework) of Di-

mension I were classified under Dimension 4: Cognitive and Behavioral Techniques. Items 11, 12, 13, 14, and 15 of Dimension 2: Development of A Collaborative Therapeutic Relationship were put under Dimension 2, with the consensus of judges. Item 10, involving socialization to the CT model, concepts, process, or structure, was placed under Dimension 1: Cognitive Therapy Structure. Items 18, 19, 20, and 21 of Dimension 3: Development and Application of Case Conceptualization were classified into Dimension 3, but items 16 and 17 of Dimension 3 were placed under the Dimension 4: Cognitive and Behavioral Techniques. Items 22, 23, and 24 of Dimension 4 were placed in Dimension 4 with the full consensus of the judges. In general, the judges classified scale items under sub-dimensions with a high rate of consensus, in accordance with the original form.

Reliability

We calculated intra-class correlation (ICC) coefficients using the absolute consensus method to determine the inter-judge reliability coefficients for the data obtained from 2 judges. We first examined the response frequency of the judges for each item. In most cases, item 4 (inquired about the ongoing problem) and item 24 (use of alternative cognitive and behavioral techniques) were not coded by the judges. Considering the infrequency of these constructs within most of the cognitive behavioral sessions, we excluded these items from analysis. Additionally, acceptance/respect (item 12), accurate empathy (item 14), and addressing key issues (item 19) had low ICC values ($ICC < 0.40$). Barber et al. (2003) found similar results for items 12 and 14, and excluded these items from the scale. We decided to keep these 2 items in the scale, which provided significant information regarding some sessions. The mean, standard deviation, and ICC values of the other 23 items are presented in Table II.

ICC values ranged between 0.13 and 0.94 for adherence ($n = 20$). Mean ICC value for adherence was 0.70 when the 2 problematic items were excluded from analysis. Mean ICC value for competence was 0.60 (range: 0.0 - 0.90).

Internal Consistency

Cronbach's alpha coefficients were used for computing the internal consistency of the scale. The coefficient was $\alpha = 0.84$ for adherence and $\alpha = 0.83$ for competence. Results indicated that total CTACS scores highly represented the scale's items. Additionally, Pearson's cor-

relation coefficients were calculated for the relationship between the adherence and competence dimensions of the scale, which were $r = 0.95$ ($n = 20$, $P < 0.001$) for the first judge and $r = 0.97$ ($n = 20$, $P < 0.001$) for the second judge.

Regarding the possibility that the judges that coded the 2 dimensions were biased, the association between the 2 dimensions was blindly calculated. With this aim, we calculated the association between one judge's rating of adherence and the other's rating of competence for a given session with crosswise Pearson's correlation coefficients. The correlation coefficient for the first cross group was $r = 0.77$ ($n = 20$, $P < 0.001$) and for the second group it was $r = 0.68$ ($n = 20$, $P < 0.001$). Results indicated that when coding biases of the judges were controlled, there was a strong relationship between the adherence and competence dimensions of CTACS.

DISCUSSION

This preliminary study indicated that the Turkish CTACS has acceptable levels of reliability and validity. CTACS demonstrated good content validity for the evaluation of the levels of adherence and competence of therapists conducting CT. The internal consistency of the scale was high and the scale was evaluated as reliable by the independent judges.

In terms of content validity, the judges distributed sub dimension items of the scale with a high level of consensus and in accord with the original version of the scale. Nevertheless, some items (5, 6, 10, 16, and 17) of specific sub dimensions in the original form were classified under other sub dimensions by our judges. Items 5 and 6 of the Cognitive Therapy Structure Dimension were related to homework assignments, which might lead judges to place them under the Cognitive Therapy Techniques Dimension. Similarly, the content of item 10, which involved socialization to the CT model, concepts, process, or structure (under Dimension 2: Development of a Collaborative Therapeutic Relationship) might lead judges to classify it under the Cognitive Therapy Structure Dimension. Furthermore, items 16 and 17 of the Development and Application of the Case Conceptualization Dimension were related to eliciting automatic thoughts, core beliefs, and cognitive schemas. These items were classified under the Cognitive Behavioral Techniques Dimension, which might appear to be related to the items' content. These items can represent the structure or technique of CT, depending on the session context. The judges' evaluations, however, were based

on structured evaluations of the sessions, without regard to the specific therapy context. Thus, different classification of these items compared to the original version is understandable. We observed that the scale dimensions could be evaluated based on the original version of the scale in our main study; therefore, we preserved the original English version in the Turkish form. Items 4 and 24, which were in the original form, were excluded from the last analysis. Since Barber et al.'s (2003) sample consisted of patients with the diagnosis of drug abuse, they argued that the evaluation of item 4 (which was related to inquiring about impulsive behaviors) was essential for their original scale. Moreover, they suggested that item 24 might be influenced by the therapist's level of experience. In this respect, therapy sessions of inexperienced therapists involved higher technical variation than sessions of more experienced therapists. In the present study, items 4 and 24 were not scored appropriately because none of the patients in our sample had an impulse control problem and the therapists were all inexperienced. Nonetheless, the Turkish form might be functionally used for diverse therapist and patient groups, and thus these items were not excluded from the scale. We added a "not appropriate for scoring" option for these items on the evaluation form.

As mentioned before, based on the judges' evaluations the internal consistency of the scale was significantly high. Furthermore, in line with the findings of Barber et al. (2003), we found high consistency across the adherence and competence dimensions. Whether the latter finding was a positive feature of the content of the items remains debatable. Barber et al. (2003) regarded the adherence and competence dimensions as separate constructs at the beginning of the study. Regarding the literature in support of our findings and those of Barber et al.'s, the authors did not expect to find differences between the adherence and competence dimensions since each construct was not a necessary condition for the other (2003). Studies that evaluated CT processes (e.g. Shaw et al. 1999) and those that examined psychoanalytic therapy processes (Barber and Crits-Christoph, 1996) found statistically significant correlations between the adherence and competence dimensions. Researchers cite rater biases, the evaluations of 2 dimensions sequentially, and the comparison of the evaluations of independent judges as possibly affecting the results (Barber et al. 2003). Moreover, authors argued that strong association between the adherence and competence dimensions was related to the high experience level of the therapists. We found a strong association between these 2 dimensions

despite the fact that in our study the therapists were inexperienced. This finding suggests that the strength of the relationship between the 2 dimensions was independent of the experience level of therapists conducting CT. Additionally, we found statistically significant correlations between the 2 dimensions based on crosswise analysis of the judges' scores for each dimension, which we performed to control for possible biases related to sequential scoring of the 2 dimensions. This finding supports Barber et al.'s (2003) argument that a strong relationship between adherence and competence was related to the content of CT. Based on the subjective experience of our study, we, however, suggest that adherence and competence levels should be independently evaluated. Preserving this form of the scale would provide more benefits to the field. Moreover, additional instructions that help differentiate the 2 dimensions should be added to the scale manual we prepared.

As did Barber et al. (2003), we found that therapists usually conducted CT in a didactic fashion during the initial sessions. In the following sessions, therapists placed more emphasis on collaboration with the patient. We argue that this is a natural tendency related to the nature of CT. The tendency to evaluate the therapeutic relationship and deep cognitive structures was reflected in CTACS, and this tendency is one of the strengths of the scale.

One contribution of the study processes to psychotherapy research was the manualized coding sheet for the scale. Our observations and findings suggest that training and instructions are significant elements in studies in which researchers consult judges for evaluations. The training and instruction package for CTACS has also improved the quality of psychotherapy education and supervision in our research center.

There are some limitations to our study; in general, the nature of psychotherapy research and the strengths of therapy practice in Turkey are related to these limitations. Firstly, we did not evaluate therapy sessions of therapists that used different psychotherapeutic approaches; thus, we could not examine the discriminative validity of CTACS in our Turkish sample. Our research team tried to deal with this issue, but there were practical and ethical problems related to collecting audio-visual records of therapy sessions from different institutions; therefore, we could not form a matched sample for our study group.

Our therapist sample consisted of students who were inexperienced in conducting CT, which was another lim-

itation of our study. In the initial phases of the study, we predicted that this would not be a major limitation since the consistency of the judges' evaluations was essential for our analysis. We aimed to determine the level of consistency between the judges' ratings for a given therapy session; therefore, using inexperienced therapists should not be regarded as a real limitation. In this respect, if the judges gave consistently low scores for a given therapy session, this would support the reliability of CTACS. This situation did not create any significant difficulty during rating; in contrast, we observed that because the therapists were inexperienced they were very careful about conducting therapy correctly, that is, adhering strongly to theory, instructions, and supervision. Their competence scores were relatively low, but, as mentioned above, there were no statistically significant differences; the therapists' use of CT provided adequate data for the judges to evaluate.

Another limitation was the relatively small sample size of the study (20 sessions). This limitation was because there were scarce sources for recruiting qualified applicants and judges. Intense efforts and time were needed to systematically collect psychotherapy session records, and to randomly select them and form a sample. Moreover, judges had to spend a significant amount of time rating each session. Taking all these conditions into consideration, we regarded the sample size as acceptable for a preliminary analysis. We plan to expand the pool of session records and create a more heterogeneous therapist sample.

The judges differed in terms of their clinical experience (10 years), which was related to the practical difficulties we faced within the study. We considered this diversity in judge experience as a limitation to our method and, thus, we developed a handbook to minimize this limitation. Despite judge diversity, in terms of their experience, the consistency of their ratings shows that widespread clinical use of this scale is possible. We predicted that after a certain level of education and experience, specialists would use this scale in clinical settings. In order to be competent in using this scale, one must be experienced in CT and should be trained in the application of the scale. In this respect, we suggest that our manualized instructions will enhance the effective use of the scale.

This preliminary study indicated that CTACS could prove useful to psychotherapeutic research and clinical practice. The scale provides significant feedback for CT supervision and individual/group CT evaluations.

CTACS can be used to evaluate the effectiveness of the training processes. That is to say, in order to standardize the applications of CT, this scale can contribute to clinical education on an objective basis.

In conclusion, studies of the original and Turkish forms of the scale were preliminary. We raised several

points that can be examined in future studies. We recommend that researchers investigate whether adherence to a therapy approach can predict the effectiveness of the therapy. Similarly, the association between the therapeutic alliance and adherence to a therapy approach, or competence level in a therapy process, should be examined in future studies.

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