

Psychometric Properties of the Turkish Working Alliance Inventory-Observer Form

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Abstract

Objective: This study aimed to examine the reliability and validity of the Turkish version of the Working Alliance Inventory-Observer Form (WAI-O) (Titchenor and Hill, 1989).

Method: The study included 18 videotape records of 6 therapists conducting short-term cognitive behavioral therapy. The videotape records were chosen randomly from the pool of Hacettepe University Psychotherapy Research Laboratory (HU-PRL) and coded by 3 judges. Intra-class correlation (ICC) coefficients for the scale were calculated using the average measure method to determine the inter judge reliability coefficients for the data obtained from the 3 judges.

Result: The ICC coefficients were 0.73, 0.70, and 0.78 for the bond, goal, and task dimensions, respectively. The ICC coefficient was 0.75 for the inventory total score. The internal validity of the scale was $\alpha = 0.90$. The item total correlation ranged between 0.84 and 0.96.

Discussion: On a preliminary basis our findings indicate that the Turkish version of the WAI-O Short Form has acceptable levels of reliability and validity for clinical and research use in Turkey.

Key Words: Working Alliance Inventory- Observer Form, Reliability and Validity.

INTRODUCTION

Bordin's transtheoretical reconceptualization of the therapeutic alliance has had a great impact on psychotherapy research (Bordin, 1979; 1980). He proposed a more operational definition consisting of 3 components: the first component includes an agreement between the therapist and patient concerning the task; the second component includes an agreement on the goals and anticipated outcomes; finally, the third component involves the affective bond, which refers to mutual trust

and acceptance between the therapist and patient. Bordin's transtheoretical perspective emphasized the importance of the interpersonal relationship in all therapeutic processes. Subsequently, psychotherapy research focused on both therapist and patient variables that contribute to the therapeutic alliance, and the robust finding that the therapeutic alliance might be the best predictor of therapeutic outcome was considered a turning point in psychotherapy research (e.g. Horvath and Symond, 1991; Martin et al., 2000; Safran and Muran, 2000).

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TABLE 1. An example from the WAI-O manual (Wang et al., 2005).

1. There is agreement about the steps taken to help improve the client's situation (Task).

1 point

Client states that tasks and goals are not appropriate, and does not generally agree on homework or in-session tasks. The client may argue with the therapist over the steps that should be taken. The client does not participate in tasks.

2 points

Client is hesitant to explore and does not follow therapist guidance. The client withdraws from the therapist, or does not engage or is not attentive to the therapist or to the task.

3 points

The client appears to be unsure as to how the tasks pertain to his/her goals, even after some clarification by the therapist. The client seems either ambivalent or unenthusiastic about the tasks in therapy, and could be resistant to the tasks (e.g., limited participation).

4 points

No evidence or equal evidence regarding agreement and/or disagreement.

5 points

Client follows exploration willingly with few or no therapist clarifications needed. The client becomes invested in the process, and is an active participant in the task. There is a sense that both parties have an implicit understanding of the rationale behind the tasks in therapy.

6 points

Client openly agrees on tasks and is enthusiastic about participating in tasks. Both participants are acutely aware of the purpose of the tasks and how the tasks will benefit the client. To this end, the client uses the task to address relevant concerns and issues.

7 points

Repeated communication of approval and agreement, both before and after the task is completed. The client responds enthusiastically to interventions, gains insight, and appears extremely confident that the tasks are appropriate.

The aforementioned theoretical progress increased the importance of assessing the therapeutic alliance. The Working Alliance Inventory (WAI), consisting of 36 items and based on Bordin's transtheoretical conceptualization, was developed by Horvath and Greenberg (1989) and has since been widely used in psychotherapy research (Martin et al., 2000). The WAI-Short Form (12 items) was developed by Tracey and Kokotovic in 1989, and this version is highly correlated with the original WAI (Busseri and Tyler, 2003). Following this, the observer form of the inventory was developed by Titchenor and Hill (1989) to increase the validity of the evaluations. Along with these developments in the assessment of the alliance variable that there is a growing emphasis on including a third-party observer in psychotherapy research

(e.g. Andrusyna et al., 2001; Fenton et al., 2001).

As reported by Hatcher and Gillaspay (2006), factor analytic studies yielded inconsistent findings for the factorial pattern of the inventory. Andrusyna et al. (2001) then underlined that the conceptualization of Bordin implies a factor structure characterized by 1 general factor and 3 secondary factors, each corresponding to one of the components. Supporting this definition, some research reported that only 1 general factor emerged; however, Andrusyna et al. also emphasized that there is a need for clarification of this definition of alliance with respect to the therapy construct, and their study examining this assumption showed that the inventory has 2 factors,—the task and goal dimensions were loaded under the same structure, and the bond dimension emerged as a different factor. Researchers argued that this factorial pattern might reflect the structural nature of cognitive therapy and proposed 2 factors for the WAI-O: agreement/confidence and relationship. Pursuing another line of research, Fenton et al. (2001) reported that the WAI-O is more likely powerful to predict the therapy outcome than the WAI-Therapist and Patient forms.

Considering that the aforementioned literature emphasized the importance of including the third-party observer in psychotherapy research, we thought that examining the psychometric properties of the Turkish WAI-O and its manual would be a worthwhile endeavor. Moreover, we considered that this instrument could be used in supervision settings, and as a follow-up of our previous study on psychometric properties of the Turkish WAI-Therapist and Patient forms (Soygüt and Işıklı, 2008) we also aimed to investigate the psychometric properties of the Turkish WAI-O.

METHODS AND MATERIAL

a. Translation Study

Pre-translations of the WAI-O and manual by 3 clinical psychology doctoral students were reviewed by a group of 6 clinical psychology doctoral students. Three experienced judges were asked to evaluate the original and Turkish forms, in terms of translation congruity. In addition to their suggestions, they were also asked to examine the scale in terms of language use and comprehensibility using a standard form.

As a second step based on a randomly selected videotape, these judges were also asked to examine the translation of the WAI-O manual in terms of language use and comprehensibility using a standard form.

TABLE 2. Inter-rater reliability co-efficients of the items.

Item	Cronbach's Alpha	95% Confidence Interval		SD ₁	SD ₂	F	P
		ICC Single	ICC Average				
1	0.82	0.59 (0.33-0.80)	0.81 (0.60-0.93)	17	34	5.47	0.000
2	0.91	0.78 (0.59-0.90)	0.92 (0.81-0.97)	17	34	11.34	0.000
3	0.87	0.66 (0.42-0.84)	0.86 (0.68-0.94)	17	34	7.55	0.000
4	0.87	0.69 (0.46-0.86)	0.87 (0.72-0.95)	17	34	7.83	0.000
5	0.84	0.65 (0.40-0.84)	0.85 (0.65-0.94)	17	34	6.30	0.000
6	0.80	0.55 (0.28-0.76)	0.78 (0.53-0.91)	17	34	4.80	0.000
7	0.84	0.58 (0.31-0.80)	0.81 (0.57-0.92)	17	34	6.08	0.000
8	0.90	0.72 (0.49-0.87)	0.88 (0.74-0.95)	17	34	9.57	0.000
9	0.89	0.70 (0.45-0.86)	0.87 (0.71-0.95)	17	34	9.25	0.000
10	0.85	0.65 (0.40-0.85)	0.85 (0.67-0.94)	17	34	6.62	0.000
11	0.81	0.60 (0.33-0.80)	0.81 (0.60-0.93)	17	34	5.34	0.000
12	0.92	0.76 (0.56-0.89)	0.91 (0.79-0.96)	17	34	11.58	0.000

b. The Main Study

Sample

Patients

Our patient group consisted of 10 patients that presented to the Hacettepe University Psychotherapy Research Laboratory (HU-PRL) between 2006 and 2008. Their ages ranged between 21 and 42 years. Their initial evaluations were conducted at the Hacettepe University Psychiatric Outpatient Clinic or at the Hacettepe University Health Center. As our study focused on brief cognitive behavioral therapy (CBT), those patients with an Axis-I mood disorder or anxiety disorder diagnosis, and those that did not have a thought disorder or any Axis-II disorders were identified. Patients that satisfied these criteria read and signed an informed consent form. Then, we further evaluated them with respect to their appropriateness for CBT using the Turkish form of the Suitability for Short-term Cognitive Therapy Rating Scale (Soygüt and Dürü, 2006). We conducted individual therapy sessions with these clients once a week for about 4-5 months. We included the session records of the volunteer patients in the research pool.

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 laboratory, while graduate students in clinical psychology conduct therapy as part of their education. The therapist sample consisted of 6 of these graduate students. They were all female and aged between 25 and 26 years. Each therapist was extensively educated in the theoretical background of CBT and its various applications 1 year prior to the study. During this research, their therapy sessions were supervised via audio-visual records. In this way, we attempted to control the confounding variables rooted in differences in the educational background, experience, and supervision process of the 6 therapists. In order to structure the therapy sessions, therapists utilized the Turkish version of *Cognitive Therapy: Basics and Beyond*, as a CT handbook (Beck, 2001), and the **Turkish Cognitive Therapy Adherence and Competence Scale (CTACS)**.

Judges

Three clinical psychologists (with 6 and 15 years of clinical experience) participated as judges in the study.

TABLE 3. Inter-rater reliability co-efficients of total and sub-scales.

Component	Cronbach's Alpha	95% Confidence Interval		SD ₁	SD ₂	F	P
		ICC Single	ICC Average				
Task	0.92	0.78 (0.59-0.90)	0.88 (0.81-0.97)	17	34	11.67	0.000
Goal	0.88	0.70 (0.47-0.86)	0.92 (0.71-0.95)	17	34	8.28	0.000
Emotional Bond	0.90	0.73 (0.52-0.88)	0.89 (0.76-0.96)	17	34	9.93	0.000
Total	0.91	0.75 (0.54-0.88)	0.90 (0.78-0.96)	17	34	10.39	0.000

TABLE 4. Internal consistency analysis.

	Cronbach's Alpha			
	Rater 1	Rater 2	Rater 3	General
Task	0.93	0.95	0.97	0.97
Goal	0.89	0.94	0.91	0.93
Emotional Bond	0.79	0.93	0.94	0.94
Total Inventory	0.96	0.98	0.98	0.98

Visual Records

One main tool of this study was audio-visual session records that were coded by the judges. We obtained the records of the 6 therapists (3., 7. and 15. Sessions). In total, 18 sessions constituted the sample, which was provided to the judges for individual evaluation.

b. Data Collection Instruments

Cognitive Therapy Adherence and Competence Scale (CTACS)

To evaluate adherence and competence levels of the sessions included in this study we used the Turkish CTACS (Soygüt et al, 2008). The instrument consists of 25 items—each scored on a scale of 1-7. 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 inability to use the therapy method was scored as 1. Cronbach's alpha coefficients were calcu-

lated as follows: adherence dimension: 0.84; competence dimension: 0.83. Intra-class correlation (ICC) coefficients were calculated using the absolute consensus method to determine inter-judge reliability coefficients for the data obtained from the 3 judges. Mean ICC scores were as follows: adherence dimension: 0.70; competence dimension: 0.60 (Soygüt et al., 2008).

The Working Alliance Inventory-Observer Form (WAI-O)

The WAI-O was developed by Titchenor and Hill (1989) from the client and therapist forms of the scale by altering the pronouns to fit an observer's perspective. It contains 3 subscales: agreement on tasks, agreement on goals, and development of bonds, each with 4 items rated on 7-point-Likert-type scale (Table 1). The ICC coefficient was 0.70; and mid-level correlations of the WAI-O with other related inventories were reported as follows: Penn: $r = 0.63$; CALPAS: $r = 0.56$; VTAS: $r = 0.46$ (Fenton et al., 2001).

The first WAI-O manual was developed by Raue et al. (1991). They created guidelines for how to approach the ratings of each item, as well as explanations tailored to each item. Wang et al. (2005) expanded the existing WAI-O guidelines, which were used in our study, and also altered the way in which ratings are assigned.

FINDINGS

Adherence and Competence

Eighteen sessions were coded with the CATS by ex-

TABLE 5. Total item correlations.

Item		Mean	SD	a	b
1	There is agreement about the steps taken to help improve the client's situation (task).	4.85	1.20	.905	.977
2	There is agreement about the usefulness of the current activity in therapy (task).	4.75	1.24	.952	.976
3	The client and the therapist (bond).	4.92	1.06	0.841	0.979
4*	There are doubts or a lack of understanding about what the participants are trying to accomplish therapy (goal).	5.02	1.33	0.954	0.976
5	The client feels confident in the therapist's ability to help (bond).	4.91	1.11	0.885	0.978
6	The client and therapist are working on mutually agreed upon goals (goal).	5.35	.81	0.840	0.979
7	The client feels that the therapist appreciates him/her as a person (bond).	5.24	.70	0.816	0.980
8	There is agreement on what is important for the client to work on (task).	5.35	1.02	0.910	0.977
9	There is mutual trust between the client and therapist (bond).	5.41	.87	0.915	0.978
10*	The client and therapist have different ideas about what the client's real problems are (goal).	5.26	1.22	0.881	0.978
11	The client and therapist have established a good understanding of the changes that would be good for the client (goal).	4.65	1.23	0.896	0.978
12	The client believes that the way they are working with his/her problem is correct (task).	4.89	1.19	0.955	0.976

*Reverse coded items; a: total item correlation; b: Cronbach's alpha value when item is excluded.

TABLE 6. Factor analysis (varimax rotation).

Item	Common Factor Variance	Factor Load Value	Loading	
			Factor-1 Load Value	Factor-2 Load Value
1	0.946	0.919	0.899	0.371
11	0.927	0.913	0.886	0.377
2	0.942	0.959	0.818	0.523
12	0.935	0.962	0.786	0.563
8	0.872	0.926	0.774	0.523
6	0.773	0.861	0.763	0.437
4	0.926	0.962	0.736	0.620
3	0.948	0.869	0.360	0.905
10	0.918	0.905	0.469	0.836
7	0.808	0.843	0.425	0.792
9	0.870	0.927	0.622	0.695
5	0.820	0.902	0.620	0.660
Variance explained:				
Total: 89.19%;				
Factor 1: 49.19%;				
Factor 2: 40%.				

perienced coders. Based on the instrument's subscales, means were summarized as follows: structure: 5.33 ± 0.92 , (range: 3.33-6.88); relationship: 5.48 ± 1.12 (range: 3.30-7.00); formulation: 5.16 ± 1.14 (range: 2.33-7.00); technique: 4.97 ± 1.30 . In the overall evaluation **total mean score was 5.22, indicating acceptable levels of adherence and competency of therapists included our sample.**

Inter-rater Reliability

ICC coefficients were calculated using the average measure method to determine the inter-judge reliability coefficients of the data obtained from the 3 judges (Table 2).

The ICC coefficients were 0.73, 0.70, and 0.78 for the bond, goal, and task dimensions, respectively. The ICC coefficient was 0.75 for total score of the inventory. The Cronbach's alpha coefficient was $\alpha = 0.90$; and item total correlation ranged between 0.84 and 0.96.

Internal Consistency

The Cronbach's alpha calculations for each subscale and total scale are given in Table 4.

Overall evaluation of these analyses shows that the inventory might have 1 general factor. Total item correlations based on means are presented in Table 5.

As can be seen in Table 5, the observed ranges (between 0.84 and 0.96) might be indicative of 1 general factor (mean: 60.6 ± 11.90).

The Structure of Therapeutic Alliance in Cognitive Behavioral Therapy

Although the limited number of participants made it difficult to conduct factor analysis, we examined principal component analysis with Varimax rotation for 2 factors in order to evaluate the structural congruency of the Turkish WAI-O with the model proposed by Andrusyna et al. (2001) (Table 6).

As can be seen in Table 6, prior to rotation all items were loaded under the same structure (Eigen value = 10; total variance = 83.39%). Accordingly, alliance in the cognitive behavioral therapy process might be predicted by 1 general factor; however, following rotation 2 factors emerged: factor 1 (Eigen value = 5.90; total variance = 49.19%); factor 2; (Eigen value = 4.79; total variance = 40%). Total variance for both factors was 89.19%. Item-based evaluations showed that items reflecting the task and goal dimensions were loaded under factor 1, and items related to the bond dimension were loaded under factor 2. Only 1 item (item 10) reflecting the goal dimension was loaded under factor 2.

DISCUSSION

In general, our findings indicate that the Turkish WAI-O has acceptable levels of reliability and validity. In terms of reliability, a high level of agreement among the 3 judges was observed for all 12 items on the inventory. In addition, the reliability coefficients were very similar to those previously reported (Andrusyna et al., 2001; Fenton et al., 2001).

Total item correlations and internal consistency analysis was conducted to examine the scale's validity. Each item had statistically significant and strong correlations with the total item correlations. Internal consistency calculations yielded a high Cronbach's alpha value, which might be indicative of 1 general factor as emphasized by some authors (Salvio et al., 1992; Hatcher and Barends, 1996). Previous psychometric studies showed that there were 3 different factorial patterns for the inventory: a 1-factor model, a 2-factor model, and 2 corresponding factors that were loaded under 1 general factor; however, the latter was not examined. Therefore, although we had a limited number of participants, as a preliminary step we intended to investigate this model in our study and observed that the WAI-O items were loaded under 1 general factor. Nonetheless, when we examined the corresponding factorial structure assumption (Andrusyna et al., 2001; Hatcher and Gillaspay, 2006), we also observed that there were 2 corresponding factors (the task and

goal dimensions were loaded under 1 factor; however, the bond dimension was differentiated).

Andrusyna et al. (2001) drew attention to the possibility that the task and goal dimensions, though distinct, covary as 1 factor, as measured in cognitive behavioral therapy with the WAI scales. They further argued, "the confidence item does not seem to fit in Bordin's bond component, suggesting that confidence in the therapist and therapy also falls within the factor comprising the task and goal" (p.177). Similarly, in the present study, items 5 and 9 were equally loaded with 2 different factors. Regarding that these items assess both confidence between therapist and patient, this finding might be a reflection of overlapping structures. These speculations need to be addressed in future studies. Overall, it seems that the present

study uncovered a factorial pattern for the Turkish WAI-O similar to that reported by Andrusyna et al. (i.g. agreement/confidence and relationship factors)

The major limitation of this study is small number of participants, which we try to compensate with basing adherence measures as inclusion criteria.

In conclusion, given that the present study shows that the Turkish WAI-O has acceptable levels of reliability and validity, it could prove useful in psychotherapeutic research and clinical settings by providing a method of assessment of the therapeutic alliance via a third-party observer. Furthermore, the Turkish version of the WAI-O manual might also be useful in research and psychotherapy training.

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