



# Development and Validation of the Drexel University ACT/CBT Therapist Adherence Rating Scale: Phase II



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## Introduction

The Drexel University ACT/CBT Therapist Adherence Rating Scale (DUTARS) was adapted from the Adherence Raters' Manual for the NIDA ACT/Bupropion Smoking Cessation Treatment Study (Gifford, Pierson, Smith, Bunting, & Hayes, 2003) and the Cognitive Therapy Adherence and Competence Scale (CTACS; Liese, Barber, & Beck, 1995). It represents an attempt to combine items relevant to assessing therapist practices specific to Acceptance and Commitment Therapy (ACT) and Cognitive Behavioral Therapy (CBT) with items focusing on more general therapist attributes within a single scale. The Adherence Raters' Manual, the CTACS and multiple treatment manuals were reviewed to generate a pool of items.

Research in the area of ACT has increased exponentially in recent years. Nearly five times as many ACT-related publications and studies came out in the past five years as in the preceding 15 years. There is a need for an adherence rating scale to be used in the many Randomized Controlled Trials comparing ACT to gold standard treatments, which are frequently cognitive-behavioral.

The DUTARS is designed to measure the presence or absence of 33 therapist behaviors at five-minute intervals. These behaviors fall into six subscales, with no overlaps among subscales:

- Relationship-building
- Treatment implementation
- CBT-specific behavior
- ACT-specific behavior
- Miscellaneous therapist behaviors
- Therapist competence

During the first phase of development, interrater reliability and internal consistency ratings were high (.96-.99) for the full scale, as well as the five adherence subscales. The discriminant validity of the DUTARS was supported. However, the interrater reliability for the therapist competence subscale fell below acceptable levels (.61) and the alpha coefficient for the competence subscale (.76) was significantly lower than that of the other subscales. In order to improve the scale's psychometric properties, items with low interrater reliability were dropped and the instructions for rating competence were modified. This poster will report on the second phase of measure development and validation.

## Method

Participants in this study had recently participated in a clinical trial at the Drexel University Student Counseling Center in which they were randomized to receive either CBT (n=15) or ACT (n=17). All of these sessions were audiotaped. Forty-one of these treatment session tapes were randomly selected for use in the current study. Ratings were made of whole audiotaped therapy sessions ranging from 20 to 60 minutes (mean=49.5 minutes).

The raters (n=6) consisted of psychology students (5 graduate, 1 undergraduate) with variable training (4/6 have formal training in ACT, 3/6 have formal training in CBT) and experience (4/6 have conducted ACT and CBT). All raters were provided with an overview of CBT, ACT, and the rating scale. All rated and received feedback on number of practice sessions.

## Drexel University

**Adherence Rating Scale for the Drexel University ACT/CBT Trial**

Adapted from the Adherence Raters' Manual for NIDA ACT/Bupropion Smoking Cessation Treatment Study (Gifford, Pierson, Smith, Bunting, & Hayes, 2003) and the Cognitive Therapy Adherence and Competence Scale (CTACS; Liese, Barber, & Beck, 1995)

Subject ID: \_\_\_\_\_ Session Date: \_\_\_\_\_ Session Number: \_\_\_\_\_ Therapist Initials: \_\_\_\_\_ Rater Initials: \_\_\_\_\_

Listen to audiotaped therapy session. Every five minutes, pause the audiotape and check (✓) off all behaviors that occurred within the past 5 minutes. If the session terminates early, write an X at the top of the remaining time interval(s) and strike through the column(s). If the therapist is unobservable for more than half of a time interval (2.5 minutes) write an I at the top of the time interval and strike through the column. At the end of the session, complete the competence items.

Did the therapist...	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
<b>Relationship-building</b>										
1 Listen actively?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Make empathic statements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Make summary statements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Ask for patient feedback about session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Treatment implementation</b>										
1 Provide focus and structure (i.e. identify important areas to be addressed in session, direct the flow of conversation and redirect the client as necessary)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Review previous homework?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Assign new homework?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Discuss the client's treatment goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>CBT specific behavior</b>										
1 Structure the client to the CBT model (concepts, process and/or structure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Elicit automatic thoughts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Refute automatic thoughts to the client's problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Elicit core beliefs and schemas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Refute core beliefs and schemas to the client's problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Ask the client to consider evidence supporting or refuting their beliefs and/or core beliefs/schemas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 State or confirm that thoughts lead to feelings or behaviors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Relate improvement in client's symptoms or problems to changes in beliefs or thoughts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>ACT specific behavior</b>										
1 Socialize the client to the ACT model (concepts, process and/or structure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Discuss language conventions aimed at helping the client to remember that thoughts and feelings are not necessarily real?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Discuss the client's ability to observe thoughts and feelings without acting on them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Discuss the client's sense of self-awareness or identification as the context in which all of their thoughts, feelings, and evaluations occur (i.e. the place from which they can observe their thoughts and feelings)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Discuss the client's willingness to contact and accept difficult thoughts, feelings, memories and/or bodily sensations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Encourage the client to experience difficult thoughts, feelings, urges, memories and/or bodily sensations either in or out of session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Encourage the client to be mindful of current experiences, both in and out of session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Identify client's efforts to control his or her thoughts or feelings as problematic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Discuss the client's history of attempts to solve his or her problems and/or the consequences of this unskillful behavior?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Discuss the client's beliefs and goals based on stated values?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Encourage the client to generate and/or keep commitments in any area of life or his life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Discuss client versus duty disconnector?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Miscellaneous</b>										
1 Ask about the client's mood or ongoing problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Discuss the client's in-session behavior, past or present (i.e. comment on it, link it to client's experiences in other situations/relationships)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Encourage the client to identify high-risk situations for problem behaviors and/or client's coping skills to manage them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Link the past to present beliefs, thoughts, emotions or behaviors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Use confirmatory responses or statements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Behavioral</b>										
1 Discuss behavioral activation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Facilitate in vivo exposure in session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Assign or discuss homework assignments related to in vivo exposure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Facilitate imaginal exposure in session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Discuss relaxation training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Model behaviors or responses for the client?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Role play with the client?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Provide skills training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

When rating the competence items, please note that a lack of adherence to treatment condition should negatively impact competence ratings (with the exception of item 4).

Rate the therapist...	Poor	Fair	Good	Very Good	Excellent
1 Knowledge of treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Skill in delivering treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Appropriate application of treatment components within the context of the session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Relationship with the client	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Overall performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To which condition do you believe this participant was assigned?

ACT  
 CBT  
 I don't know.

## Results

### Interrater Reliability

Strout and Fleiss's (1979) intraclass correlation coefficient (ICC) model 2, a random effects model, was used to measure interrater reliability. The ICC (2,1) coefficients were uniformly high:

- Full scale: 0.95
- Relation-building subscale: 0.92
- Treatment implementation subscale: 0.97
- CBT subscale: 0.94
- ACT subscale: 0.96
- Miscellaneous therapist behavior subscale: 0.93
- Competence subscale: 0.86

### Internal Consistency

Cronbach's alpha was used to measure internal consistency. Alpha coefficients were uniformly high:

- Full scale: 0.92
- Relation-building subscale: 0.96
- Treatment implementation subscale: 0.93
- CBT subscale: 0.91
- ACT subscale: 0.93
- Miscellaneous therapist behavior subscale: 0.92
- Competence subscale: 0.95

### Discriminant Validity

Discriminant validity was examined by correlating the CBT items and subscale scores with the ACT items of subscale scores. The discriminant validity was supported by the low *r* values (ranging from -.28 to .23), and non-significant correlations found in these analyses.

## Discussion

These results support the internal consistency and construct validity of the six adherence subscales, the full scale score, and the therapist competence scale. The DUTARS appears to have utility as a measure of treatment integrity and distinctiveness in comparative treatment research.

### Advantages of the DUTARS

- The only adherence and competence scale suitable for rating both ACT and CBT
- Can be used reliably by raters with variable experience, education, and training
- Measures therapy content
- Can be used as a measure of process and a predictor of therapeutic outcome
- Provides detailed feedback to therapists

### Directions for Future Research

Further work to substantiate the reliability and validity of the DUTARS will explore its factor structure, construct validity and predictive validity.