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Development of an ACT prototype for therapeutic skill assessment

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Abstract
Research on therapist training requires efficient therapist skill assessments. One skill is the ability to identify clinically relevant processes and their effective targeting in therapy. This can be tested by tasks that involve participant coding of simulated therapy sessions. One such task was developed for this study using the process model of Acceptance and Commitment Therapy (ACT). This measure showed sensitivity to therapy training histories of participants both by moving with ACT training workshops, and by differentiating undergraduates and therapists. Limitations included lack of a randomized control condition and high drop-out. Further assessment refinement may support process-focused psychotherapy training.

Keywords: Acceptance and Commitment Therapy; psychotherapy; competency; training; workshops; assessment

Proponents of evidence-based practices (EBPs) in psychotherapy face a challenging question: how do you know when a therapist has been adequately trained? Common methods of EBP dissemination such as workshops and manuals are unreliable sources of change (Herschell, Kolko, Baumann, & Abigail, 2010; Shafran et al., 2009). EBP training efforts routinely fail to assess impact, in part due to the need for validated and efficient measures of therapeutic

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skill (McHugh & Barlow, 2010; Schoenwald et al., 2011). In hope of better understanding the impact of training, the current paper describes the development and evaluation of prototype for assessing therapeutic skill in Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 2012).

Assessing the impact of training on therapeutic skill requires clarity about what precisely is being disseminated. Psychotherapy models can be understood as systems of rules or principles that modify therapist sensitivity to clinically relevant processes in therapy sessions (Kohlenberg & Tsai, 1991). The ACT model aims to help therapists detect opportunities to support psychological flexibility which can be defined as “contacting the present moment as a conscious human being, fully and without needless defense – as it is and not as what it says it is – and persisting with or changing a behavior in the service of chosen values” (Hayes, Strosahl, & Wilson, 2012, pp.96-97).

ACT components and putative change processes have been successfully tested, highlighting six key psychological flexibility processes: flexible attention to the present, self, defusion, acceptance, values, and committed action (Hayes, Villatte, Levin, & Hildebrandt, 2011; Levin, Hildebrandt, Lillis, & Hayes, 2012). Therapist sensitivity to these flexibility processes and knowing how to target them is considered to be a foundational component of ACT therapeutic skill (Luoma, Hayes, & Walser, 2007).

Despite support for its underlying model, ACT faces the same practical challenge confronted by other EBPs: that of determining precisely when a therapist has been successfully trained. ACT training efforts would benefit from assessments that provide evidence-based competency benchmarks – assessments of therapeutic skill that have been shown to move with training and to be predictive of client outcomes. Ideally such measures would also have
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prescriptive utility, such that specific qualities of therapist performance could inform targeted trainings.

A number of different approaches have been tried. For example, to assess the impact of ACT training within the United States Veteran’s Health Administration (USVHA) researchers used observers to rate therapist competence as revealed in recordings of ACT sessions. These ratings were found to increase with training (Walser, Karlin, Trockel, Mazina, & Barr Taylor, 2013), but as of yet there are no objective criteria for competence that can be applied to them. In that context it is telling that the criterion for competence was consensus based, not empirical, in the USVHA roll out of ACT: “Based on expert consensus, minimum competency for successful completion of training was defined as a score of at least 90 on at least one rating of this scale” (Walser et al., 2013; p. 557).

One might try to overcome the criterion issue by correlating observer ratings of sessions with client outcomes (e.g., Webb, DeRubeis, & Barber, 2010). Unfortunately, interpretation of any such correlation could be confounded by therapist responsiveness and client severity (Perepletchikova & Kazdin, 2005; Webb, DeRubeis, & Barber, 2010). That problem suggests the need for an alternative assessment approach that can be administered independently of the client changes used to validate it.

ACT skill has been also been assessed through quizzes that test knowledge of ACT vocabulary and principles (e.g., Luoma & Vilardaga, 2013). Quizzes could avoid the interpretive confounds faced by observer ratings of sessions, but having conceptual knowledge of the ACT model and of psychological flexibility processes is not the same as the having the skills needed to track and change them. Therapist ability to detect such cues in session and to target them is considered essential for ACT (Hayes, Strosahl, & Wilson, 2012, pp. 103-140). For example, ACT
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therapists are asked to react with sensitivity to “subtle but highly significant nonverbal signals or behaviors (i.e., eyes dropping or saddening, clinched fists, lip biting, hand rubbing) that reflect the client’s psychological attitude” (Hayes et al., 2012, pp. 103-104), but skills of that kind are not assessed by paper and pencil knowledge tests.

Another approach to assessing therapist ability to discriminate ACT processes in session might be generated by examining therapist ability to code flexibility processes in a manner similar to experts. Procedurally, this is similar to competency coding, except instead of examining the coding of therapists we are suggesting examining the coding done by therapists (see Plumb & Vilardaga, 2010). Researchers of other EBPs have anecdotally observed that competency coders have a tendency to develop sensitivity to “the interior processes of psychotherapy” (Miller & Mount, 2001, p. 470). Insofar as sensitivity to therapy processes supports the acquisition and delivery of ACT-consistent behavior, performance as a coder may provide a metric of a key component of therapeutic skill.

A person’s “eye” and “ear” for therapy processes can be tested in a standardized fashion by their ability to code simulated therapy sessions (Worrall & Fruzzetti, 2009). The current study applied this rationale to develop an assessment of therapist skill in detecting change processes in simulated sessions of ACT. To our knowledge, this type of assessment has never before been empirically tested within ACT.

The current study evaluated an assessment prototype of this kind by examining its change in association with ACT training workshops and its variability across individuals with different training histories (i.e., therapists and students). This was done based on the recommendation by Perepletchikova and Kazdin (2005) that therapeutic skill assessments be developed with special attention to the two criteria: 1) They should discriminate between
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individuals who are known to be more or less experienced in a particular approach; and 2) They should be responsive to training. If these two criteria are satisfied, the prototype may be worthy of further attention.

METHOD

Assessment Construction

The assessment developed for this study compared participant reactions to simulated therapy sessions with reactions provided by experts. Because this approach shares some procedural similarities with competency coding in clinical trials, there can be a tendency to confuse the two methods of assessment. In order to avoid confusion, we shall refer to the assessment method used in this study as Therapist Agreement with Sensitivity to Context (TASC). The name is meant to emphasize that it is targeting agreement with the expert’s sensitivity to stimuli encountered in the context of a therapy session, rather than intellectual agreement about ACT theory (e.g., Hayes et al., 2012, pp. 103-104).

This study created an ACT TASC focused on coding therapist targeting of ACT processes and therapist consistency with ACT. This was done by adapting videos of simulated sessions from the Learning ACT manual (Luoma, Hayes, & Walser, 2007), a popular training manual for ACT that has been used by the USVHA in their dissemination efforts (Walser et al., 2013). It includes a DVD containing 31 video segments of simulated therapist-client interactions, ranging in length from 30 seconds to about 8 minutes. These segments used expert therapists (i.e., the book’s authors) and actors to demonstrate a range of ACT competencies across each of the six psychological flexibility processes as well as the general ACT therapeutic stance. ACT terms and techniques were used throughout the clips, while the level of therapist skillfulness varied.
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Expert commentary following each segment on the *Learning ACT* disc explained the therapist’s behavior as being primarily either ACT-consistent or ACT-inconsistent, identified which ACT processes the expert was attending to while making this judgment, and identified which ACT process was being primarily targeted by the therapist. Note that the process most strongly attended to by the expert differed at times from the process primarily targeted by the therapist in the segment. This is because multiple processes can be simultaneously in operation. For example, an expert might notice the therapist trying to target the process of defusion while inadvertently impacting the process of acceptance in an ACT-inconsistent way.

To adapt the videos to the ACT TASC, all expert commentary was deleted and the video segments of simulated therapy sessions were embedded into an online survey. Each video in the TASC survey was followed by these questions that prompted for a coding response:

1. How would you rate the therapist’s behavior in this segment?
2. Which process was the therapist attempting to use in this segment?
3. Which process most strongly influenced your rating of the therapist in this segment?

These were presented as multiple-choice questions with mutually exclusive categorical response options. Question one provided two response options (ACT consistent or ACT inconsistent), whereas questions two and three provided seven response options (each of the six psychological flexibility processes plus the ACT therapeutic stance).

Construction of the TASC questions was determined by the first author of this study, who coded the expert commentary such that one “point” could be scored for each instance of agreement with an expert. An example of how this coding was done can be seen with commentary by ACT expert Robyn Walser on one of the therapy segments:

This clip was fairly ACT consistent at first [because I got the client] to recognize the emotion she was experiencing in the moment. That is something you would do in ACT. However, once that emotion was recognized, in the name of ‘validation’ I changed and moved in and tried to comfort her. . . . And although that may be helpful in small ways in the long run that probably will not help the client find a place where she can be flexible and more willing in such a way that her
values are actively chosen. So there's a place here where I allowed her to escape and in that escape reinforced the notion of control.

This commentary was coded to indicate the following “correct” answers for the three TASC coding questions above: ACT-inconsistent, contacting the present moment, acceptance.

It is worth noting that the expert commentary could have been coded in different ways, to produce different “correct answers.” The practice of coding therapist descriptions of their own behavior and using this as a criterion is similar to the approach used in research examining the discrimination of subtle social cues (Azrin & Hayes, 1984). This differs from the procedures of clinical trials that use independent observers to code sessions (Plumb & Vilardaga, 2010). The relative advantages and disadvantages of different approaches to coding could themselves be made the subjects of empirical study.

Because interaction with the ACT TASC required at least a basic grasp of ACT, a brief written introduction to the ACT model and its key vocabulary was included prior to the ACT TASC. When available from the Learning ACT DVD, an introduction to each client’s presenting problem and therapy goals was printed in the ACT TASC above each embedded video.

Additionally, the following text served as orientation to the video rating procedures:

In the remaining pages of this survey, we will present you with 31 short video segments of therapy role-plays, and ask you to rate them. Some of the videos will begin in an identical manner, but end differently. In some of the videos, therapists will use ACT skillfully. These are ACT-consistent videos. In other video segments, therapists will make mistakes in their use of ACT. These are ACT-inconsistent videos. After each video we will ask you to [1] rate the therapist’s behavior as either ACT-consistent or ACT-inconsistent. You will also be asked to [2] indicate which ACT psychological flexibility process the therapist was trying to use, and [3] which process most heavily influenced your rating. Sometimes you might notice multiple processes. Try to pick the one that you notice most strongly. These video questions are intended to be challenging. So, it is OK if you are not completely sure of the correct response. Please just use your best judgment.

Workshops, Recruitment, and Incentives
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ACT workshop attendees were recruited through an email forwarded by the second author either to individuals who had signed up to attend an ACT workshop, or to an “ACT for Professionals” email list inviting participation from attendees of ACT trainings held during a professional conference. All ACT workshops included in this study were conducted by peer-reviewed ACT trainers recognized by the Association for Contextual Behavioral Science (ACBS) – an international professional association that has guided ACT development. The ACBS peer-review process was developed for quality control (among other reasons) and involves peer evaluation of the trainer’s knowledge and ratings by two independent observers of the applicant’s fidelity to the ACT model during training (ACBS, 2015). Table 1 provides information about the workshops targeted for recruitment and the number of participants obtained from each.

Study volunteers were offered the following incentives (which were distributed only to those who participated in the post-workshop survey): A one hour online group consultation with Steven C. Hayes, online videos containing the Learning ACT expert commentary segments, and a lottery for a $200 Amazon.com gift card with a chance of winning of approximately 1/100. With the exception of the email sent to a professional listserv regarding the entire ACBS World Conference, which produced a minimal response rate (less than 1%), the emails were successful in recruiting approximately a fifth of workshop participants (203 out of 974).

Undergraduate Recruitment and Incentives

The undergraduate sample was recruited through an online posting to the University of Nevada’s Psychology Department’s Experiment Sign-up System. Some psychology courses offer students extra credit for participating in research through this system, such that they might
improve their course grade (e.g., from a B- to a B). The online posting was titled, “Can you tell how well a therapist is doing?” A total of 189 undergraduates participated in the study.

**Procedures**

Workshop participants were invited to complete the ACT TASC and other measures in an online survey prior to their ACT training (the Pre assessment point) and 1-3 weeks following the training (the Post assessment point). The undergraduate sample was also invited to complete the ACT TASC and other measures in an online survey but were given no training and were subsequently invited to complete the same survey again 1-3 weeks later.

All participant responses were collected using Qualtrics, a secure online survey program (www.qualtrics.com), allowing individuals to participate at times and locations of their choosing. During the consent process, participants were informed that they would twice be asked to complete a survey that was expected to take approximately 90 minutes (largely due to the length of the ACT TASC videos). Because of the length of this survey participants were allowed to complete the survey across multiple sittings.

Links to the Post surveys were emailed to those participants who provided contact information in the Pre surveys. Undergraduates received the Post invitation email one week after the Pre survey and received two reminder emails over the next two weeks. Workshop participants received the Post invitation email one week following their workshop and received four reminder emails over the next three weeks. Participants received no feedback at any time regarding their ACT TASC performance.

**Measures**

The following measures were presented in the same online survey that contained the TASC videos.²
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a) Workshop Acceptability Statements. Workshop participants were asked to rate their agreement on a 5-point Likert scale with the following statements regarding their experience: “I was emotionally engaged by the workshop,” “I was intellectually engaged by the workshop,” “I learned new things about ACT in the workshop,” and “I was allowed enough time to practice new skills in the workshop.” These items were developed for this study and were presented at the beginning of the Post survey.

b) Demographics. Standard demographic variables were collected for all participants, such as age, gender, ethnicity, race, education, major area of study, profession, and employment setting. All participants were asked, “Have you ever directly provided psychotherapy services? (Psychotherapy services can be in any form -- such as groups, couples, individuals, families, or others).” If undergraduates answered in the affirmative, they were asked to provide a brief written description of this experience. If workshop participants answered in the affirmative, they were invited to fill out therapist demographic items described below.

c) Therapist Demographics. Participants in the workshop sample with a history of providing therapy services were asked questions regarding weekly clinical hours, theoretical orientation, years of experience, and supervision practices. As recommended by Poznanski and McLennan (1995) therapist orientation was assessed in a continuous rather than categorical manner using Likert scales for various orientations (e.g., psychodynamic, behavioral) and models (e.g., Functional Analytic Psychotherapy, Dialectical Behavior Therapy).

d) ACT Experience. All participants in the workshop sample were asked about prior experience with ACT. This was assessed through questions regarding number of ACT workshops
attended, ACT books read, years practicing ACT, years receiving ACT supervision, current practice of ACT, current level of ACT supervision. Participants were additionally asked to rate agreement on a 1-5 Likert scale with the following statements: “I feel a personal connection with ACT because it is relevant to my own life,” “I am an ACT therapist,” “I am skilled in using ACT,” and “I am familiar with Relational Frame Theory (RFT).” Undergraduates were not asked to describe their ACT experience, but were instead asked to rate their agreement with the statement “I am familiar with Acceptance and Commitment Therapy (ACT),” on a 1-5 Likert scale.

e) **ACT Knowledge Questionnaire.** This measure consists of 16 multiple choice items that assess declarative knowledge of ACT – primarily with a focus on definitions of terms and recognition of commonly used ACT phrases (Luoma & Vilardaga, 2013). It is scored such that each correct answer receives 1 point, and total scores range from 0 to 16. This measure has previously been shown to move in response to ACT workshops (e.g., Richards et al., 2011; Luoma & Vilardaga, 2013). It was presented to the workshop attendees prior to their exposure to the written introduction to the ACT model. Undergraduates were not asked to complete this measure. In its place, undergraduates were asked to complete the ACT Basic Definitions Quiz described below.

f) **ACT Basic Definitions Quiz.** This new measure was developed for this study as a way of assessing a basic ability to apply ACT vocabulary terms. It was administered only to the undergraduate sample and was immediately alongside the written introduction to ACT, so doing well merely required attention to the reading. The quiz assessed knowledge of the terms needed to engage with the ACT TASC meaningfully and whether participants were attending the task. Failure was used in the exclusionary criteria described below.
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g) ACT TASC. The ACT TASC contained 31 video segments with a total time of approximately 1 hour and 15 minutes. ACT-consistent therapy segments were shown in 19 of the videos, with ACT-inconsistent segments in the remaining 12. As detailed in the above section on assessment construction, each video was accompanied by 3 multiple-choice questions. Item responses in agreement with experts were given a value of one point and those differing from experts were given zero points. Participant responses were combined across videos to create three ACT TASC subscales corresponding to the three questions above: ACT TASC-Consistency, ACT TASC-Therapist Process, and ACT TASC-Rater Process, respectively. Scores were calculated by summation of all the points gained from items within a subscale. The score of each subscale ranged from 0 to 31, with higher values reflecting greater agreement with experts.

Inclusion and Exclusion Criteria

Participants were informed that in order to be included they must satisfy the following descriptions: age 18 or older, fluent in English, able to access the internet, participant in an ACT training workshop or an undergraduate at the University of Nevada, Reno. Potential participants were asked to exclude themselves from participating if they had previously viewed the training DVD contained in the Learning ACT manual as this was used to create the ACT TASC. The dates and times of survey initiation and completion were recorded by the online survey program and were used to exclude any workshop participant who started the Pre survey after the workshop had begun.

Responses from participants who did not sufficiently respond to the survey were analyzed separately and are discussed in the results section below as “non-completers.” Survey non-completers were identified as participants in the following categories: Participants who
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completed fewer than 80% of the ACT TASC consistency ratings; any participant who spent less than 80 minutes in the survey (since serious involvement could not be done faster than that); and any undergraduate participant who scored less than 67% correct on the 6-item ACT Basic Definitions Quiz (indicating a failure to attend to the task).

Figure 1, shown below, summarizes the flow of participants through the project. The vertical arrows signify advancement of participants through the study, whereas the horizontal arrows signify departure from the study or exclusion from analyses.

Results

Analytic Strategy

It is important to note that no causal claims regarding the impact of training or therapist characteristics were examined by this study due to the lack of independent variables that were directly changed across study conditions. Instead, this study examined the suitability of the TASC for usage in future research by exploring whether it displayed meaningful variability. The questions posed by this study were examined using t-tests for comparisons of means (Gravetter & Wallnau, 2004) and Pearson’s product moment correlation coefficient (r) matrices (Cohen, Cohen, West, & Aiken, 2003). Effect sizes presented below are in reference to Cohen’s (1992) standard guidelines for the identification of small, medium, and large effects.

Non-normal distributions identified by visual inspection and by skewness and kurtosis statistics falling outside the range of -2 and 2 were transformed using logarithmic procedures (Mertler & Vannatta, 2010). Data tables contain non-transformed values. Extreme values identified through visual inspection were investigated as possible outliers, and removal was
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contingent upon observed influence upon any particular analysis. Removals or transformations
are detailed below.

Workshop Sample Characteristics

The 108 workshop participants who completed the Pre survey were largely female
(73.1%), non-Hispanic (94.4%), Caucasian (87%), and aged 30 year or older (95.4%), with 87%
having obtained either a Master’s or Doctoral degree. Degree focus was primarily in
clinical/counseling psychology (52.8%) and social work (15.7%). Most (66.7%) identified as
therapists or clinicians, while 14.8% identified with other types of service professions (e.g.,
physician, social worker). Many (88%) identified as having experience as therapists. Within this
group, 75% reported 3 years or more of experience and 25% reported 18 years or more, with a
median of 7 years. In terms of activity level, 75% of them spent 10 or more hours per week in
direct contact with clients, with a median of 20 hours. They identified most strongly with a
“Cognitive Behavioral” orientation and on average rated this view as “very important” to the
formation of their personal approach to therapy.

Most of the participants can be described as having a history of intellectual engagement
with the ACT model, but few had very much applied ACT experience. 75% of the sample
reported having read 1 or more ACT books, and on average they reported having read 3 or more
journal articles about ACT. However, only 25% of them had spent 2 or more years practicing ACT
with a range from 0 to 25 years and a median of 1 year. 75% reported never having been part of
an ACT supervision group. While half reported that they had never seen a recording of a real
ACT session, 50% reported having seen at least 1 hour of therapy role-play. These could have
been encountered at ACT training events as 50% of the sample reported having attended at
least 1 workshop.
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Statistical tests were conducted to examine whether there were any systematic differences between survey completers and non-completers. Tests of demographics were insignificant with the exception of age differences in Pre completers (M=47.57, SD=11.84) and non-completers (M=43.65, SD=11.45) [t(190)=2.31, p = .02], such that higher age was associated with a higher rate of survey completion. Completers of the Pre survey were more likely to identify themselves as members ACBS [X² (1, N=186) = 8.243, p = .004]. There were no other statistically significant differences between Pre survey completers and non-completers.

Of the 108 workshop participants who completed the Pre survey, 41 did not attempt the Post survey. An additional 3 engaged with the Post survey but spent less than 80 minutes with the materials. This resulted in a total of 44 participants who provided sufficient Pre data but insufficient Post data. Independent sample t-tests examined potential differences between Post completers and non-completers in measures of ACT skill collected in the Pre survey. All comparisons were non-significant with one exception. There was a statistically significant difference in ACT Knowledge Questionnaire Scores between Post completers (M=10.09, SD=2.29) and Post non-completers (M=9.13, SD=2.31) [t(105)=2.13, p = .035].

Undergraduate Sample Characteristics

Subsequent analyses of the undergraduate sample concern the 62 individuals whose survey responses were of sufficient quantity and quality – identified as Pre completers. This group was largely female (83.9%), non-Hispanic (77.4%), and Caucasian (67.7%). In contrast to the workshop sample that had an average age of about 47, the undergraduates were younger with an average age of around 25. Interestingly, 28.7% of the undergraduates had already completed some form of degree beyond high school (either Associate’s or Bachelor’s).
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Psychology (43.5%) was the most popular major declared by the sample. On average, these participants reported cumulative college GPA that fell slightly above a B+ average on a 4.0 scale.

Only 5 of the students indicated any level of agreement with the statement, “I am familiar with Acceptance and Commitment Therapy (ACT),” and only 1 reported membership with ACBS. It is not surprising that some were aware of ACT since the clinical psychology doctoral program at their university has long provided ACT services to the community. Only 1 student reported any history of psychotherapy service delivery and described this experience by writing, “I am a Basic Skills Trainer.”

In contrast with the workshop sample that had 108 Pre completers and 92 Pre non-completers, undergraduates were significantly more likely to begin the Pre survey but not engage sufficiently with the material \(X^2 (1, N=383) = 15.67, p < 0.001\). As in the workshop sample, there was a significant difference in age between completers (M=24.90, SD=8.50) and non-completers (M=22.11, SD=3.65), such that older participants were more likely to sufficiently complete the survey \(t(73.02)=2.47, p = .016\). There was also a statistically significant difference in GPA between completers (M=3.36, SD=0.46) and non-completers (M=3.19, SD=0.43), wherein completion of the survey was associated with superior academic performance \(t(170)=2.409, p = .017\). No other contrasts between undergraduate Pre completers and non-completers were significant.

A total of 42 undergraduates attempted the Post survey. However, 24 of these had not sufficiently completed the Pre survey and are excluded from analyses for that reason. Of the remaining 18 only 6 spent the minimum 80 minutes or more in the Post survey, a sample too small for meaningful analyses. Thus, only Pre data were analyzed.

How Sensitive is the ACT TASC to Past Therapist Training History?
This question was examined using correlations of ACT TASC subscales with the ACT Knowledge Questionnaire, therapist demographics, and ACT experience measures within the workshop sample, as well as by using independent sample t-tests to contrast the known groups of therapists and undergraduates. ACT TASC subscales were normally distributed, indicating that it was neither too easy nor too hard. Measures of past ACT experience were skewed, and logarithmic transformations were for used for analyses involving ACT books read, ACT articles read, ACT workshops attended, years spent practicing ACT, ACT sessions observed, ACT role-plays observed, and years spent in ACT supervision group. This was also done for the general therapist demographic variable of weekly hours spent providing therapy supervision. Transformed distributions conformed to the standard of skewness and kurtosis values between -2 and 2. The one exception to this was the extremely skewed distribution of years spent in ACT supervision group. All tables below contain original non-transformed values.

Extreme values were identified and excluded from analyses involving the following variables: ACT books read (one outlier with 22), ACT articles read (one outlier with 81), ACT workshops attended (one outlier with 26), years spent practicing ACT (one outlier with 10 and two with 11), ACT sessions observed (one outlier with 102), ACT role-plays observed (four outliers with 16, 19, 21, and 25), and self-rating of ACT’s influence over therapy orientation (five outliers rated ACT as “not at all important”). The removal of outliers did not substantially alter the outcomes of statistical significance tests except that the exclusion of one participant who reported spending 39 hours per week supervising other therapists caused the correlation between this variable and the ACT TASC-Therapist Process subscale to lose significance, suggesting that this was not a robust correlation worthy of inclusion below.
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Table 2 presents data from the 95 workshop participants who identified themselves as having a history of providing therapy services in any form in the Pre survey. Variability in the number of participants included in each cell’s analysis is due both to the exclusion of outliers as well as to participants who occasionally elected to not complete certain items in the survey. The Pearson’s r values therein demonstrate that the ACT TASC subscales correlated significantly with each other, but not with general therapist demographic variables.

Correlations between the ACT TASC subscales and previous ACT experience in all participants who completed the Pre workshop survey are presented in Table 3. The moderately sized positive correlations between the ACT TASC subscales and the ACT Knowledge Questionnaire were suggestive of a sensitivity to participant’s histories of exposure to the ACT model, as was further reflected in relation to self-reported ACT training experiences.

The experience measures that most strongly and consistently correlated with the ACT TASC subscales were exposure to ACT books followed by ACBS membership and self-identification as an ACT therapist. The number of ACT books read by participants demonstrated a moderate positive correlation with identification of ACT consistency (ACT TASC-Consistency) and identification of ACT processes targeted by therapists (ACT TASC-Therapist Process) but did not show significant correlation with identification of the process influencing a rater’s decision (ACT TASC-Rater Process). ACBS membership status was a significant predictor of participant agreement with expert ratings, as it was moderately positively correlated with the ACT TASC-Consistency and ACT TASC-Therapist Process subscales in addition to trending toward positive correlation with ACT TASC-Rater Process scores with $p = .063$. Level of agreement with the statement “I am an ACT therapist,” was mildly to moderately positively correlated with the ACT
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TASC-Consistency subscale and trended toward positive correlation with the ACT TASC-Therapist Process subscale with $p = .06$.

With the exception of self-rated familiarity with RFT, ACT journal articles read, and years spent practicing ACT, each measure of past ACT experience at least approached a statistically significant correlation with one of the three ACT TASC subscales. The ACT TASC-Consistency subscale held a medium positive correlation with hours spent viewing simulated ACT sessions and trended toward a positive relationship with hours spent viewing real ACT sessions ($p = .066$). It also trended toward a positive relation with agreement with the statement, “I am skilled in using ACT,” ($p = .085$). The ACT TASC-Therapist Process subscale demonstrated a small to medium positive correlation with ACT workshops attended and with years spent in an ACT supervision or consultation group. This subscale was also positively correlated with ratings of agreement with the question, “I feel a personal connection with ACT because it is relevant to my own life.” Except for a trend toward correlation with ACBS membership status, the ACT TASC-Rater Process subscale demonstrated no significant relationship with any of the ACT experience measures.

Table 4 presents t-tests that contrasted Pre scores of undergraduates and therapists. The 11 workshop participants who reported that they had never provided any form of psychotherapy services were excluded from these analyses so that this sample could be more precisely described as “therapists.” No transformations were applied and no participants were identified as outliers. Mean differences were computed by subtracting undergraduate means from therapist means.

Therapists demonstrated significantly more agreement with expert ratings of the simulated ACT sessions for each of the ACT TASC subscales, with large effect sizes in each case.
How Responsive is the ACT TASC to an ACT Training Workshop?

Table 5 presents paired sample t-tests that investigated the ACT TASC’s change between the Pre and Post workshop surveys. Although the workshops used to collect this data (see Table 1) varied considerably in length and size, the 64 workshop participants who completed both the Pre and Post surveys were uniform in their expressions of satisfaction with the workshops. In the Post survey, between 81.2% and 100% agreed or strongly agreed with the Workshop Acceptability Statements.

While the mean differences between Pre and Post survey scores for each of the measures in Table 5 were fairly small, most of these differences were either statistically significant (ACT TASC-Consistency and ACT TASC-Rater Process) or trended in that direction (ACT TASC-Therapist Process and ACT Knowledge). Effect sizes were medium to large except for ACT TASC-Therapist Process which was small.

Discussion

The present study found promising results for a TASC approach to the assessment of a putatively foundational ACT therapist skill: the ability to discriminate psychological flexibility processes and to recognize when they are being targeted in an ACT-consistent way (Luoma, Hayes, & Walser, 2007). ACT training has been shown to be predictive of therapist skill improvements (Walser et al., 2013), and of positive client outcomes (Strosahl, Hayes, Bergan, & Romano, 1998), and thus a new measure of ACT skill should show that it is sensitive to training history. The ACT TASC prototype was moderately successful in this respect as judged by baseline
PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT

correlations with ACT experience variables, baseline differentiation between therapists and undergraduates, and movement following ACT training workshops.

General therapist variables such as years of therapy experience and weekly hours spent providing therapy or supervision were not predictive of ACT TASC scores. In contrast reports of past exposure to ACT-specific contexts were predictive, including for example ACT books read, ACT workshops attended, hours of simulated ACT sessions observed, ACBS membership status, and years spent in an ACT supervision group. These correlations were not consistent across all ACT TASC subscales, however, and were somewhat hampered by the restricted range of ACT experience in the sample. Only 25% of the participants had spent 2 or more years practicing ACT, and 75% reported never having been part of an ACT supervision group.

Despite limitations posed by the workshop sample’s composition, the general pattern of results was supportive of the ACT TASC’s sensitivity to past ACT training experiences. This was further reflected in the ACT TASC’s correlation with the ACT Knowledge Questionnaire as an indication of previous exposure to training materials. In addition, each of the ACT TASC subscales demonstrated an ability to differentiate between therapists and undergraduates with large effect sizes.

The Pre to Post changes in the workshop sample’s ACT TASC scores were seemingly small with mean differences ranging from .67 to 1.14. This is similar to what has been found using the ACT Knowledge Questionnaire, with previous studies reporting changes following workshops that range from 1 (Luoma & Vilardaga, 2013) to 3 points (Richards et al., 2011). More meaningful comparisons can be made using Cohen’s $d$ effect sizes. Previous research has shown knowledge improvement after ACT workshops ranging from a $d$ of .49 (Luoma & Vilardaga, 2013) to a $d$ of 1.09 (Richards et al., 2011). The present sample demonstrated a similar change in
the ACT Knowledge Questionnaire with movement from 10.09 at Pre to 10.55 at Post ($d = .50$). The ACT TASC performed similarly in its Pre to Post changes with $d$ of .43 for the Therapist Process subscale, .57 for the Consistency subscale, and .81 for the Rater Process subscale.

The ACT TASC-Rater Process subscale was the least sensitive to past ACT experience, but also demonstrated the largest change from the Pre to Post workshop surveys. This measure was likely the most challenging for both undergraduates and therapists because correct coding responses at times required attention to multiple ACT processes within the same therapy segment.

It is possible that the TASC was too challenging for many participants who initially agreed to participate in the study but either dropped out or did not display sufficient engagement with the TASC for their data to be analyzed. Of the initial recruits only 52% of the therapists and 33% of the undergraduates provided sufficient data in the Pre assessment. Only 31% of the therapists and essentially no undergraduates persisted through the Post assessment. These observations suggest that future assessment development efforts may benefit from shorter tasks or greater incentives for participation.

There were a number of limitations to the present study. Due to the lack of a randomized control condition this study could not support strong claims regarding the effectiveness of the workshops per se. It is possible that repeated exposure to the survey’s instructions alone improved survey performance. Furthermore the present analyses did not account for the drop-out between Pre and Post. If participants did not benefit from the workshop and felt discouraged they may have been reluctant to complete the Post survey, resulting in a biased measure of workshop impact. At most we can say that at least some participants demonstrated changes that were associated with their completion of the workshop.
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The order of video presentation was not varied across participants, but was identical to the order found on the original Learning ACT DVD. While this maintained the relevance of the study’s findings to the Learning ACT DVD already in circulation that may itself now be used as an assessment device, it did introduce possible order effects.

The ACT TASC developed for this study was crude and imprecise relative to the range of clinically relevant stimuli encountered in therapy sessions (e.g., Hayes, Strosahl, & Wilson, 2012, pp. 103-104). Nonetheless, it displayed meaningful variability as a prototype suggesting that this strategy of assessment is worth further refinement.

Future Directions

Many questions remain unanswered about the impact of training on therapist skills. What are the learning processes by which exposure to a therapy model can modify clinician responses to stimuli in a therapy session? Can a therapist’s learning be tracked with enough precision to guide training and thus improve client outcomes? The present results suggest that a TASC approach to skill assessment provides a useful way forward in assessing a therapist’s “eye” and “ear” for clinically relevant processes.

One could conceivably develop a TASC for any EBP. Both Dialectical Behavior Therapy (Worrall & Fruzzetti, 2009) and Motivational Interviewing (Miller & Mount, 2001) have developed methods for training therapist agreement with expert coding. As is shown in the present study, training videos already in existence can provide a low-cost starting point and could be adapted into TASC procedures using a variety of coding schemes (e.g., Atkins & Styles, 2016).

A key step forward would be to link contextual sensitivity skills of this kind to client outcomes. With sufficient validation, TASC assessments could in turn be used to evaluate
PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT

therapist training methods and be investigated as mediators between training and therapy outcomes. The development of TASC assessments that do not require familiarity with specialized vocabulary could also provide a means of acknowledging therapist skills developed prior to EBP training. For example, a well-designed TASC could assess sensitivity to changes in the therapeutic alliance, attention flexibility, or avoidance in session without using a technical vocabulary.

Until recently funding for psychotherapy development has focused more on syndromes and protocols rather than client and therapist processes (Hayes, Long, Levin, & Follette, 2013). Efforts to overcome the gap between research and practice may benefit from methods that train therapeutic skills focused on evidence-based processes and principles, rather than on discrete products (Hayes & Hofmann, 2018; Rosen & Davison, 2003). Particularly as the field of intervention science moves more in the direction of process-based therapy (Hofmann & Hayes, in press), the present study suggests that TASC is worth exploring as a measure of clinician skill.
Acknowledgments
The first author is grateful to Drs. Kristy L. Dalrymple, William C. Follette, Alan E. Fruzzetti, Melanie M. Minarik, and Jacqueline Pistorello for their feedback on earlier versions of this manuscript.

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Compliance with Ethical Standards
Conflict of Interest: The first author declares that he has no conflict of interest. The second author received payment for some of the workshops in this study and royalties for sale of the workbook and accompanying DVD used in this study, although the videos are available online for free.

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
Informed consent was obtained from all individual participants included in the study.

References


PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT


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PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT


Rosen, G. M., & Davison, G. C. (2003). Psychology should list empirically supported principles of change (ESPs) and not credential trademarked therapies or other treatment packages. *Behavior Modification, 27*(3), 300-312.


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Footnotes

1 The *Learning ACT* videos are available for free here: https://www.youtube.com/user/NewHarbingerPub/playlists.

2 In addition to the measures described here, participants also completed the Philadelphia Mindfulness Scale (PHLMS; Cardaciotto et al., 2008) and the Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011). Data from these scales are not discussed in the current paper.
PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT

Fig 1. Participant flow

Undergraduates
Recruited: 189
- Seen videos before: 6
- < 80% videos: 44
- < 80 minutes: 67
- < 67% quiz: 10
Analyzed at Pre: 62
- Dropped out: 44
- < 80 minutes: 12
Insufficient data

Workshop Participants
Recruited: 209
- Seen videos before: 8
- < 80% videos: 89
- < 80 minutes: 3
- Missed Pre deadline: 1
Analyzed at Pre: 108
- Dropped out: 41
- < 80 minutes: 3
Analyzed at Post: 64
PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT

Table 1. *ACT workshops targeted for recruitment*

<table>
<thead>
<tr>
<th>Workshop Title</th>
<th>State</th>
<th>Trainers</th>
<th>Days</th>
<th>Attendees</th>
<th>Recruited</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Boot Camp NV</td>
<td>S C Hayes, K Strosahl, K G Wilson</td>
<td>4</td>
<td>282</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>ACT Boot Camp PA</td>
<td>S C Hayes, K Strosahl, K G Wilson</td>
<td>3</td>
<td>170</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>ACT 1 TX</td>
<td>S C Hayes</td>
<td>2</td>
<td>155</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>ACT 1 MN</td>
<td>S C Hayes</td>
<td>2</td>
<td>110</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>ACT 1 CA</td>
<td>S C Hayes</td>
<td>2</td>
<td>160</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>ACT 2 OR</td>
<td>S C Hayes</td>
<td>2</td>
<td>97</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>ACBS World Con MN</td>
<td>K G Wilson, R D Walser, R Harris, M Twohig</td>
<td>6</td>
<td>770</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td></td>
<td>1744</td>
<td>209</td>
</tr>
</tbody>
</table>
Table 2. Pearson correlations between general therapist demographics and ACT TASC scores in Pre survey amongst therapists in workshop sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT TASC-Consistency</td>
<td>25.47</td>
<td>2.64</td>
<td>.37**&lt;br&gt;(N=92)</td>
<td>.45**&lt;br&gt;(N=91)</td>
<td></td>
</tr>
<tr>
<td>2. ACT TASC-Therapist Process</td>
<td>18.44</td>
<td>3.80</td>
<td>.37**&lt;br&gt;(N=92)</td>
<td>.68**&lt;br&gt;(N=90)</td>
<td></td>
</tr>
<tr>
<td>3. ACT TASC-Rater Process</td>
<td>13.80</td>
<td>3.58</td>
<td>.45**&lt;br&gt;(N=91)</td>
<td>.68**&lt;br&gt;(N=90)</td>
<td></td>
</tr>
<tr>
<td>4. Years spent providing therapy</td>
<td>12.27</td>
<td>9.59</td>
<td>.00&lt;br&gt;(N=94)</td>
<td>.11&lt;br&gt;(N=92)</td>
<td>-.09&lt;br&gt;(N=90)</td>
</tr>
<tr>
<td>5. Weekly hours providing therapy</td>
<td>19.34</td>
<td>11.56</td>
<td>-.06&lt;br&gt;(N=94)</td>
<td>.12&lt;br&gt;(N=92)</td>
<td>-.02&lt;br&gt;(N=90)</td>
</tr>
<tr>
<td>6. Weekly hours supervising others</td>
<td>2.23</td>
<td>1.96</td>
<td>-.01&lt;br&gt;(N=92)</td>
<td>.05&lt;br&gt;(N=90)</td>
<td>-.08&lt;br&gt;(N=88)</td>
</tr>
<tr>
<td>7. Weekly hours receiving supervision</td>
<td>2.19</td>
<td>1.29</td>
<td>.00&lt;br&gt;(N=94)</td>
<td>-.11&lt;br&gt;(N=92)</td>
<td>-.04&lt;br&gt;(N=90)</td>
</tr>
<tr>
<td>8. Behavioral orientation</td>
<td>5.52</td>
<td>1.37</td>
<td>.13&lt;br&gt;(N=93)</td>
<td>.10&lt;br&gt;(N=91)</td>
<td>.00&lt;br&gt;(N=89)</td>
</tr>
<tr>
<td>9. Cognitive orientation</td>
<td>5.46</td>
<td>1.27</td>
<td>.07&lt;br&gt;(N=93)</td>
<td>.00&lt;br&gt;(N=91)</td>
<td>-.15&lt;br&gt;(N=89)</td>
</tr>
<tr>
<td>10. Cognitive Behavioral orientation</td>
<td>6.11</td>
<td>0.9</td>
<td>-.09&lt;br&gt;(N=94)</td>
<td>-.13&lt;br&gt;(N=92)</td>
<td>-.14&lt;br&gt;(N=90)</td>
</tr>
<tr>
<td>11. Psychodynamic orientation</td>
<td>4.33</td>
<td>1.67</td>
<td>-.03&lt;br&gt;(N=94)</td>
<td>.01&lt;br&gt;(N=92)</td>
<td>.02&lt;br&gt;(N=90)</td>
</tr>
<tr>
<td>12. Existential/Humanistic orientation</td>
<td>5.26</td>
<td>1.41</td>
<td>.08&lt;br&gt;(N=93)</td>
<td>.03&lt;br&gt;(N=91)</td>
<td>.18&lt;br&gt;(N=89)</td>
</tr>
<tr>
<td>13. ACT orientation</td>
<td>6.01</td>
<td>0.92</td>
<td>.15&lt;br&gt;(N=87)</td>
<td>.11&lt;br&gt;(N=85)</td>
<td>.00&lt;br&gt;(N=84)</td>
</tr>
<tr>
<td>14. Contextual CBT orientation</td>
<td>3.93</td>
<td>1.04</td>
<td>.00&lt;br&gt;(N=91)</td>
<td>-.08&lt;br&gt;(N=89)</td>
<td>-.16&lt;br&gt;(N=87)</td>
</tr>
</tbody>
</table>

*Note.* † = p < .10 (2-tailed), * = p < .05 (2-tailed), ** = p < .01 (2-tailed).
### Table 3. Pearson correlations between ACT experience variables and ACT TASC scores in Pre survey amongst ACT workshop sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT TASC-Consistency</td>
<td>25.52</td>
<td>2.54</td>
<td>.39**</td>
<td>.41**</td>
<td>(N=105)</td>
</tr>
<tr>
<td>2. ACT TASC-Therapist Process</td>
<td>18.51</td>
<td>3.78</td>
<td>.39**</td>
<td>.63**</td>
<td>(N=105)</td>
</tr>
<tr>
<td>3. ACT TASC-Rater Process</td>
<td>13.74</td>
<td>3.74</td>
<td>.41**</td>
<td>.63**</td>
<td>(N=104)</td>
</tr>
<tr>
<td>4. ACT Knowledge Questionnaire</td>
<td>9.69</td>
<td>2.34</td>
<td>.47**</td>
<td>.48**</td>
<td>.37**</td>
</tr>
<tr>
<td>5. ACT books read</td>
<td>4.21</td>
<td>3.43</td>
<td>.28**</td>
<td>.26**</td>
<td>.15</td>
</tr>
<tr>
<td>6. ACT articles read</td>
<td>7.09</td>
<td>8.64</td>
<td>.11</td>
<td>.06</td>
<td>- .03</td>
</tr>
<tr>
<td>7. ACT workshops attended</td>
<td>2.40</td>
<td>2.28</td>
<td>.12</td>
<td>.23**</td>
<td>.03</td>
</tr>
<tr>
<td>8. Years spent practicing ACT</td>
<td>2.04</td>
<td>1.41</td>
<td>.09</td>
<td>.11</td>
<td>.02</td>
</tr>
<tr>
<td>9. ACT session hours observed</td>
<td>3.59</td>
<td>5.48</td>
<td>.18</td>
<td>.04</td>
<td>- .11</td>
</tr>
<tr>
<td>10. ACT role-play hours observed</td>
<td>2.95</td>
<td>2.93</td>
<td>.28**</td>
<td>.14</td>
<td>.00</td>
</tr>
<tr>
<td>11. Years spent in ACT supervision group</td>
<td>1.36</td>
<td>1.21</td>
<td>.04</td>
<td>.19*</td>
<td>.03</td>
</tr>
<tr>
<td>12. Personal connection to ACT</td>
<td>4.39</td>
<td>0.82</td>
<td>.14</td>
<td>.20</td>
<td>.09</td>
</tr>
<tr>
<td>13. Self-identification as ACT therapist</td>
<td>3.08</td>
<td>1.25</td>
<td>.19*</td>
<td>.19</td>
<td>.14</td>
</tr>
<tr>
<td>14. Self-rating of ACT skill</td>
<td>2.60</td>
<td>1.10</td>
<td>.17</td>
<td>.16</td>
<td>-.05</td>
</tr>
<tr>
<td>15. Self-rating of familiarity with RFT</td>
<td>2.97</td>
<td>1.10</td>
<td>.11</td>
<td>.16</td>
<td>-.05</td>
</tr>
<tr>
<td>16. ACBS membership status</td>
<td>0.65</td>
<td>0.48</td>
<td>.25**</td>
<td>.24*</td>
<td>.18</td>
</tr>
</tbody>
</table>

Note: ' = p < .10 (2-tailed), * = p < .05 (2-tailed), ** = p < .01 (2-tailed). ACBS membership status coded as 1 = ACBS member, 0 = Non-ACBS member.
Table 4. *Independent sample t*-test comparisons of therapists and undergraduates mean scores of ACT TASC variables in Pre survey

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Mean difference</th>
<th>t</th>
<th>df</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT TASC-Consistency</td>
<td>Therapists</td>
<td>95</td>
<td>25.47</td>
<td>2.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Undergraduates</td>
<td>62</td>
<td>20.04</td>
<td>3.42</td>
<td>5.43</td>
<td>11.21**</td>
<td>155</td>
<td>1.80</td>
</tr>
<tr>
<td>2. ACT TASC-Therapist Process</td>
<td>Therapists</td>
<td>91</td>
<td>18.44</td>
<td>3.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Undergraduates</td>
<td>61</td>
<td>10.23</td>
<td>3.99</td>
<td>8.21</td>
<td>12.88**</td>
<td>152</td>
<td>2.09</td>
</tr>
<tr>
<td>3. ACT TASC-Rater Process</td>
<td>Therapists</td>
<td>91</td>
<td>13.80</td>
<td>3.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Undergraduates</td>
<td>61</td>
<td>8.46</td>
<td>3.15</td>
<td>5.33</td>
<td>9.42**</td>
<td>150</td>
<td>1.54</td>
</tr>
</tbody>
</table>

*Note.* *t* = *p* < .10 (2-tailed), * = *p* < .05 (2-tailed), ** = *p* < .01 (2-tailed). Effect size = Cohen’s *d*. Mean differences computed by subtracting undergraduate means from therapist means.

Table 5. *Paired sample t*-test comparisons of Pre and Post survey scores of ACT skill variables in workshop sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Mean difference</th>
<th>t</th>
<th>p</th>
<th>df</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT TASC-Consistency</td>
<td>Pre</td>
<td>64</td>
<td>25.76</td>
<td>2.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>64</td>
<td>26.43</td>
<td>2.33</td>
<td>0.67</td>
<td>2.27</td>
<td>0.027</td>
<td>63</td>
<td>0.57</td>
</tr>
<tr>
<td>2. ACT TASC-Therapist Process</td>
<td>Pre</td>
<td>61</td>
<td>18.59</td>
<td>4.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>61</td>
<td>19.27</td>
<td>3.55</td>
<td>0.69</td>
<td>1.66</td>
<td>0.101</td>
<td>60</td>
<td>0.43</td>
</tr>
<tr>
<td>3. ACT TASC-Rater Process</td>
<td>Pre</td>
<td>61</td>
<td>13.99</td>
<td>4.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>61</td>
<td>15.14</td>
<td>4.14</td>
<td>1.14</td>
<td>3.12</td>
<td>0.003</td>
<td>60</td>
<td>0.81</td>
</tr>
<tr>
<td>4. ACT Knowledge Q.</td>
<td>Pre</td>
<td>63</td>
<td>10.09</td>
<td>2.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>63</td>
<td>10.55</td>
<td>2.51</td>
<td>0.46</td>
<td>1.98</td>
<td>0.052</td>
<td>62</td>
<td>0.50</td>
</tr>
</tbody>
</table>

*Note.* All *t*-tests are 2-tailed. Effect size = Cohen’s *d*. Mean differences equals Post minus Pre means. ACT Knowledge Q. = ACT Knowledge Questionnaire.
PROTOTYPE FOR THERAPEUTIC SKILL ASSESSMENT

Highlights

- Ability to detect psychological flexibility processes is considered to be a component of ACT skill.
- An assessment prototype compared expert process coding with trainee process coding.
- The prototype displayed responsiveness to ACT training workshops.
- The prototype differentiated between undergraduates and therapists.
- The assessment method may be refined to support process-focused psychotherapy training.