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Assessing Treatment Integrity in Acceptance and Commitment Therapy: Strategies and Suggestions

Jennifer C. Plumb & Roger Vilardaga

Abstract

In this paper, we briefly review the current literature on treatment integrity and discuss the relevance of this procedure for detecting, measuring and ensuring that the proposed mechanisms of change in cognitive behavior therapy, in this case of acceptance and commitment therapy (ACT; S.C. Hayes, Strosahl, & Wilson, 1999), take place. We discuss aspects such as how to develop an integrity coding system that takes into account the nuances of the ACT model, critical factors when deciding the different processes to include in the coding manual, and suggestions for how to operationalize the distinction between adherence and competence from an ACT perspective. In addition, we also provide more specific guidance about issues as how to select the segments to be coded, the training of those who will code the intervention, and the interrater reliability process. Finally, we provide the reader with a complete example of a treatment integrity coding manual that was specifically adapted for a randomized controlled trial in the treatment of obsessive compulsive disorder (Twohig et al., 2010a). The aim of the current paper is to provide some essential tools for ACT researchers to develop treatment integrity protocols so that they are more encouraged to adopt such methods in their studies.

Keywords: ACT, treatment integrity, adherence, competence, mechanisms of change

Treatment integrity as it relates to psychotherapy outcome research refers to the degree to which a particular intervention is implemented in a competent manner with fidelity to the theoretical model and the specific processes and procedures specified in the treatment protocol (Nezu & Nezu, 2008). Treatment integrity typically involves two processes, *adherence* or fidelity to the manual, protocol, or treatment model, and *competence* or level of skill with which therapists deliver the specified treatment (Waltz, Addis, Koerner, & Jacobson, 1993). These constructs are related in that in order for a treatment to be delivered competently, adherence to the treatment is implied, but adherence to the treatment does not necessarily imply competence (Waltz et al., 1993). Treatment integrity is primarily viewed as a way to conduct a manipulation check to ensure that a treatment has been implemented appropriately. Without such assurance, treatment effects cannot be linked to the specific processes purported in the treatment model to be related to change. A well designed, reliable treatment integrity manual may also allow comparisons of treatments across settings, comparison of therapists across settings and studies, and provide important information for training and supervision procedures (Waltz et al., 1993). Integrity checks are also vital for randomized clinical trials, as an important tool to discriminate between different treatments (Kazdin, 2003; Nezu & Nezu, 2008). There is a small, but growing, body of literature in psychotherapy research that highlights the importance of assessing therapist adherence and competence in psychotherapy outcome studies and has examined these processes as predictors of outcomes themselves (e.g., Barber, Foltz, Crits-Christoph, & Chittams, 2004; Barber et al., 2006; McGlinchey & Dobson, 2003; Perepletchikova, Treat, & Kazdin, 2007).

The relationship of adherence and competence to outcome is complex and conflicting. While some studies have shown that these variables predict positive outcomes (Barber, Crits-Christoph, & Luborsky, 1996; Barber, Liese, & Abrams, 2003; Carroll et al., 1998, 2000), meta-analyses of treatment outcome studies indicate that on the whole, they do not predict outcome (Webb, DeRubeis, & Barber, 2010). Such findings may highlight the importance of common (or nonspecific) factors, such as therapeutic alliance, treatment credibility and client's expectations given that a previous meta-analysis has indicated that common factors might be more influential for outcome across studies than treatment-specific factors (Wampold et al., 1997). However, Webb and colleagues postulate several reasons for their null findings, given that some individual studies have demonstrated direct significant effects of adherence

on outcome (both in relation to and separate from therapeutic alliance). First, they postulate that the significant heterogeneity of effect sizes for adherence and competence in their analysis makes interpreting a nonsignificant mean effect size difficult, and that such disparate effect sizes between studies may be due to the fact that the methods used, problems treated, treatments applied, and the outcomes themselves were widely varied between studies in the meta-analysis. Webb and colleagues also postulate that, given evidence that certain methods within treatments tend to relate better to outcomes than others (e.g., problem focused cognitive therapy techniques; DeRubeis & Feeley, 1990; Feeley et al., 1999), the effect of adherence to effective components of treatments may be masked by adherence to less helpful components.

Other researchers have attributed such lack of impact of treatment-specific processes on treatment outcomes in the cognitive-behavioral literature to the fact that only a minority of studies have actually assessed treatment integrity (Bhar & Beck, 2009; Perepletchikova, Hilt, Chereji, & Kazdin, 2009; Perepletchikova et al., 2007, 2009) and when assessed, there is often an unclear delineation or ineffective measurement of purported mechanisms of change (Kazantzis, 2003) and inadequate methodologies are often employed (Perepletchikova & Kazdin, 2005). Despite the difficulties and null findings, treatment integrity is viewed as a vital part of empirical validation of psychotherapy research and measurement as evaluating the implementation of interventions allows treatment development researchers to increase the efficiency and effectiveness of available therapies by identifying effective and ineffective processes and adequate doses of treatment required for certain outcomes (Kazdin, 2007; Nezu & Nezu, 2008; Perepletchikova et al., 2007).

Taken together, these data indicate two areas of further development for treatment outcome researchers. First, we postulate that if even smaller outcome study researchers were to conduct treatment integrity (TI) coding, and did so using methods that have been identified as useful in other outcome studies, such efforts would go a long way towards providing fruitful information in the literature as to the importance of adherence to treatment-specific processes. Such procedures could provide a tool for discriminating between outcomes (both positive and negative) where there was demonstrated adherence to important processes and where there was not, thereby pointing to either a problem with the processes themselves or to problems with training or adherence to them. Therefore, we provide a brief overview of considerations for planning to conduct TI coding and methods for doing so, as well as citations for further reading as needed. Second, researchers can better identify those processes or components of treatments that are likely to lead to positive change through basic, analog, component analysis or dismantling studies and separate those from the components that are unlikely to lead to change (e.g., see Addis & Jacobson, 1996 for an excellent example). ACT researchers have conducted several studies examining ACT processes as mechanisms of change, and we present some of these data below. There is more work to be done, but the work so far is promising in support of many of the ACT processes as not only mechanisms of change, but also as mediators of outcome across a wide array of populations.

Acceptance and Commitment Therapy and Treatment Integrity

ACT (S.C. Hayes et al., 1999) is a form of cognitive-behavior therapy that has proposed a series of alternative processes of change in contrast to other models within the cognitive-behavioral tradition. ACT is a contextual behavioral approach that seeks to change the function of undesired experiences (including thoughts, feelings and emotions) by changing the contexts in which they occur, rather than their form or frequency. This is done by the use of experiential exercises and metaphors (changing the verbal context in which these events occur). As such, ACT is a principle-based treatment that seeks to influence context and function and that results in the development of psychological flexibility. ACT proposes that *psychological flexibility*, or the ability to persist in valued life activities in the face of distressing or unwanted private events, is the general process of change responsible for improvements in outcome (S.C. Hayes, Luoma, Bond, Masuda, & Lillis, 2006). The six processes that work together to

produce psychological flexibility are *acceptance* of private experiences, *defusion* from the literal functions of thoughts, an awareness of the *self-as-context* or an observing self, contact with the *present moment*, clarity of personal *values*, and *committed action* to live consistent with those values. A more detailed description of the ACT model can be found elsewhere (e.g., S. C. Hayes et al, 2006).

ACT has placed special emphasis on defining, clarifying, and testing its purported processes of change. Such focus on processes of change has been an important part of studies employing ACT for a variety of psychological problems. A recent meta-analysis indicated that laboratory, component, and outcome studies provide a base of evidence that one or more of the processes of change in ACT are linked to outcomes of interest (S.C. Hayes et al., 2006). This is important, because mediational analysis, in which processes of change are examined statistically to account for the change seen in outcomes, is another way to establish empirical support for particular treatment-specific processes and there has been a shortage of studies including such methods within the CBT literature at large (Kazdin, 2001, 2007; Stout, 2007). A large number of ACT studies to date have included such analyses, which cohere with the processes of change emphasis of this model.

Specifically, changes in acceptance have been shown to mediate outcomes in studies of worksite stress (Bond & Bunce, 2000), psychosis (Gaudio & Herbert, 2006), anxiety and depression (Forman, Herbert, Moitra, Yeomans, & Geller, 2007), diabetes management (Gregg, Callaghan, Hayes, & Glenn-Lawson, 2007) and obsessive-compulsive disorder (Twohig, Hayes, & Plumb, 2010). Changes in values mediated outcomes for epilepsy (Lundgren, Dahl, & Hayes, 2008). Overall psychological flexibility mediated outcomes for chronic pain (Wicksell, Olsson, & Hayes, 2010), and acceptance, mindfulness, and values each mediated outcomes for generalized anxiety disorder (S.A. Hayes, Orsillo, & Roemer, 2010). In some studies, ACT processes mediated outcomes and outperformed the processes of change put forth in alternative treatment models (e.g., Twohig et al., 2010b; Wicksell et al., 2010).

These mediation analyses provide evidence that the specific processes employed in ACT and other acceptance and mindfulness-based treatments are likely important mechanisms through which desired clinical change occurs. Given the potential positive impact of employing empirically validated processes, we must also assess that these processes are indeed being employed as intended in psychotherapy outcome studies. Therefore, it behooves clinical researchers to ensure that ACT treatments are employed with fidelity to the model and to develop and/or utilize appropriate methods to assess treatment integrity.

However, we recognize that there may be significant barriers to implementing a TI protocol for psychotherapy researchers in general and ACT researchers specifically. In a recent survey, researchers reported the most common barriers to implementing integrity checks in psychotherapy outcome studies were (a) lack of understanding of the processes responsible for change, (b) paucity of labor and funding to develop and implement such procedures, and (c) few professional journal editor and granting agency requirements for implementing such procedures, even though TI was viewed as an important component of outcome research for many of those surveyed (Perepletchikova et al., 2009). ACT, as a relatively new treatment, is still in its early stages of empirical evaluation, and as such has relatively fewer studies funded or funded at a high level (which in turn could provide the funds and personnel to appropriately apply TI procedures) as compared to other, more established treatments (Gaudio, 2009). Despite this disparity, ACT researchers may have somewhat of an advantage in that there are a number of measures developed for ACT that assess its purported mechanisms of change and many of these have shown to be predictors and mediators of outcome. While these processes of acceptance, mindfulness and values are still being evaluated, some have been shown to mediate outcomes across a wide range of psychological difficulties, as is the case of experiential avoidance.

This is encouraging, and may serve to reduce the burden on ACT researchers for identifying theoretically-consistent processes of change. Our goal in this paper is to help reduce some of the additional burden of developing an ACT integrity coding system by sharing the strategies that have been employed in recent ongoing clinical trials and providing additional suggestions for clinical researchers to develop their own TI protocols that fit their research questions.

Developing an ACT Integrity Coding System

Nezu and Nezu (2008) provide extensive guidelines for developing and implementing an integrity protocol, of which the following are particularly relevant for ACT studies: (a) treat integrity as an integral part of the study, influencing study design and hypothesis generation, protocol development, and therapist training and supervision; (b) develop a treatment manual with integrity issues in mind, specifying treatment ingredients, intervention structure, therapist behaviors, and examples of competent and incompetent behaviors, differentiating behaviors by context (e.g., behaviors that are more relevant at different times in treatment than others), building in flexibility (particularly when client difficulties supersede the planned course of a given session), and continuously revising both the treatment and integrity protocols until they are in sync, (c) identify and operationalize the elements of treatment, including conceptually critical processes, that are crucial for integrity assessment, (d) develop a standardized procedure for integrity raters, and (e) ensure that the method of measuring integrity is standardized, independently rated, possible within the confines of the study (e.g., videotaping may make for different observable behaviors than audiotaping), and maps onto the particular questions of interest (e.g., the way in which researchers operationalize and measure adherence and competence may influence the ability to assess their relation to outcome, particularly when delivering certain treatment components that are conceptualized by the researchers as key for changes in outcomes).

This last point is particularly relevant for ACT researchers as the treatment model and mediational analyses conducted within the literature do indeed indicate that particular processes are likely to be responsible for changes in outcomes. Therefore, considering the treatment components that are hypothesized to be potential moderator and mediator variables can and should influence both TI protocol development as well as the treatment manual development.

The greatest difficulty with developing a coding system to assess the integrity of ACT is that ACT, by its very functional, principle-based nature, does not lend itself easily to rigidly manualized or scripted treatment protocols that define therapist behaviors topographically. While some treatments may prescribe a set of procedures or techniques that should occur in a particular order, with a particular frequency or duration, and during a particular session in the course of treatment, ACT is typically less procedural, instead suggesting a range of exercises and metaphors that aim at a particular function based on a series of behavioral principles. In addition, while there are some recommendations that particular techniques or exercises occur earlier in treatment and others later in treatment, there is nothing within ACT itself that requires adherence to these suggestions, particularly if clinical choices are employed based on an ideographic functional case conceptualization. Depending on the goals of the researcher, the funding status of the project, and the experience of the therapists, the ACT treatment protocol may be more or less detailed, with varying degrees of flexibility in ACT process focus or procedure from session to session.

Therefore, adherence to ACT treatment protocols must be assessed from a functional perspective. Coding therapist behaviors in this way requires clear examples for observable behaviors on the part of the therapist, and while function may seem to be an unobservable behavior at times, we will suggest ways in which the function of a particular therapist behavior can be identified from statements that the therapist makes and the larger context of the therapeutic interaction. This can make for a more difficult coding atmosphere, which we will discuss in the section on creating a coding team.

We cannot stress enough the need to state clearly in a written coding manual both the items to be assessed for integrity as well as a rubric for coding them. Doing so may require a team of individuals with some experience conducting ACT treatment, such as postdoctoral level therapists, additional members of the treatment team, or collaboration with other colleagues. While developing a coding manual in this manner may be difficult and time-consuming for smaller and underfunded studies, there are existing coding manuals (including the one in the appendix of this paper) that can be used as a starting point for developing an individualized coding manual that includes items of importance for a particular study. Having a coding rubric allows coders to have a clear understanding of the meaning of a particular rating (be it a dichotomous rating of “present” versus “not present” or a more detailed Likert scale) and to make comparisons between coders. We will present recommendations for coding procedures including the number/percentage of sessions to code and training coders to use the manual in a later section of the paper.

The strategies and suggestions supplied in this paper are based on our work on three funded clinical trials, although the coding procedures employed in these studies included both graduate and undergraduate research assistants who were successfully trained to reliability. First, many of the suggestions in this paper come from R.V.’s work helping to develop and train coders to distinguish between ACT model processes and two other intervention models in a large randomized controlled trial for reducing stigma and burnout in substance abuse counselors (e.g., S. C. Hayes, Luoma, Kohlenberg, Vilaradaga, Lillis, et al., 2009). In this study the authors found good interrater reliability scores (.85) in coding ACT workshops. Notice that in this case, the adherence coding procedure was conducted in the context of the delivery of ACT in a group format and not at an individual level. Second, the sample coding manual provided in the appendix was utilized in J.P.’s work on a recent funded clinical trial of ACT for OCD (Twohig et al., 2010a). Positive outcomes for the ACT intervention were reported, and integrity coding indicated that each of the identified ACT process occurred at the highest level during at least one session of treatment and that there was no observed occurrence of processes that were expressly prohibited in the ACT treatment manual. Further, this study reported high interrater reliability scores (.94) between coders at the same institution, and acceptable interrater reliability scores (.80) between coders across sites. Prior to its modification for the OCD study, a version of the sample TI manual was successfully used in both small, unfunded studies as well as large, funded studies in our research laboratory (e.g., Gifford et al., 2004; Twohig, Hayes, & Masuda 2006).

Coding Adherence to ACT Processes

Choosing the coding unit is an important first step to developing a coding manual. The entire session may be rated or observations may be chunked into smaller segments (e.g., say within a day-long workshop) depending upon the researcher’s study and questions of interest. Whichever unit of measurement is chosen, the researcher should also consider the best method of rating the observations – to allow multiple processes to be coded in a given observation or to force a choice of the primary process that occurred in a given instance.

Given the fact that the processes in the ACT model are often interrelated and presented together, we recommend designing a coding system that allows for rating all processes along a continuum (e.g., for frequency, simple occurrence, or depth) in a given observation rather than forcing a primary process to be coded. There are instances in which a single-item code (e.g., wherein coders are asked to select a primary process for that observation, to the exclusion of other processes) may be more in line with a particular research question, such as in component analysis studies or investigations that aim to test order effects for components in ACT.

Coding for adherence to the therapeutic model requires a focus on coding the observable behavior of the therapist. How might one code observable behavior when the goal of coding is to assess the

function of the response? Take for example a therapist making the following statement, “Just think something else!” to a client in session. Taken alone, this statement might appear to be indicative of a positive thinking strategy, and inconsistent with ACT. Rather than make inferences about what the therapist’s intention was in making such a statement (e.g., perhaps the therapist said the statement in what one could construe as a sarcastic tone of voice), the coder should rely only on the observable behavior of the therapist -- by assessing the preceding or subsequent statements and other observable behaviors in the room. Suppose this therapist followed that statement with “So, how successful were you?” Now the function of the statement “Just think something else” is a bit clearer -- it was an attempt to examine the workability of attempting to control one’s thoughts. In another scenario, perhaps a client said in response to “Just think something else”, “I’ve tried that, and it doesn’t work very well” and the therapist replied, “Exactly. So what else could you do?” In this second example, the statements the therapist makes would both be indicative of workability/control as the problem. Note that in both examples, the coders do not need to consider what the therapist’s “intention” might have been -- the observable behavior of the therapist tells a clear story for the purpose of the statements.

Additionally, coding focuses on the observable behavior of the therapist, and not the client’s behavior or responses. For example, a therapist would be coded as adherent if they present the material accurately to clients, even if the client expresses confusion or displays disruptive behavior in the room. How well the therapist presents the material and the therapist’s responses to client’s confusion or other concerns is best considered under the competency rating.

In addition to coding the therapist’s introduction of therapeutic material, the therapist facilitation of client’s behaviors can be considered for coding as well. For example, suppose a client was to say, “I am definitely noticing my mind telling me that I’m useless a lot. I’m thanking my mind for that thought”, the therapist might continue facilitating defusion by saying “Great, let’s practice thanking your mind for some of your other sticky thoughts. When else do you notice your mind chiming in with critical statements?” In this example, while the client initiated defusion activity, the therapist facilitated it in the room following the client’s defused statement. Notice that what is coded in this instance is the therapist’s behavior and not what occasioned it.

In considering the options for developing a coding rubric, Waltz and colleagues (1993) indicate that the simplest coding for a variable of interest is a dichotomous rating of occurrence versus nonoccurrence, but recommend coding the frequency with which the variable occurred during an observation as a potentially more useful method. Given the global nature of the ACT processes, it is more appropriate in our view to examine the frequency with which ACT processes are employed in a given observation rather than simple occurrence, as it will provide a more in-depth account of the dose of ACT being applied. For example, a coder may observe that an ACT therapist employed an acceptance exercise for 5 minutes during a session, and mark that “acceptance” occurred, but perhaps the therapist spent the remaining 45 minutes simply listening to a client speak without responding in a particularly ACT-consistent way (e.g., simply responding with statements such as “Yeah, tell me more.” or “Sounds difficult.”) as opposed to responding more actively from an ACT stance (e.g., “Tell me what you have done when you noticed that feeling showing up. Has it worked?” or “So this is one experience that you’ve had difficulty making space for. What’s the cost of trying not to have it?”). Were this same session to be coded using a frequency rating system, acceptance might be coded as occurring with low frequency, lessening the ACT-consistency of the session.

In addition to frequency coding, we also advocate that an adherence coding system examine the depth or extensiveness of each occurrence as well. In our experience, a therapist may bring up values several times throughout a session (e.g., saying things like “It sounds like you really care about your family”, “One cost of avoiding anxiety is not doing things you like to do”, or “What if we could move toward what you care about no matter what shows up inside your skin?”) but not going into great detail about those values. Alternatively, they may discuss values extensively two or three times during a

session (e.g., conducting overt values clarification or using the recommended metaphors/exercises for that session) and both could be considered highly adherent ratings.

Identifying ways to recognize subtle moves in the room is an important part of capturing the richness of the interaction between the therapist and client (or audience). For example, defusion may occur as many brief instances in the session rather than as any one overarching metaphor or time-consuming exercise, and as such it can require a more nuanced awareness of responses indicative of defusion. It can be difficult to design an integrity coding manual that accounts for both gross instances of a therapist's behavior as well as these more nuanced or subtle instances; subtle discriminations are more difficult to train and are subject to interpretation. Even when all coders have acknowledged that some processes occurred in a particular segment, there may be disagreement about which particular process or processes took place. It is in the nature of subtleties that they are difficult to perceive or agree upon, and this is something that the researcher needs to take into account when designing a particular coding manual as well as planning for a coder training procedure.

Deciding which facets of the protocol to include in a coding manual. An obvious starting point is to include the six processes in the ACT psychological flexibility model; acceptance, defusion, self-as-context, present moment awareness, values, and committed action. However, coding manuals are better at capturing behaviors of interest if they include specific strategies or techniques of importance to a particular study. The iterative process between a treatment protocol and the TI protocol is especially clear here. The research questions of the study may shed important light on the treatment processes and procedures that will be important to assess carefully in a TI protocol. Whichever processes and/or techniques are of the highest importance should be included in the integrity coding manual. Particularly when researchers plan to disseminate the protocol, a more specific coding manual will help therapists in different settings stay closer to the intention of the protocol.

For example, the coding manual in the appendix includes items that assess control as the problem, creative hopelessness strategies, and the idea of workability. While not being the main ACT processes, these strategies are key in establishing acceptance, defusion, and so on as the alternatives to unhelpful control or avoidance agendas and may therefore be important to measure. Alternatively, if a treatment protocol was heavily values focused, the coding manual could include several additional facets of values-related therapy behavior such as clarifying values, conducting values-related experiential exercises, assigning and troubleshooting values-related homework exercises, and utilizing clinical tools and values measurements in and out of session.

Additionally, if a study includes features of the treatment protocol that are integral for the treatment delivery but that go beyond the ACT processes themselves, it is important to operationalize and include them as well. For example, in another coding manual designed to assess adherence to ACT in a RCT for helping addiction counselors overcome barriers to engaging with difficult clients and reducing burnout (S. C. Hayes, Luoma, Kohlenberg, Vilardaga, Lillis, et al., 2009), the authors created a coding manual that included key processes or aspects of each of the four treatment conditions tested in the trial. The result was a coding manual that included aspects such as psychoeducation about burnout, recognizing stigmatizing attitudes towards difficult clients, and awareness of our own cultural bias. Such codes were key to accurately represent all the different components of the treatment study and verify that each treatment arm was reliably different treatment from the others.

Discriminating between processes across treatment models. A vitally important function of a TI protocol is to enable researchers to discriminate between treatment models (Perepletchikova & Kazdin, 2005). Discriminating between treatment models is clearly important for any study in which two or more treatment models are directly compared, but discriminating between treatment models can be important to establish the treatment of interest (e.g., ACT) as distinct from other models, even if no direct comparison

to that model is part of a particular study. This is especially important for any modality within the family of CBT treatments, including ACT, because if ACT constitutes a refinement of techniques and proposed processes of change as compared to other forms of CBT, this should be able to be shown reliably through an adherence coding procedure. This aspect is a key factor for treatment development in CBT.

Nezu and Nezu (2008) also propose that a clear TI protocol is even more important when the comparative treatments are more similar in process and procedure than they are different. For example, a study comparing traditional CBT to ACT will require a more nuanced TI coding manual to establish key differences (e.g., between cognitive defusion versus cognitive restructuring), whereas a study comparing relaxation training to a relationship-focused treatment may only require a fairly simple set of discriminations. Particularly when comparing two similar treatments such as CBT and ACT, we recommend cross-coding for key processes of change so as to ensure that cognitive therapy strategies are not present in ACT treatment sessions and vice versa.

While discriminating between the comparative treatments utilized in a randomized trial is important, it is also important to assess that therapists avoided processes that were explicitly excluded in the treatment, even when there is no comparison group utilizing that model in a particular study. Such a strategy is important for establishing evidence that ACT, particularly when applying it to a new treatment population, is distinct from existing treatments. For example, in order to distinguish ACT as a possible efficacious treatment that utilized processes different than those already found effective in exposure with response prevention (ERP), a recent study purposely excluded in-session formal exposure in the treatment manual (Twohig et al., 2010a) and as such an ERP item was included in the integrity coding to ensure that this variable did not occur in the treatment sessions.

While a therapist might adhere to the use of ACT processes throughout the therapeutic process, he or she might also frequently use therapeutic strategies that encourage patients to challenge the content, frequency or intensity of their thoughts and feelings, or other therapy moves that are antithetical to ACT. Therefore, it is often just as important to establish that therapists avoided the use of these prohibited strategies or rationales. This provides a means of further explicating ACT processes as distinct from processes in other models as well as highlighting the unique features of the treatment. In coding for adherence to the ACT model, such antithetical items can include using experientially avoidant change strategies (e.g., “stay away from situations that make you scared, and you’ll feel a lot better”), reassuring statements directed at reducing or removing the client’s experiences in the moment (e.g., “I know you’re feeling sad now, but everything is going to be just fine,” or “you don’t have to feel bad about that anymore, it wasn’t your fault.”), or the idea that thoughts and feelings cause behavior (e.g., “When you think you are a bad person, you feel sad, and then you stay home. So we’re going to help you deal with the thought that you’re a bad person so that you can go outside more.”). These examples of behaviors are ACT-inconsistent in that they are direct attempts to change the form, frequency or intensity of thoughts and feelings so that clients will feel better and/or will live better lives. ACT-consistent behaviors would be to present acceptance, defusion, present moment, or self-as-context strategies in order to help the client choose more values-consistent behaviors even when uncomfortable experiences are present.

Overall adherence to the protocol. In addition to ACT-specific processes or procedures, there are likely other specific procedures or topics that the researchers wish to ensure happen in each session or in specified sessions including symptom assessments, specific and/or regular homework assignments, homework debriefing, inside and outside of session experiences/exposures, and so on. These items can either be included under adherence to the treatment protocol, or if they are recommended to occur in specific sessions, it should be specified when they should occur.

Overall adherence to the protocol may be more of a global assessment when the treatment protocol is written as a flexible protocol as is often the case in ACT studies. In that case, the TI coding manual should ideally specify the parameters within which the therapist's behavior is adherent to the

protocol. When developing parameters for coding therapists delivering a flexible protocol, the parameters should be as specific as possible while still encompassing the desired flexibility intended in the protocol. Perhaps the protocol specifies the processes that should take primary precedence within the early therapy sessions, the middle sessions, and the later sessions; perhaps there are certain metaphors or exercises that should occur within the treatment at some point; and perhaps therapists were expected to conduct in-session exercises and assign homework based on the process that the therapist choose to focus on within each session. By including language in the coding manual that addresses these parameters, adherence to the treatment protocol can be better assessed.

In previous studies, we have found it useful to set a particular standard for an appropriate amount of ACT processes being applied throughout the study. For example, OCD researchers identified that for the treatment to be applied with fidelity to the model, each ACT process assessed in the coding manual should be rated at the highest level at some point across sessions, indicating that that process occurred with great frequency and depth during at least one session in treatment (Twohig et al., 2006, 2010a). Also in these studies, there was high adherence to the treatment protocol, as certain processes tended to occur with high frequency at the same approximate time into treatment (e.g., early, middle, and later sessions) across sessions and therapists and this pattern fit the treatment protocol. Other standards could be developed that fit each study's goals or design (e.g., looking over each case for levels of different processes, etc.). While previous ACT studies point to a probable effective treatment dose for different problems as defined by number of sessions (e.g., S. C. Hayes et al., 2006), this is only a rough estimate of hours of global intervention and provides little guidance for what is considered "enough" ACT to affect change. That is a question that can only be answered through further study.

Operationalizing Competence

There is general agreement in the literature that both adherence and competence are important for TI. Adherence is thought to preclude competence, but is not sufficient for competence (e.g., Waltz et al., 1993). For instance, even if therapists deliver treatment in a way that is adherent to the procedures in the protocol, they may do so in an incompetent manner that will threaten the internal validity of the study and limit the interpretation about observed outcomes (Perepletchikova et al., 2007). Therefore, we suggest that researchers include at least one competence item in the TI coding manual whenever doing so is feasible. Competence can be considered globally, such that it is assessed at the end of a treatment session or observation instance. In the case in the sample TI manual provided in the appendix, there is an 'overall competence' item that was coded for each therapy session observed.

Three simple features provide an excellent foundation for assessing competence. First, how consistently did the therapist address the client's needs? Second, how consistently did the therapist attend to the client's responses to treatment targets? Third, how clearly and in-depth did the therapist apply the procedures outlined in the treatment manual? The sample TI manual in the appendix includes a rubric for using these three features of competence to identify competence on a five-point Likert-type scale.

Opportunities for a more fine-grained analysis of competence are also possible, although to our knowledge no ACT studies have yet examined them specifically. First, learning how to avoid common therapy pitfalls are often described as key competencies for therapists training in ACT (e.g., S.C. Hayes et al., 1999; Luoma, Hayes, & Walser, 2007) and assessing for such moves could provide an additional level of detail regarding competent ACT delivery. Specific behaviors that are considered ACT-inconsistent are convincing or lecturing the client that the procedures in the ACT model are correct or useful, pushing the client to experience certain feelings in the room without obtaining permission, or prescribing certain personal values or value-directed behaviors. At another level, researchers may be interested in specifically assessing the competence with which therapists in a study deliver particular processes, although such coding may require a higher level of skill and familiarity with the ACT model to do well.

Perhaps the goal of a study is to assess the competence with which a therapist or therapists tend to demonstrate a particular process (e.g., defusion) or conduct a particular procedure (e.g., creative hopelessness). Identifying such process- or procedure-specific strengths and weaknesses could then provide much needed data for planning future training, dissemination, or assessment of therapists across sites.

Competence and the ACT therapeutic posture. While the operationalization of competence above is quite comprehensive for most studies and global competence is likely the easiest to code to reliability, there are other features of ACT that relate to competence such as the ACT therapeutic posture. The therapeutic relationship or alliance has shown to be an important component of therapy, and is one that has been appealed to in the common factors literature (Wampold et al., 1997). This literature has emphasized the importance of the therapeutic alliance as a measure of the working relationship and collaboration between therapist and client in the pursuit of mutually agreed upon therapeutic goals (Messer & Wampold, 2002; Wampold, 2005), but in ACT, the therapeutic relationship is taken one step further to include a therapeutic posture specific to the ACT model (Vilardaga & Hayes, in press). ACT trainers and manuals typically suggest that there is a therapeutic posture or stance from which therapists should work, such that the ACT processes are modeled and instigated by therapists themselves throughout treatment. It may be important for the goals of a study to assess the degree to which the therapist embodies an ACT therapeutic posture, meaning that they respond to the client from an accepting, defused, and value-directed stance. As a result, the therapeutic relationship in ACT is built upon the therapists' facilitating, modeling, and instigating of the specific skills (e.g., present moment awareness, value-consistent living) that are explicitly taught, through experiential exercises and metaphors in the treatment (Pierson & Hayes, 2007; Vilardaga & Hayes, in press). While the explicit behavioral skills training component of the treatment can be more clearly captured in adherence, as of yet this other important feature of the ACT model has not been assessed or coded in any study. Future studies that attend to these processes both in relationship to treatment outcome and within TI coding would be a welcome addition to the literature.

Coding Procedure

There are a number of considerations for developing a coding procedure such selecting sessions to code, the number of coders to select, whether the coders should be blinded to treatment condition, and the best way to train, assess, and supervise the coders. In many cases, two coders are sufficient, but additional coders may be preferred to accommodate the amount of coding.

Nezu and Nezu (2008) propose that researchers should weigh the time and cost associated with coding all sessions conducted with the importance of establishing that the treatment was applied exactly as planned across all sessions. Given the amount of skill and time it can take to train coders to carefully code each therapy session, coding all sessions for integrity may not be feasible for unfunded or studies with limited financial or personnel support. However, because so very few RCTs actually employ TI procedures at all (Perepletchikova et al., 2009), even in well-funded CBT trials (Bhar & Beck, 2009), we propose that coding even a percentage of treatment sessions for integrity will increase the methodological rigor of any treatment outcome study.

Selection of sessions to be coded. In the case that the researchers cannot afford or choose not to code all sessions conducted for integrity, the selection of sessions to be coded is an important process and one that is not always done entirely at random in studies that assess integrity. Why? First, therapists are rarely equally talented at applying the protocol throughout the study; they very often get better as they have seen more clients (particularly when the study utilizes novice or trainee therapists) and as they grow accustomed to the protocol. Second, it can be important for gleaning a representative sample of therapist behavior in applying the entire protocol to assess the therapists equally throughout the early, middle, and later sessions across clients. Webb and colleagues (2010) report that for some studies in their meta-

analysis, TI coding consisted of coding one session of each therapist's treatment as "representative" of that therapist's behavior. While any integrity coding is laudable, coding only one session per therapist is unlikely to accurately capture all relevant variables of interest (at least for some treatment modalities) and Webb and colleagues (2010) postulate that such a procedure could have contributed to their null findings. For ACT studies, where the intervention is likely to look very different in an early versus a later session (e.g., different processes are likely to be targeted), it is even more important to consider coding more than one session as representative. Even if selecting a few sessions at random, the sessions selected for coding could be skewed to include a greater number of certain sessions than others. This could result in a greatly unrepresentative sample of therapist behavior, as oversampling certain sessions decreases the likelihood of assessing the therapists' full repertoire throughout the course of treatment. Therefore, it is important to block the random selection of sessions to be balanced across early, middle, and later sessions, as well as across the therapist's earlier clients and their later clients (Nezu & Nezu, 2008).

Establishing interrater reliability. Interrater reliability (IRR) establishes the degree to which the coders' ratings agree, and anything above 80% agreement is generally considered sufficient, with reliability of at least 90% being ideal. To assess (IRR) the coders each assess the same therapy sessions and their ratings are compared to each other. Calculating an IRR statistic is one way to establish that the coders have all been properly trained. Early in the coding training process the coders may have a low IRR but as their codes are discussed and coding discrepancies are minimized, the IRR should increase. While establishing good IRR before beginning the official coding process is important, so too is periodically assessing each coder over time to minimize coder drift. Therefore, we recommend creating an IRR coding schedule that includes a planned overlap between raters at the beginning of their official coding, in the middle, and towards the end of the sessions they will code. In selecting the sessions to be coded for IRR, it can be useful to apply a similar strategy as recommended above. Consider selecting earlier, middle, and later sessions across the therapists' time in the study as sessions to be coded for IRR so that the coders are able to learn from a fairly representative sample of therapist behaviors throughout the course of therapy. We recommend seeking additional reading for statistical and methodological suggestions appropriate for the study in which IRR will be conducted (e.g., Tinsley & Weiss, 2000).

Training coders. There are several features of a coding training procedure that may facilitate an effective and efficient coding procedure. First, if possible, it is important to blind the coders to the treatment model being applied in any given session. This may not be feasible in the case where videotaping occurs or the treatment providers are clearly linked to one treatment or another. However, whenever possible, it may allow for a more objective assessment of both prescribed and proscribed behaviors across sessions. Second, the assembling of a team to code sessions is important. In the aforementioned studies from which we draw our experience, an ideal coding team includes members who have some exposure to functional/behavioral thinking and know or are willing to learn the basic principles of ACT, but being a therapist is not necessarily required (e.g., we have successfully trained to reliability a range of coders including undergraduate research assistants). Novices of the ACT model may require outside reading to establish a foundation of knowledge about the model and behavioral thinking and in such cases we recommend incorporating into coder training readings from such texts as *The ABC's of Human Behavior* (Törneke & Romnerö, 2008), *Learning ACT* (Luoma, et al., 2007), *ACT Made Simple* (Harris, 2009), or *A CBT-Practitioner's Guide to ACT* (Ciarrochi & Bailey, 2008), depending on the potential coder's background. Third, successfully training coders to apply accurately a complex TI protocol involves regular meetings and multiple shaping opportunities. We recommend selecting training segments that a lead trainer and the coding trainees can watch/listen to together and discuss the discriminations as they arise. Fourth, we recommend assessing the coders periodically (particularly if the coding process takes place over an extended period of time) to ensure that their ratings have not drifted too far from the original intentions in the integrity coding system. Assessing for coder drift can also be an opportunity to further hone the integrity coding manual to help clarify any points of confusion or ambiguity. Finally, in our experience, psychological flexibility on the part of the integrity coding team is

as important as psychological flexibility on the part of the therapist or client. When coders experience a coding item as ambiguous, confusing, or worded such that it conflicts with the intended meaning, it is easy to disagree with other team members. In that sense, disagreeing on specific therapy observations can be a frustrating process and thus as a team leader it is important to foster psychological flexibility in terms of the coder's own reactions and their reactions to others. In addition, the integrity manual should be adapted to better explicate the process of interest, even when the authors of the manual believe the wording to be clear.

Summary

Including an integrity protocol can provide additional empirical evidence for the model being used, which can be of the highest importance when a study is designed to treat a novel population or apply a new technique. While mediation analysis can provide empirical support for the purported processes of change, mediation analysis does not indicate whether or not the procedures/exercises used in the treatment were responsible for the changes in the mediator and outcome. As such, researchers must also conduct at minimum a manipulation check to ensure that the procedures were employed as directed by the treatment protocol. Together, treatment integrity checks and mediational analysis can provide strong empirical evidence that the processes of change are indeed responsible for desirable changes in outcome.

The strategies presented in this paper are designed to be a starting point for researchers developing a study-specific TI ACT protocol. However, we recognize that many of our suggestions represent a best-case scenario for coding for TI. Admittedly, our experience in coding for ACT processes comes exclusively from federally-funded studies with multiple personnel. We hope that these suggestions are helpful not only for those with the financial resources to conduct carefully developed integrity checks, but for those conducting smaller, unfunded studies to incorporate some level of integrity coding. While the field as a whole is lagging behind the need for such integrity checks, we hope that papers such as this will help provide the necessary tools for ACT researchers to consider developing and employing integrity checks in their studies more regularly.

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See Appendix on Next Page!

Appendix

ADHERENCE RATERS' MANUAL FOR ACT for OCD TREATMENT STUDY

Michael P. Twohig, M.S. (Version 1; 6/22/05)
(Version 2; 7/15/08 revised by Jennifer Plumb, M.A.)

Adapted from: Gifford, E.V., Pierson, H., Smith, A.A, Bunting, K., & Hayes, S.C. (2003): Adherence raters' manual for NIDA ACT/Bupropion smoking cessation treatment study

Adapted from: E.V. Gifford, K. Beitz, K. Turner, G. Chang, & S.C. Hayes (2001): Adherence Raters' Manual for NCI ACT/NRT Smoking Cessation Treatment Study*

Adapted from: R.L. Sifry, K.M. Carroll, L. Gordon, S. Ball, J. Corvino, & R.M. Bisighini: Rater's Manual for Project Match Alcohol/Cocaine Treatment Study Tape Rating Scale *

Adapted from: H.M. Behr, R.M. Bisighini, K.M. Carroll, R. MacLean, & K.F. Nuro: Rater's Manual for Project Match Tape Rating Scale*

***Adapted from: M.D. Evans, J.M. Piasecki, M.R. Kriss, & S.D. Hollon: Rater's Manual for the Collaborative Study Psychotherapy Rating Scale

*Adapted from: C. R. Parker, M. Bolling, & R. J. Kohlenberg: Therapist In-Session Strategy Manual

*Adapted from: S. D. Hollon, M. D. Evans, A. Auerbach, R. J. DeRubeis, I. Elkin, A. Lwery, M. Kriss, W. Grove, V. B. Tuason, & J. Piasecki: The Collaborative Study Psychotherapy Rating Scale**

**Adapted from: Adapted from: C. R. Parker, M. Bolling, & R. J. Kohlenberg: Therapist In-Session Strategy Manual

GENERAL GUIDELINES

1. RATE OBSERVABLE THERAPIST BEHAVIORS:

Items refer to the therapist's behavior, not the client's behavior or the client's responses. In rating the therapist's behavior, the rater should consider what the therapist actually attempted to do, not whether those attempts were met with success or failure. Variables must have explicitly occurred. Do not rate a variable as having occurred if this occurrence was not explicit but only implied. Raters should have specific examples in mind to substantiate their ratings. Always consider the entire session when rating an item.

2. RATE THERAPIST FACILITATION:

Although the rater's task is to rate the therapist's behavior, the client may initiate a behavior, which is being measured with only limited therapist involvement. An item should not necessarily receive a lower rating in this case. Ratings should reflect the degree to which the therapist facilitated the behavior being measured. Facilitation refers to the degree to which the therapist actively encouraged or prompted the client in a specific activity, rather than merely acting as a passive recipient of the client's self-initiated behavior.

3. CONFIDENTIALITY:

All videotapes and rating scores are confidential material. While watching tapes and rating sessions, please ensure that you do so in a place where others cannot see or hear the sessions. The tapes are to be handled like private psychiatric charts. Do not leave tapes or rating material unattended. Do not discuss the content of sessions with anyone other than project staff. This is done to ensure the confidentiality of all clients and therapists.

4. RATE FOR FREQUENCY AND EXTENSIVENESS:

<i>A rating of:</i>	<i>Would indicate:</i>
1 = not at all:	The variable never explicitly occurred.
2 = a little:	The variable occurred at least once (and may have occurred a few times) and was not addressed in an in-depth manner.
3 = somewhat:	The variable occurred several times and was addressed at least once by the therapist in a moderately in-depth manner.
4 = considerably:	The variable occurred with relatively high frequency and was addressed by the therapist in a moderately in-depth manner.
5 = extensively:	The variable occurred with great frequency and was addressed by the therapist in a very in-depth manner.

For the frequency and extensiveness of ratings, the starting point for rating each item on the scale is “1.” The rater should assign a rating of greater than “1” only if he/she hears examples of the behavior specified in the items. The rater should be careful not to start rating from the midpoint (“3”) out.

5. AVOID HALOED RATINGS:

The Adherence Rating Scale is designed for the purpose of describing the therapist’s behavior in the session. In order to use the Adherence Rating Scale correctly, it is essential that the rater rate what actually occurred, and *not* what *ought* to have occurred. Therefore, the rater must be sure to apply the same standards for rating an item regardless of:

- (1) the type of therapy the rater thinks he/she is rating;
- (2) other behaviors the therapist engaged in during the session;
- (3) ratings given to other items;
- (4) how skilled the rater believes the therapist to be;
- (5) how much the rater likes the therapist.

6. RATE EVERY ITEM BY CIRCLING WHOLE NUMBERS:

This scale is designed so that every item is rated for every therapy session. Do not leave any item blank. Although raters may be tempted to give a score between whole numbers (e.g., 4.5) only whole numbers are acceptable scores. Thus, please record *only whole numbers* for each variable.

Each item has sub-items, which are indicated by a letter. Only rate the items designated by a number. The sub-items are not rated separately, but instead factor into the rating given to the item they are listed under. The therapist's behavior does NOT need to be differentiated among sub-items. If the therapist's behavior falls under any one of the sub-items, it counts as an example of the heading item (i.e., if a behavior would fall under in-session exposure or mindfulness of current experiences, it is just considered an example of Acceptance/Willingness/Exposure).

7. USE THE MANUAL DURING EACH RATING:

In order to prevent rater drift, we strongly recommend that all raters read the manual's description of each item each time a session is rated. Because of the complexity of the scale items, it is essential that the rater be completely familiar with the definitions of variables before rating them.

Use the manual for specific examples: Examples are provided in the manual to be used as guidelines for rating therapist behavior. The examples are guidelines for rating an item. The rater is expected to exercise his/her judgment when using the examples to guide his/her rating.

Use the manual to clarify subtle differences between items: Because the items may overlap in terms of breadth of coverage, the same therapist behaviors, which are appropriately rated in one item, may also apply to another item. The rater should be careful to rate each item distinctly (i.e., the rater should consider the extent to which the behavior specified in that item occurred and should not consider other similar items when doing so). The rater should use the manual as a guide to clarifying subtle differences between items.

8. TAKE NOTES BEFORE RATING:

Only entire sessions will be rated. Therefore, do not rate any items on the scale until the entire session has been watched. We recommend that the rater take notes while watching the session. This enhances accuracy of the ratings because raters will be reminded of information, which is relevant to rating the items and keeps the rater focused on what actually occurred in the session. Because raters are asked to make many fine distinctions, it is essential that the rater watch the session carefully and without distraction.

SESSION OCCURRENCES: RATING ITEMS

1. DELITERALIZATION/DEFUSION

- A. Deliteralization/Defusion:** To what extent did the therapist use, teach or remind the client of use of language conventions aimed at helping the client remember that thoughts and feelings are just thoughts and feelings and not necessarily reality (i.e., “but” versus “and,” and/or “I am having the thought/feeling/evaluation that...,” and/or “thank your mind for that,” etc.)?

This question is intended to evaluate whether the therapist helped the client to identify thoughts as thoughts and not necessarily as reality. Thoughts are just words, even long-held beliefs. If thoughts are seen for what they are (just thoughts), choices can be made as to whether or not they should actually be acted upon. This may include discussions about the limitations of language in general as well as reminders to the client to see particular thoughts and feelings as just thoughts and feelings,

distinct from established facts. The therapist might discuss deliteralization as “mind chatter” or separating private experiences (thoughts and feelings) from reality.

Examples:

Th: OK, and that is a thought you are describing isn't it? Thank your mind for that!

Th: Say the word “milk” really fast.

Cl: Milk, milk, milk, milk, milk, milk...

Th: Notice how the meaning of milk disappeared? The word milk is just a word; the milk isn't inherent in the word, it is in the meaning we give it.

Th: So how is, "Gosh, I'm never going to be able to do this!" different from, "I really will be able to do this!"?

Cl: They're both thoughts.

Th: Right, they're just thoughts. Thoughts are different from what you do. Can you have the thought, "Gosh, I'm never going to be able to do this!" and do it anyway?

- B. Feeling/Thoughts DO NOT Lead to Actions:** To what extent did the therapist identify that a client’s feeling/thought does not lead the client to behave in certain ways? For example, if the therapist does not accept the client’s rationale for compulsions related to thoughts and feelings (e.g., “Whenever I get angry I have to check”), then the therapist is identifying that the particular thought/feeling does not lead to action.

This item measures the extent to which the therapist highlighted that the client’s behavior is not the result of thoughts/feelings, but rather that the client has the ability to observe private experiences and urges and not act on them.

Examples:

Cl: When I feel overwhelmed I have to check and, therefore, the only way I can figure that I'll be able to quit checking is to restructure my life such that I have fewer responsibilities.

Th: ‘Overwhelmed’ is something that you experience, but it isn't you.

Cl: I know we've talked about that, but...

Th: You can have the urge to check when you feel overwhelmed, but notice that feeling overwhelmed doesn't necessarily require you to check - you could have the experience and sit with it.

Th: It's like when you have road rage - you can have a thought that you want to curse and run someone off the road, but you don't do it.

Th: Have you ever been angry enough at your child to strike them?

Cl: Yes, but I never would!

Th: Exactly! You can have the thought or urge to do it, but the thought itself doesn't cause you to actually hit your kid. In those moments you act in accordance with your values, not with your thoughts.

- C. Self As Context/Mindfulness Of Self As Separate From Language:** To what extent did the therapist facilitate the client’s sense of *self-awareness* or identification as the *context* in which all their thoughts, feelings or evaluations occur; i.e., the place from which they can *observe* all their

thoughts and feelings versus identifying their thoughts or feelings as who they are (e.g., talk about the “observer self”)?

This question is intended to evaluate whether the therapist worked on the client’s sense of relationship with him/herself, in particular to what extent did the therapist encourage the client to relate to him/herself from a more complete and profound perspective rather than basing their sense of self on the fluctuating status of their momentary feelings and thoughts.

Exercises that target getting the client focused on feeling his or her body and noticing physical sensations, thoughts, and feelings that are occurring in the moment (e.g., centering exercise) should be rated on this item.

Examples:

Th: You are the perspective from which you can observe all your thoughts and feelings.

Th: Notice that you are not just your thoughts and feelings; you are the place from which you observe all of your thoughts and feelings.

Th: At the deepest level of your experience, you are like the chessboard, and all your thoughts and feelings are like the pieces. You are in contact with all of the pieces, black and white. You are the board that contains them all, but you are more than any of the pieces.

Cl: It's difficult for me to quit checking. I feel like a failure.

Th: Notice that you're having that thought right now. That thought is one of many experiences contained within you, but it is not specifically you. Think of it this way: you are the container for your experiences. Your experiences can be held within you, but they are not the container itself: the experiences are not you.

2. WILLINGNESS/ACCEPTANCE

A. Experiential Acceptance: To what extent did the therapist facilitate the client’s willingness to *contact* and *accept* difficult feelings, thoughts, memories and/or bodily sensations, both in session and outside of session?

This question is intended to evaluate whether the therapist worked on creating a context wherein the client could experience negative thoughts/feelings/memories/bodily sensations in session and/or encouraged the client to put themselves in emotionally intense situations outside of session. Presence of client emotion is not enough. The client feeling their emotion must be encouraged by the therapist. In other words, it must occur as a result of interventions and attitudes expressed by the therapist. This includes situations wherein the client initiates expression of feelings if the therapist actively encourages this expression.

Examples:

Th: Say in this hand I hold the ability to move forward in your life, and in the other one I hold avoiding feeling bad. Which do you choose?

Th: This is a safe place to let yourself feel what’s there.

- Th: *Can you give yourself permission to have that feeling?*
- Th: *Why don't we try going there and feeling what is there to be felt?*
- Th: *Are you willing to have it (a bad feeling or thought), even if you don't want it?*
- Th: *How are you doing?*
- Cl: *This is really hard. I've been miserable all week.*
- Th: *Great! What's that like?*

B. Exploration of feelings/sensations: To what extent did the therapist help the client to explore his/her feelings or physical sensations related to current symptoms or clarify affect states as related to nicotine use *or* other target problems?

This item refers to the extent to which the therapist facilitated discussion that clarified the client's feeling state or physical sensations (e.g., attempts to help the client put his feelings and sensations into words or discriminate affects associated with the effects of other substances from other affect states). This may include clarification or exploration of feelings in an interpersonal situation.

Examples:

- Th: *It sounds you were feeling angry at work, and after work you went out and cleaned your car. I wonder what the connection is between anger and cleaning for you?*
- Cl: *I cleaned and I don't know why.*
- Th: *What were you doing right before you cleaned?*
- Cl: *I was at work.*
- Th: *What was going on at work?*
- Cl: *I was busy trying to complete a deadline before 5:00.*
- Th: *What was going through your mind or what were you feeling?*

This item would be rated greater than "1" if the therapist helped the client label his/her feelings. To be rated highly, the therapist needs to thoroughly explore the relationship between feelings, behavior and nicotine use or other target problems and distinguish between feelings that are effects of compulsions versus other affect states.

Examples:

- Cl: *I'm noticing that I'm having urges to check as we're talking right now.*
- Th: *Can you describe what thoughts, feelings and physical sensations you're having right now?*
- Cl: *Well, it feels kind of jittery and I am having thoughts like, "I can't stand this."*
- Th: *Great describing. Let's just sit with that experience for a moment.*

D. Mindfulness of Current Experiences: To what extent did the therapist facilitate noticing and awareness of the client's current experiences?

This includes physical sensations, emotions, and any experience with a focus on the present moment. This includes negative feelings as well as positive feelings, as long as the focus is on experiencing the present moment. This also differs from in-session exposure in that the therapist may talk about experiencing in the present moment at a time other than in the current session.

Examples:

Th: So in that moment you were completely aware and not struggling with your experience.

Th: See if you can just show up to what is there to be experienced right now in this moment.

Cl: Yesterday I had this experience where I really wanted to check, but instead of feeling like I had to get rid of that feeling, I felt the urge.

Th: That is exactly what we are talking about, staying right in the moment and feeling and noticing what is there to be felt.

E. Out of Session Acceptance Skills Practice: To what extent did the therapist encourage the client to experience difficult urges, thoughts, feelings, memories and/or bodily sensations in their daily life outside of session?

Out of session acceptance skills practice is in the service of building skills in order to deal with unpleasant thoughts and feelings. This item refers to the extent to which the therapist attempted to help the client, in a sense “build a muscle.”

For a high rating, the therapist must have helped the client talk openly about difficult urges, thoughts, feelings, memories and/or bodily sensations the client experiences in their daily life outside of session. The therapist also must have helped the client interpret those urges, thoughts, feelings, memories and/or bodily sensations. The therapist should have also discussed how the practice of acceptance is in the service of building a skill set for dealing with uncomfortable private experiences.

A low rating would be given if the therapist only touched upon those areas without going into detail as to how the client can cope with smoking urges by experiencing and understanding those feelings.

Examples:

Th: Tell me about your feelings and the bodily sensations you are experiencing when you have the urge to check but don't. It's ok to have the feelings and sensations because it means you are aware of what's going on. By knowing yourself you can find ways to cope with them.

Cl: When things get really tough at home I usually just start cleaning.

Th: Let's talk about your urge to clean. What thoughts, feelings or bodily sensations were you experiencing when you felt the urge to clean?

3. CREATIVE HOPELESSNESS/WORKABILITY/CONTROL AS A PROBLEM

A. Efforts to Control Thoughts and Feelings: To what extent did the therapist identify the client's current efforts to try to *control* their thoughts or feelings as *problematic agenda*, including identifying specific instances where the client attempts this (i.e., trying to control thoughts and feelings)?

This question is intended to evaluate whether the therapist discussed the nature of the agenda of trying to control thoughts and feelings (i.e., preventing one from having certain feelings or thoughts) and problems with this effort.

Examples:

Th: If you don't want to have it, you've got it.

- Th: *Control works in the world outside the skin, but not in the world inside the skin.*
- Th: *Could you stop being afraid if I hooked you up to a polygraph machine and put a gun to your head?*
- Th: *Could you fall in love with a stranger if I offered you money to do it?*
- Th: *When you're trying to control your thoughts and urges, you can think of them like waves-- you can surf through them. Think about a wave. It has about a three- minute hang time. If you try to control it, you'll never be able to ride it out. You can't block a wave from coming. When you try to control thoughts and urges they just get more intense--they don't go away.*
- Th: *Don't think about a jelly doughnut.*
- Cl: *I can't.*
- Th: *Exactly my point.*

- B. Explore the Impact of Previous Efforts to Avoid or Control:** To what extent did the therapist discuss or remind the client of the client's *history* of attempts to solve their problems and/or the emotional and situational *consequences* of this unsuccessful behavior (e.g., "How has that worked" and/or "Is that like you")?

This question is intended to evaluate whether the therapist attempted to help the client make contact with the lessons of their past behavior. This can include the painful costs of failing to change as well as discussing the strategies they have used in the past that involve efforts to control or avoid uncomfortable emotions or thoughts. The therapist's general purpose would be to set the stage for learning a new approach by identifying the need for change.

The therapist's assessment of historical coping strategies and the success or failure of these strategies should be rated on this item.

Note: To receive a high rating on this item, the therapist should identify the ineffective change strategy as well as emphasize the consequences of using this strategy.

Examples:

- Th: *(In response to client's discussion of ineffective control strategy.) Is that familiar?*
- Th: *And how has that worked for you in the past?*
- Th: *(Using the 'shovel' metaphor in a way that identifies the client's typical 'shovel.')*
- Th: *(Exploring the costs of using; e.g., financial costs, emotional costs, roads not taken, etc.)*
- Cl: *I know quite a few people have quit on will power alone. In fact, I personally have had some success in the past quitting this way.*
- Th: *And, you're here now, so obviously that hasn't really worked for you.*

- 4. VALUES AND GOALS:** To what extent did the therapist help the client discuss his/her *values* as well as *goals* based on the client's stated values?

This question is intended to evaluate whether the therapist worked on helping the client clarify and establish what his/her values are and goals based on these values. Did the therapist remind the client of his/her values during therapy and use them to help the client focus in the direction he/she wants their life to go as well as his/her efforts in that direction?

This item is intended to evaluate whether the therapist focused on the client acting effectively and choosing to act effectively. This would not include situations where the therapist scolded the client or tried to get them to do something. Rather, this includes situations where the therapist helped the client clarify his/her values and choose to act in accordance with them.

Examples:

Th: *What do you want to be about?*

Th: *What do you want for its own sake, just because that is what matters to you?*

Th: *How can you live effectively by moving in this direction in your life right now?*

Th: *How does this relate to your values/goals/living effectively?*

Cl: *I really want to go and check right now.*

Th: *Well, that's your little want--I see that you may want that in the moment. What are some of your bigger wants? What I mean by that is what do you want long-term?*

Cl: *I suppose I want to be healthier and to live longer.*

5. COMMITTED ACTION

A. Making and Keeping Commitments: To what extent did the therapist encourage the client to generate and/or keep their *commitments* in any or all aspects of their life?

This question is intended to evaluate whether the therapist focused on the client choosing to act effectively. The therapist should have helped the client make and keep commitments to behave in accordance with his or her values and goals and to track their commitments to do so *in concrete terms*. This can include looking at the reasons the client uses to avoid acting in alignment with their values and challenging these reasons by not supporting the client's belief that those reasons control their behavior. Essentially, any discussion where the client and therapist addressed targets of therapy and how the client is going to participate in working on these targets should be rated.

Examples:

Cl: *I couldn't keep with my commitments from last week.*

Th: *Why is that?*

Cl: *I got scattered and stressed and ended up checking more than I should've without even realizing it in the moment. When I went back to record the number of on sheet I then noticed that I wasn't able to follow our plan.*

Th: *Well, what should we do to help you be more conscious of your behavior throughout the day?*

Cl: *I'll just do better, I guess.*

Th: *Why don't we talk through a plan about how specifically you're going to stay focused this week and agree on it.*

Th: You have stated that you want to live a healthier life. What are things you can commit to doing this week to begin to move in that direction?

9. GENERAL ASSESSMENT

A. **Client's Goals for Treatment:** To what extent did the therapist discuss, review, or reformulate the client's goals for treatment?

This item refers to the extent to which the therapist collaborated with the client in a discussion of what the client's goals of treatment are or whether the client's goals are realistic. The therapist must in some way make reference to the client's agenda for therapy. This would include a discussion of how problems, which are not a target of the treatment, could be addressed outside or after the study protocol.

To be rated highly the therapist should help the client identify specific goals that she/he wants to work on, determine if the goals are realistic, determine which of these goals are appropriate to work on in the study, and indicate which should be addressed in treatment after the client completes the study.

This item should not be rated if the therapist only makes reference to his or her agenda without discussing the client's goals.

B. **Psychopathology:** To what extent did the therapist explicitly focus on the client's psychopathology (i.e., symptoms of depression, anxiety or psychoses)?

This item is intended to tap the extent to which the therapist focused specifically on psychiatric symptoms or problems of the client. These could include depression, anxiety and/or psychoses. Meaningful discussion of outside treatment the client might have received for these problems would also be rated here. In order to be rated, it must be clear that symptoms (e.g., depression and anxiety) are related to a condition as opposed to a transient feeling. For example, feeling anxious about a test or statements such as "I feel down today" would not be rated on this item.

Mere assessment of occurrence of these symptoms or whether the client received treatment for a psychiatric problem would receive a low rating on this item.

A high rating would be achieved if a thorough discussion of psychiatric problems occurred or a thorough examination of how a particular psychological or psychiatric problem related to the client's use of nicotine occurred.

Note: If the therapist followed a form and therefore reviewed a large quantity of potential symptoms, the rating could go up to a "3." For a rating above "3," the therapist must have discussed potential symptoms in an expanded and in-depth manner.

C. **Assessment of General Functioning:** To what extent did the therapist assess the client's general level of functioning in major life spheres (e.g., work, intimate relationships, family life, social life everyday stress, sleep, exercise, etc.)?

This item measures the extent to which the therapist assessed the client's functioning in each of the major aspects of the client's life (e.g., intimate relationships, family matters, friendships, other social relationships, vocational pursuits, etc.).

Rating Scale for A, B, and C:

<i>A rating of:</i>	<i>Would indicate:</i>
1 = not at all:	The therapist made no mention or inquiry about general functioning in major life spheres, OCD symptoms, or goals for therapy.
2 = a little:	The therapist may have done a general assessment attending to one area (general functioning in any life sphere, OCD symptoms, or goals for therapy) but only very superficially.
3 = somewhat:	The therapist inquired about at least one area of functioning (OCD symptoms, at least one major life functioning sphere, or goals for therapy) in an in-depth manner <i>OR</i> more than one area of functioning in a somewhat superficial manner.
4 = considerably:	The therapist inquired about two or more areas of functioning (OCD symptoms, at least one major life sphere, or goals for therapy) in an in-depth manner (i.e. with some exploration).
5 = extensively:	The therapist inquired about more than two areas of functioning (OCD symptoms, at least one major life sphere, or goals for therapy) in an expanded and in-depth manner.

10. CHALLENGING COGNITIONS

A. Changing Content of Thoughts: To what extent did the therapist encourage the client to think something different than what the client was already thinking?

This item should be rated if the therapist says something that indicates the client should think one thing instead of another thought that has been presented. This item is intended to measure the level that the therapist tried to replace the content of a client's thoughts with other content.

Examples:

Cl: I don't think I am ever going to be able to quit.

Th: Don't think that. Think positively about it.

Cl: I was having the thought that I am not good enough to be able to follow through.

Th: No. Just think that you are good enough.

B. Substituting Positive Thoughts: To what extent did the therapist attempt to help the client practice possible rational responses to the client's negative thoughts or beliefs?

This item measures how much the therapist facilitated daily life or in-session practice of rational responses to a negative thought or belief of the client.

In order to receive a high rating on this item the therapist must facilitate in-session or daily life practice by role-playing, assigning homework or rehearsing various rational responses. Briefly

assigning a task for practicing rational responding without extensively practicing in-session or extensively discussing a daily life assignment should receive a low rating.

Examples:

- Cl: *I think that I'm no good at anything!*
 Th: *Is that likely the case that you're no good at anything? How reasonable do you think that statement is?*
 Cl: *Well, that's how it feels sometimes...*
 Th: *...And how rational is that thought?*

11. EXPERIENTIAL AVOIDANT CHANGE STRATEGIES

- A. Avoid or Control:** To what extent did the therapist encourage the client to avoid or control their thoughts, feelings, memories or bodily sensations? This can include instances where the therapist appears to do something designed to make the client “feel better” or prevent them from “feeling bad.”

This item would be rated highly if the therapist immediately moves to problem solving when a client’s feelings, thoughts, memories and/or bodily sensations come up. This item would not be rated if the therapist encourages sticking with difficult thoughts, feelings, memories and/or bodily sensations.

Examples that should be rated:

- Th: *You should try doing activities that you enjoy so that you can avoid the depressing thoughts.*
- Cl: *I feel out of control sometimes when I can't check.*
 Th: *Don't feel bad.*
- Cl: *I've been miserable since I've quit checking.*
 Th: *I understand. How can we make this easier for you?*
- Cl: *I usually clean my kitchen so I just avoid that room.*
 Th: *That's probably a good idea.*

Example that should not be rated:

- Cl: *I usually clean my kitchen so I just avoid that room.*
 Th: *Given that we're just getting started, that's ok in the short run, but our ultimate goal is for you to be able to have urges and expose yourself to triggers for checking and not act on them.*

Note: This last example should not be rated because the therapist explains that the long-term goal is not to avoid triggers for smoking (i.e., places, uncomfortable sensations, etc.).

- B. Reassurance in Order to Reduce Experience:** To what extent did the therapist reassure the client in a way that supported the client not feeling what he/she was feeling?

This item is intended to measure the extent to which the therapist offered reassurance that was not merely supportive, but was intended to reduce the client's affect or current experience. Therapist behaviors rated on this item include behaviors that show an unwillingness on the part of the therapist to experience what the client is experiencing.

Examples:

Cl: I have been feeling really miserable lately.

Th: It's ok. You will feel better soon.

Cl: I am not sure I can handle this. I just feel so lost all the time, like something is really missing. (crying)

Th: Don't cry. It will be alright.

12. COGNITIVE THERAPY RATIONALE: To what extent did the therapist provide a rationale that emphasizes the importance of evaluating the accuracy of the client's cognitions (beliefs, thoughts, etc.) and changing inaccurate cognition *in order to* alleviate the client's smoking? Also, the therapist does not provide or state other possibilities for the cause of smoking addiction.

The purpose of this item is to measure how extensively the therapist discussed:

- (1) the importance of evaluating the accuracy of the client's cognitions, *and*
- (2) the possibility of changing the client's inaccurate cognitions for the purpose of alleviating their compulsions.

In order for this item to be rated greater than "1" the therapist must make the connection between evaluating/changing cognitions and alleviating obsessions. This connection must either be explicit or strongly implied.

This item should *not* receive a rating *greater than* "1" if:

- (1) the therapist states that they would be focusing on evaluation/changing the client's cognitions simply because it would be good to get them straightened out and did not at least imply that doing so would serve to alleviate the client's obsessions.

Examples:

Th: When a person has OCD, they are often overrun with negative thoughts and beliefs, which are often inaccurate. In order to reduce the depression it is very important to take a careful look at the accuracy of the thoughts and beliefs and change them if they are inaccurate.

The above example should receive a rating of greater than "1" because the therapist explicitly stated that the purpose of evaluating/changing cognitions was to reduce the client's smoking addiction.

Th: We are certainly going to want to help you quit checking. As a result we will focus on the way you think to make sure that there aren't times that you are viewing things inaccurately. If we discover that there are times that your beliefs are not in line with the way things really are, we will work to change your beliefs so that they are more accurate. How does that plan sound to you?

The above example should receive a rating of greater than “1.” The therapist *implied* a connection between evaluating/changing cognitions and alleviating the client’s checking.

This item measures the extent to which the therapist offered a rationale for therapy that emphasizes that evaluation and changing inaccurate cognitions (thoughts, beliefs, etc.) would be helpful in alleviating the client’s compulsions.

13. THOUGHTS AND FEELINGS CAUSE ACTION

- A. Feelings/Thoughts Lead to Action:** To what extent did the therapist identify that a client’s thought or feeling may lead to certain behavior? For example, did the therapist accept the client’s rationale for smoking related to feelings or thoughts (e.g., “Whenever I get angry I have to check.”)?

To receive a high rating on this item, the therapist must have identified and explored the client’s feelings or thoughts that may have lead to certain aspects of the client’s behavior. The therapist must put forth a feeling or thought that led the client to check or explicitly agree with or support the client's rationale.

This item would be rated lower if the therapist only went over the client’s feelings or thoughts without relating the consequence behavior to the feelings or thoughts.

Example:

Th: I think what you are telling me is that when you are nervous you have to check because it relaxes you.

- B. Relate Improvement to Cognitive Change:** To what extent did the therapist relate improvement in the client’s depressive symptoms or relate problems in daily life to changes in client’s beliefs or automatic thoughts?

This measures how much the therapist made a connection between improvement the client has experienced and changes that have occurred in the client’s beliefs, thoughts or underlying assumptions. The changes in beliefs, thoughts, or assumptions do not have to be directly caused by therapeutic efforts to change these cognitive phenomena. “Improvement” here refers to a reduction in the client’s depressive symptomatology *or* improvements in other areas of the client’s daily life.

Examples:

The following example should receive a rating greater than “1” because the therapist related improvement the client experienced in his family life to changes in his underlying assumptions:

Th: How are things going between you and your wife and between you and your children?

Cl: My relationship with my wife is much better now than it was. I'm getting along better with my kids too.

Th: What do you attribute those improvements to?

Cl: I guess the reason I'm getting along with my wife better now is that I'm not as quick to take offense at what she says as I used to be.

Th: I remember that when she said something that was at all critical, it triggered a set of beliefs you had about your worthlessness. I also remember that you felt bad in those situations, and your reaction was producing strain on your relationship with her. It

sounds like the absence of those beliefs has resulted in your getting along better with her. Is that how you see it?

The following example should receive a rating greater than “1” because the therapist related improvement the client experienced in his family life to changes in his automatic thoughts:

Th: How are things going between you and your wife and between you and your children?

Cl: My relationship with my wife is much better now than it was. I'm getting along better with my kids, too.

Th: What do you attribute those improvements to?

Cl: I guess the reason I'm getting along with my wife better now is that I'm not as quick to take offense at what she says as I used to be.

Th: I remember that when she said something that was at all critical, it triggered automatic thoughts like, "Get off my back; can't you see I'm doing the best I can?" that led you to feel defensive and angry. Your reaction was producing strain on your relationship with her. It sounds like the absence of those thoughts has resulted in your getting along better with her. Is that how you see it?

9. EXPOSURE AND RESPONSE PREVENTION/ IN SESSION EXPOSURE

To what extent did the therapist engage in exposure related to the client's feared stimuli.

This refers to discussing the events that elicit high levels of anxiety and the obsession, and exposing the client to these stimuli. Discussion of events that trigger the obsession or anxiety does *not* be scored in this category. This category refers to exercises that involve in- session exposure to the feared events themselves, with the express purpose of preventing compulsions and reducing anxiety. Additionally, discussion about exposure that occurs out of session would *not* be included in this section.

Examples

Th: I know this is scary but let's pretend that you dropped something under your chair.

Th: Why don't you touch the bottom of your shoe right now and see if you can fight the urge to get up and wash your hands.

GLOBAL RATINGS

15. OVERALL ADHERENCE TO PROJECT MANUAL: This item is intended to measure the therapist's overall adherence to the manual. This includes using the items that are discussed in the manual and not using items that contradict the manual (anti-ACT items). This is a global score of the whole session. This item does not measure how well or skillfully the therapist provides the treatment, only whether he/she was using the treatment outlined in the manual.

A rating of:

Would indicate:

1 = not at all:

The session was entirely off topic or focused entirely on general assessment without addressing any of the other processes outlined in the therapist manual.

2 = a little:

The therapist spent most of the session off topic, only superficially attending to at least one processes outlined in the manual.

- 3 = somewhat: The therapist spent at least half of the session attending to at least one of the processes outlined at any point in the therapy manual, also attending to general assessment, in a somewhat in-depth manner.
- 4 = considerably: The therapist spent most of the session doing a general assessment of functioning and applied at least one of the therapy processes outlined in the manual in a considerably in-depth manner, OR applied multiple processes in a considerably in-depth manner.
- 5 = extensively: The therapist spent most of the session doing a general assessment of functioning and applied more than one of the therapy processes in an extremely in-depth manner.

Note: Order of processes as outlined in ACT manual recommendations. As long as the therapist applied at least one of the ACT processes in each session, the session should be considered adherent to the ACT manual. If something is grossly out of order (e.g., therapist addresses values *in-depth* in session 4 or below, therapist seems to be addressing control as the problem for the first time in session 6, etc.) then consider a lower rating (3 or less).

16. OVERALL COMPETENCE OF THERAPIST: This item is intended to measure how skillfully the therapist delivered the treatment. The whole session should be considered when assigning a score to this item. How well the therapist attended to the client's needs and how well the therapist delivered the treatment outlined in the manual should be considered for this item.

- A rating of:* *Would indicate:*
- 1 = not at all: The therapist did not competently address any of the client's needs, did not attend to the client's responses to treatment targets, and did not apply any of the processes outlined in the manual.
- 2 = a little: The therapist addressed the client's needs only superficially, and/or attempted to apply the processes outlined in the manual but did so poorly.
- 3 = somewhat: The therapist sometimes addressed the client's needs, sometimes attended to the client's response to treatment targets, and applied the processes outlined in the manual only superficially.
- 4 = considerably: The therapist moderately addressed the client's needs, moderately attended to the client's response to treatment targets, and applied the processes outlined in the manual clearly and moderately in-depth.
- 5 = extensively: The therapist consistently addressed the client's needs, consistently attended to the client's response to treatment targets, and applied the processes outlined in the manual very clearly and in-depth.

ACT for OCD rating scale
Adherence Scale

ACT Items		Rating
	1) Deliteralization/Defusion - Deliteralization/ Defusion - Feelings/Thoughts DO NOT lead to actions - Self as context/mindfulness of self as separate from language	1 2 3 4 5
	2) Willingness/Acceptance - Experiential Acceptance - Exploration of feelings/sensations - Mindfulness of current experiences - Out of session acceptance skills practice	1 2 3 4 5
	3) Creative hopelessness/Workability/Control is Problem - Effects to control thoughts and feelings - Explore the impact of previous efforts to control or avoid	1 2 3 4 5
	4) Values & Goals - Values and Goals	1 2 3 4 5
	5) Committed Action - Making and keeping Commitments	1 2 3 4 5
Other Items		
	9) General Assessment - Client's goals for treatment - Psychopathology - Assessment of general functioning	1 2 3 4 5
Anti-ACT Items		
	10) Challenging Cognitions (Only rate if it is "think this instead")	1 2 3 4 5
	11) Experiential Avoidant Change Strategies - Avoid or control - Substituting positive thoughts - Reassurance in order to reduce experience	1 2 3 4 5
	12) Cognitive Therapy Rational	1 2 3 4 5
	13) Thoughts and Feelings Cause Action - Feelings/Thoughts leads to action - Relate improvement to cognitive change	1 2 3 4 5
	14) In session exposure -deliberately exposing the person to feared stimuli and preventing the compulsion so that anxiety directly decreases	1 2 3 4 5
Global Rating of Adherence		
	15) Overall Adherence to Project Manual	1 2 3 4 5
	16) Overall Competence of Therapist	1 2 3 4 5