Acceptance and Commitment Therapy for Posttraumatic Stress Disorder in Early Psychosis: A Case Series

Jens Einar Jansen, Eric M.J. Morris

PII: S1077-7229(16)30029-3
DOI: doi: 10.1016/j.cbpra.2016.04.003
Reference: CBPRA 626

To appear in: *Cognitive and Behavioral Practice*

Received date: 25 September 2015
Accepted date: 11 April 2016

Please cite this article as: Jansen, J.E. & Morris, E.M.J., Acceptance and Commitment Therapy for Posttraumatic Stress Disorder in Early Psychosis: A Case Series, *Cognitive and Behavioral Practice* (2016), doi: 10.1016/j.cbpra.2016.04.003

Acceptance and Commitment Therapy for Posttraumatic Stress Disorder in Early Psychosis: A Case Series

Jens Einar Jansen, *Psychiatric Research Unit and Early Psychosis Intervention Centre, Psychiatry Region Zealand, Roskilde, Denmark*

Eric M. J. Morris, *La Trobe University*

Address correspondence to Jens Einar Jansen, Ph.D., Toftebakken 9, 4000 Roskilde, Denmark; jens.einar@gmail.com; jenj@regionsjaelland.dk

Abstract

Persons with psychosis often report high levels of posttraumatic stress disorder (PTSD) symptoms, which render them more vulnerable to relapse, symptom exacerbation, and reduced well-being. However, less is known about how to adequately accommodate the needs of persons recovering from a first episode of psychosis, presenting with PTSD. Further, the existing evidence-based interventions for PTSD seem less equipped to deal with serious mental illness and comorbid conditions. This study aimed to assess the efficacy, acceptability, and safety of Acceptance and Commitment Therapy (ACT) for persons suffering from PTSD with comorbid trauma and psychosis. Three consecutively referred participants meeting ICD-10 criteria for PTSD and a first-episode nonaffective psychotic disorder were treated in an outpatient service within a case-series analysis. A manual-guided ACT intervention of 12 sessions showed clinically relevant improvement on self-report measures of PTSD symptoms and emotional distress. These initial findings are promising and appear to justify a more controlled evaluation of this brief intervention.

***Keywords*:** mindfulness; acceptance; psychosis; psychotherapy; early intervention

Psychotic disorders are some of the most debilitating psychological disorders, causing enormous suffering for individuals and their families (Jablensky, 1997; Jansen, Haahr, et al., 2015). However, contrary to long-standing belief, many persons achieve full recovery or significant improvement (Lysaker & Buck, 2008) and recent years have seen a proliferation of research interest and psychosocial endeavors to intervene early to avoid chronicity. Central to the early intervention movement is the examination and management of risk factors known to influence a negative outcome, such as comorbid substance abuse and personality dysfunction (McGorry, Killackey, & Yung, 2008). One important risk factor that has received increasing attention recently is the presence of trauma and posttraumatic stress disorder (PTSD). Studies have found that between 28% and 73% of persons with a psychotic disorder have been victims of childhood sexual and/or physical abuse (Bendall, Jackson, Hulbert, & McGorry, 2008; Mueser, Lu, Rosenberg, & Wolfe, 2010). A recent study found that 89% of persons with first-episode psychosis reported significant childhood adversity compared to 37% in the control group (Trauelsen et al., 2015). The prevalence of PTSD in people with psychosis ranges from 12% to 29% (Achim et al., 2011; Buckley, Miller, Lehrer, & Castle, 2009). This is of great clinical importance as the presence of trauma symptoms often exacerbates symptoms and increases the risk of relapse (McGorry et al., 1991; Mueser et al., 2010).

However, counselors often fail to identify a client's trauma history and the symptoms of posttraumatic stress often go unnoticed (Grubaugh, Zinzow, Paul, Egede, & Frueh, 2011; Jansen, Pedersen, Hastrup, Haahr, & Simonsen, 2015; Jansen et al., 2016; Mueser et al., 2010). The types of trauma presented include childhood sexual and physical abuse, physical and sexual assaults, bullying, and trauma related to the experience of psychosis (Varese et al., 2012). The interaction between posttraumatic stress and psychosis can be cyclical; a person may have developed a psychotic disorder and PTSD after childhood traumas, but the traumatic experience of a psychotic episode itself can activate or reactivate PTSD (Morrison, Frame, & Larkin, 2003). While the presence of trauma and its relation to the development of

a psychotic disorder has been highlighted in a number of studies (Varese et al., 2012), considerably less is known about how to treat comorbid PTSD and psychosis (Grubaugh et al., 2011). In general, clinicians treating persons with psychotic disorders are often reluctant to talk about trauma due to fear of causing distress and increasing the risk of relapse (Read, Hammersley, & Rudegeair, 2007).

There are a number of evidence-based psychological therapies for the treatment of PTSD, including Prolonged Exposure (PE; Foa, Hembree, & Rothbaum, 2007), Cognitive Processing Therapy (CPT; Shipherd, Street, & Resick, 2006), and Eye-Movement Desensitisation and Reprocessing (EMDR; Shapiro & Maxfield, 2002). However, there are some important challenges to implementing these evidence-based therapies in real-world settings (Bradley, Greene, Russ, Dutra, & Westen, 2005). First, there are challenges in engaging people in these treatments, as evinced from the considerable rates of dropout observed in trauma intervention programs and psychotherapy research: it is evident that large numbers of people do not want to engage because of fears about activating difficult memories and emotions in therapy (Rothbaum, Meadows, Resick, & Foy, 2000). Second, many clinicians are reluctant to deliver the exposure part of the therapy for PTSD, even when these therapists have been appropriately trained (Becker, Zayfert, & Anderson, 2004). Third, most of the studies on PTSD exclude participants with comorbid conditions, including psychosis, personality disorders, and substance abuse, which are very prevalent in persons presenting for treatment in psychiatric services. In other words, since many clients will either refuse or not respond to the most supported interventions, and many clinicians are reluctant to deliver the interventions, there is little evidence or clinical reports on how to treat the more complex cases.

One approach to engage with this dilemma is to apply known trauma interventions to persons with psychosis, which a handful of studies have attempted. Bernard et al. (2006) found that written emotional disclosure reduced psychosis-related posttraumatic stress symptoms in persons with early psychosis. In a feasibility study, de Bont et al. (2013) found that PE and EMDR were both effective and safe in persons with psychosis and PTSD. In a

cognitive behaviour therapy (CBT)–based open trial, Frueh et al. (2009) showed a significant reduction in PTSD symptoms in a sample of adults with schizophrenia. Jackson et al. (2009) also found an effect of a CBT-based intervention on trauma symptoms in a randomized controlled trial with a first-episode psychosis sample. Based on the findings in these studies, there seems to be preliminary support for the feasibility, safety and efficacy of brief trauma interventions for persons with psychosis.

Another approach in dealing with the complexity of comorbidity has been to apply trans-diagnostic treatment programs that address common psychological processes underlying both (or all) disorders (Lang et al., 2012). One such approach is Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 2012). ACT is an acceptance-based behavior therapy that targets experiential avoidance and a lack of flexibility and persistence in pursuing valued life directions (Hayes, Strosahl, & Wilson, 1999). ACT is rooted in the philosophical tradition of functional contextualism and based on a program of basic research referred to as Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001; Hayes, Hayes, Reese, & Sarbin, 1993). One of the core psychological processes thought to be responsible for the development and maintenance of PTSD is experiential avoidance: individuals go to great lengths to avoid people, places, objects, thoughts, feelings, and bodily sensations associated with the traumatic event, even if these are personally valued (Marx & Sloan, 2005; Seligowski, Lee, Bardeen, & Orcutt, 2015; Tull, Gratz, Salters, & Roemer, 2004). For many suffering from PTSD, this significantly reduces social activities and meaningful interactions with the world (Orsillo & Batten, 2005; Walser & Hayes, 2006). Experiential avoidance and limited engagement in personally meaningful activities are also considered central psychological mechanisms in development and maintenance of psychotic symptoms, including hallucinations, suspiciousness, and unusual thought content (Morris, Garety, & Peters, 2014; Udachina, Varese, Myin-Germeys, & Bentall, 2014). So reducing experiential avoidance may improve both traumatic and psychotic symptoms. Moreover, there are considerable overlaps when trying to conceptualize and understand symptoms of PTSD and psychotic disorders. For example: some hallucinations and delusions may be variants of

posttraumatic flashbacks (Morrison et al., 2003); dissociative experiences, which are a prominent complication seen in complex trauma, and psychosis may be difficult to disentangle (Moskowitz, Schäfer, & Dorahy, 2008); and finally, voices and intrusive thoughts share a range of common phenomenological aspects, such as being repetitive, powerful, and often negative or critical (Morris et al., 2014; Morrison & Baker, 2000).

Studies have found ACT to be effective in managing a number of disorders, including depression, anxiety, stress, psychosis, epilepsy, and pain (Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Ost, 2008; Powers, Zum Vorde Sive Vording, & Emmelkamp, 2009). While ACT has demonstrated safety and potential efficacy for PTSD in uncontrolled studies (Batten & Hayes, 2005; Orsillo & Batten, 2005; Twohig, 2009), larger controlled studies are still under way (e.g., Lang et al., 2012). The aim of the current study was to examine the feasibility and effectiveness of an ACT intervention in reducing PTSD symptoms in persons with early psychosis.

Method

Participants

Participants were three persons consecutively referred to outpatient psychotherapy from a specialized early psychosis treatment service, after having been screened for eligibility by their case managers. Participants were included in the case series if they (a) were between the age of 18 and 35 years; (b) were currently receiving treatment for a first-time nonaffective schizophrenia spectrum disorder (F20-29, except F21; WHO, 1992); (c) presented with trauma symptoms due to the experience of either childhood trauma, or an acute psychotic episode; which (d) met a severity score of ≥33 on the Impact of Event Scale (IES-R; Creamer, Bell, & Failla, 2003). Details regarding age, diagnoses, trauma experience, and length of treatment in specialized early psychosis service are presented in Table 1.

"Maria" was seeking help for dealing with childhood sexual abuse, which happened when she was 12, and then again when she was 18. Her main challenges were those of

avoiding things, places, or feelings related to the events, which made social relations difficult for her. Maria described occasional "paranoid" thoughts in these situations (i.e., of people looking at her, following after her, and having bad intentions).

"Sarah" had also suffered childhood sexual abuse; her coping took the form of heavy drug and alcohol use to escape painful feelings (numbing). She presented her main problem as intrusive memories of the events and the problems that it caused in her sexual relations with her boyfriend. Although less frequent, Sarah still had "paranoid thoughts" about being monitored when she was alone in the house or walking by herself at night.

"John" presented with trauma related to the experience of acute psychosis and forced admission to psychiatric hospital. His main complaints were intrusive memories and profound fear of "losing grip of reality" and of relapse, which caused avoidance of talking about his experiences and disclosing symptoms to friends, family, and therapist in the early intervention service. John also described hearing voices that sometimes were comforting and exciting, but at other times very distressing and disturbing to his daily activities and level of functioning. Also, he viewed the presence of voices as a sign that he was "ill" and a reminder that he could be "pulled into a fantasy world" again and lose control.

All three were White with Danish citizenship and met full ICD-10 criteria for both schizophrenia and PTSD. The prescribed medication was stable for Sarah (25 mg Quetiapine) and John (20 mg Aripiprazole). Maria had Oxazepam 15 mg on as-needed basis, but seldom used it and reported a desire to avoid the use of medication. All clients were unemployed.

The authors developed ACT case conceptualizations of the three participants: the childhood sexual abuse, acute psychotic episode, and anomalous experiences precipitated a number of uncomfortable thoughts, feelings, and memories, which they dealt with by simply not thinking or talking about it (thought and emotional suppression). This probably increased the frequency and intensity of the unwanted material, and increased importance of avoiding and suppressing the experiences. Then, other forms of avoidance and safety behaviors began, such as alcohol and drug use, not visiting certain places or social gatherings, and threat monitoring, which continued to exacerbate the PTSD symptoms, reducing the feeling of

control and self-efficacy (increasing experiential avoidance). Patterns of avoidance may have led to greater social isolation, reducing opportunities to check the veracity of their concerns, and limit the possibilities for validation and emotional support from significant others. It also led them into behaviors and situations that provided them with more negative thoughts, feelings, and self-evaluations, responded to as threats to self (self as content; cognitive fusion), leading to even more avoidance. They were further and further detached from engaging in personally meaningful and rewarding behavior (disconnection from valued directions; rigid and narrow patterns of actions focused on avoidance), reducing mood, positive experiences, social skills, and experience of control, hope, and agency.

Measures

The Impact of Events Scale-Revised (IES-R; Weiss & Marmar, 1997)

The IES-R is a 22-item self-rating scale measuring PTSD symptoms such as intrusion, avoidance, and hyperarousal on a 5-point Likert scale (*not at all* to *extremely*). It is widely used and has good psychometric properties (Creamer et al., 2003). It is considered that a score of ≥33 indicates posttraumatic stress (Creamer et al., 2003). The IES-R was used as the primary outcome measure for this study.

Beck Anxiety Inventory (BAI; Beck et al., 1988)

The BAI is a 21-item self-report measure that assesses anxiety symptoms, with the following categories: minimal (0–7), mild (8–15), moderate (16–25), and severe anxiety (26–63). The scale has been shown to have high internal consistency (Cronbach's alpha >.85), adequate test-retest reliability (rs >.75), and moderate to high convergent and discriminant validity.

Beck Depression Inventory–II (BDI-II; Beck, 1996)

The BDI-II is a 21-item self-report measure that assesses depressive symptoms, with the following categories: minimal (0–9), mild (10–18), moderate (19–29) and severe depression (30–63). The BDI-II is a widely used measure and has high internal consistency (Cronbach's alpha =.91), good test-retest reliability (*r* =.93).

Acceptance and Action Questionnaire II (AAQ-II; Bond et al., 2011)

The AAQ-II is a 10-item self-report measure of psychological flexibility. Participants are asked to indicate agreement with statements (e.g., "It's OK if I remember something unpleasant") on a 7-point Likert scale (*always true* to *never true*). High scores reflect greater experiential avoidance. The AAQ has adequate internal consistency (Cronbach's alpha = .84) and acceptable test-retest reliability (*r*'s =.81 and .79.) (Bond et al., 2011).

Positive and Negative Syndrome Scale for Schizophrenia (PANSS; Kay et al., 1987)

The PANSS is a 30-item observer rated scale used to assess the presence and severity of positive and negative symptoms. The positive and negative subscales each consist of 7 items and the general pathology subscale consists of 16 items. The PANSS is widely used and has been shown to have good psychometric properties (Peralta & Cuesta, 1994; Santor, Ascher-Svanum, Lindenmayer, & Obenchain, 2007).

PTSD Checklist-Civilian Version (PCL -C; Ruggiero et al., 2003)

The PCL-C is a widely used 17-item self-report measure that assesses symptoms of PTSD in civilians. The instrument has been found to have good psychometric properties, including high internal consistency (Cronbach's alpha >.85), good test-retest reliability (*r* =.92), and high correlations with other well-established measures of PTSD (*r* >.75). A score of 44 has been suggested as a clinical cutoff for PTSD (Ruggiero et al., 2003).

Post-Therapy Questionnaire

An open-ended questionnaire was used to examine participants' experiences of the ACT intervention. This consisted of four questions: In what ways has the therapy been helpful? In what ways has the therapy been unhelpful, harmful, or in any way causing you distress? Was there something you lacked in therapy? Was there something you wanted more of?

Procedure

Prior to treatment, participants completed the BAI, BDI-II, PCL-C, IES-R, AAQ-II, and PANSS. These (except PANSS) were also completed midway (Session 6, at the end of treatment, and at a 2-month follow-up. One of the authors (JEJ) delivered the intervention for all participants.

Brief Outline of the Intervention

A manual was developed for this study by combining the clinical and research work of Hayes and colleagues (1999), Walser and Westrup (2007), and Morris and colleagues (2013). The intervention consisted of three interwoven phases, conducted across 12 sessions.

The goal of the *first phase* was to socialize the client into the ACT model, along with providing psychoeducation about anxiety, PTSD, and psychosis. In this phase, the client was introduced to the idea of willingness (acceptance), and encouraged to explore what may be possible if negative private events, such as thoughts, feelings, and bodily sensations, were accepted, rather than being targets for avoidance. With the help of metaphors and exercises, the cost of past efforts to control and manage discomfort was explored. Clients were helped to identify the occasions when their efforts to avoid unwanted private experiences may have backfired, making the situation worse by inadvertently increasing intensity or frequency of the experience, or by limiting life's possibilities. In this phase, participants began learning some basic skills to "be with discomfort" and observe it from a mindful perspective.

The focus of the *second phase* was identifying life goals and personal values, and teaching skills to develop more flexible behavioral patterns when anxiety and fear arose.

Clients learned to engage in a mindful way to trauma-related discomfort. Mindfulness was presented as an alternative to experiential avoidance strategies that aimed at controlling or reducing unwanted PTSD-symptoms but tended to get in the way of value-guided actions. The therapist also worked on helping the client commit to actions that were consistent with those values. Through the use of mindfulness and acceptance exercises, the therapist also aimed to strengthen clients' flexible perspective taking (Hayes et al., 2012). Skills in being a "self as experiencer" were promoted so that clients could more consistently have a sense of self as observer: noticing changes in experiences, from the perspective of being the "container" of experience. This sense of self involves a hierarchical relationship with experiences (McHugh, Stewart, & Hooper, 2012) and may provide greater self-consistency and a sense of grounding, to those whose sense of self is threatened by traumatic memories and the experience of psychosis (Chadwick, 2006).

In the *third phase*, the therapist supported the client's value-guided actions, through finding ways to stay committed to moving in those directions despite experiencing trauma-related barriers. Concrete goals were specified from the values described earlier. This phase was influenced by understanding how exposure is used within the ACT model (Thompson, Luoma, & Lejeune, 2013): to support behavioral flexibility, in response to repertoire-narrowing stimuli. Much work was devoted to working through avoidance and barriers, and reinforcing the use of acceptance strategies learned in therapy. Increasing the willingness to engage in valued actions, while remaining open to experiencing unwanted private events that arose from these actions, was of central concern for the remainder of the treatment.

Course of Treatment and Key Features of the ACT Model

The treatment manual was built around the session structure outlined by Walser and Westrup (2007). Briefly, each session opened with a mindfulness exercise, followed by a review of last week's "homework." Then, a new topic was introduced followed by a new homework assignment. An integral part of ACT is the use of metaphors and experiential

exercises to change the context in which uncomfortable private events are experienced, by adopting a decentered and accepting self-perspective. While the manual was outlined in the form of session-by-session guidelines, ACT was not delivered in a linear fashion; the concepts, metaphors, and exercises were presented and revisited when relevant, in a flexible and creative way, to strengthen psychological flexibility.

Treatment Orientation

The first session consisted of building rapport and getting an overview of the client's history, adverse events and what impact they had on the client's everyday life and functioning. The focus was on a general overview of mental health functioning, including psychotic symptoms. Most of the clients reported that this was the very first time they had talked about the traumatic incidents; therefore, validating these experiences and their efforts to deal with them were of central importance. Also, their initial ideas of how therapy could help them and their treatment goals were discussed.

Struggle, Control, and Workability

The notion of struggle, control, and "workability" was introduced in Sessions 2 and 3 and the various strategies the client had used to cope with the trauma were discussed. In general, we examined (a) the short- and long-term workability of coping strategies employed, (b) how the control agenda and experiential avoidance had limited the client's life, and (c) what acceptance and letting go of the struggle might look like (especially in terms of valued actions). With all three participants it quickly became apparent that the strategies they had employed to control the traumatic experiences, including avoidance, self-talk, and substance abuse, were not working in the long term to give life purpose and meaning, although some gave short-term relief. Clients were engaged in a discussion of how the network of avoidance tends to expand indefinitely. Following the experience of sexual abuse, Maria had difficulties with romantic relationships, and avoided getting involved or intimate with men. This

avoidance expanded to more and more situations in which there was a possibility that men could be present, which complicated her ability to study, socialize, and engage with the community around her. Sarah also utilized numerous strategies to avoid experiencing anxiety following her abuse, including listening to music, not leaving the house when dark, engaging in self-talk, and "mental preparing" (rehearsing) fight strategies for when she would be attacked. John avoided talking about his difficulties to avoid getting in touch with the memories he felt could make him more prone to relapse. This caused him to be very anxious and self-conscious around others and, ultimately, to withdrawing and spending most of his time only in the company of his voices. This isolation and "entanglement" in symptoms rendered him more at risk of psychotic relapse.

Clients were invited to participate in experiential exercises to explore the futility and long-term cost of struggling with their experiences, such as the *tug-of-war with the monster* (Hayes et al., 1999, p. 199). All clients engaged enthusiastically and the metaphor made sense to them. They described a "bodily sense of relief" upon "dropping the rope" and the exercise was used as a central story throughout treatment and as a cue in later sessions: “Is this you pulling the rope? What would dropping the struggle mean in this situation?”

This phase explored a central ACT idea: that therapy presents an opportunity to experience a radically different approach — letting go and stop struggling with your inner experiences. This is done not by a conceptual understanding or insight, but rather through developing skills such as mindfulness. Clients were encouraged to bring their attention to a single focus, such as their breathing or using imagery (e.g., the *leaves on the stream* exercise, (Hayes et al., 1999)), and watching and allowing internal events, such as thoughts, feelings, and bodily sensations, to come and go. Clients could observe that experiences change from moment to moment, coming and going on their own, without any effort on the client’s part. Following the suggestion of Chadwick and colleagues (2005), the closed-eyes exercises were brief, guided, monitored, and prepared together with the client. A graded approach was taken, starting with outside objects and sounds, then physical sensations, then the breath, and

then thoughts. Clients were also encouraged to practice mindfulness on a daily basis, either formally (sitting down, eyes-closed meditations) or more informally (e.g., being mindful when engaging in daily activities, chores or morning rituals, or when doing pleasant activities) depending on the clients' preferences, interest in, or earlier experience with mindfulness. It should be noted that none of the clients reported any adverse experiences when doing mindfulness exercises.

Adjusted to the particular client, we worked on a number of the central ACT strategies developed to demonstrate how attempts to control inner experiences often are counterproductive. For example, participants were asked to (a) not think a particular thought ("whatever you do, don't think of ice cream"), (b) not to feel anxious if hooked up to a polygraph machine ("just don't be anxious"), or (c) decide to immediately feel an emotion such as love ("if I gave you €1000 if you fell in love with the first person to enter the room, could you do that?") (Hayes et al., 1999). The work of Daniel Wegner (e.g., Wegner et al., 1987), who has demonstrated how attempts at suppressing thoughts lead to a rebound effect, was also discussed with the clients. All three clients found these exercises both helpful and amusing and they were often highlighted as something they really remembered after treatment.

Values and Goals

One of the most important goals in ACT is to encourage clients to engage in value-based behavior as an alternative to a life defined by controlling unwanted experiences. Clients often recognized that, since their trauma and onset of the psychotic illness, much of their lives had been about managing inner experiences and not about doing things that were meaningful to them. Anxiety management had moved them away from their personal goals and values. Early in therapy, clients were encouraged to think about what they wanted their life to be about, rather than what they did not want to have or feel. In other words, the focus was on *moving towards* something desirable, rather than *moving away* from something aversive.

The initial discussions about values were often difficult, as all three clients had trouble specifying their values or described them in very vague terms. Following the trauma and onset of the psychotic illness, they had been focusing mainly on distress management rather than what they wanted their life to be about. Getting in touch with what they wanted had also been avoided, because of fear of failing or because these desires were tainted by fear and avoidance. They were also beset by the challenges often reported by persons diagnosed with schizophrenia, such as reduced sense of agency, negative symptoms, and reduced ability to form complex accounts, or narratives, of their selves — also making questions about what constitutes a meaningful life difficult (Frith, 1992; Lysaker, Buck, & Ringer, 2007). Therefore, the early discussion of values was revisited later in therapy, including using more structured approaches, such as the Bull's Eye Values Survey (BEVS; Lundgren, Luoma, Dahl, Strosahl, & Melin, 2012). Thus, the work on values and meaning-making was considered both a motivational aspect and something that was refined and developed throughout the process of therapy. In general, this shift in thinking — moving towards something they wanted, instead of moving away from something uncomfortable — was an important, new perspective that helped them channel their energy in helpful ways.

A preliminary identification and assessment of values began early in therapy. Clients were asked, as a homework exercise, to generate brief descriptions of "what was meaningful to them and what they wanted their life to be about" in areas of life such as family, friends, employment, spirituality, and health. These narratives were further refined throughout the course of therapy. Of central importance to all three was having a good romantic relationship, being close to friends and family, and obtaining an education in order to have a fulfilling job and career. Then, goals and actions related to each of the value domains were generated and barriers to approaching them were discussed. Barriers were sometimes things that could be practically changed and the client was motivated to do so. But often they were private events, to which the skills in willingness and defusion could be applied, as described below.

For example, Sarah had stopped being intimate with her boyfriend because of anxiety and flashbacks. This put a strain on their relationship and contrasted with her values about

being a warm, loving, and close girlfriend. Rather than continuing to control her anxiety by avoiding intimacy, she practiced making space for these uncomfortable thoughts, feelings, and images, and was eventually able to enjoy touching, caressing and, ultimately, sexual intercourse with her boyfriend. In this way, the process of clarifying values would increase the reinforcing value of acceptance (allowing the anxiety to be there without defense), as it brought her closer to being the girlfriend she wanted to be. To John it was also important to have a girlfriend and he realized during the course of therapy that his voices served as a substitute for this wish for intimate relationships. Much of the effort revolved around working towards goals that helped him be the reliable and caring partner he wanted to be for a future girlfriend, including practicing social skills, attaining and keeping a job, and dealing with his symptoms in a way that reduced the likelihood of relapse.

Showing up to Distress

Following Sessions 3 or 4, the therapist actively worked with acceptance and mindfulness-based interventions, or helping the clients "show up" to their distress. This included the concepts of acceptance, flexible perspective-taking, and being present, which were addressed when found appropriate, rather than in a sequential fashion.

Two important points were highlighted in the sessions. First, acceptance does not mean condoning, liking, or feeling good about the things that had happened to them. Rather, it involves making "space" or "room" for the uncomfortable experiences currently compromising their well-being. Second, acceptance is a skill that needs to be practiced ("like playing the guitar") and is better described as an active choice or "a stance" than a feeling ("you can't control feelings, but you can choose to be more or less willing to approach feared situations").

In this phase, clients were practicing defusion: the skill of observing unwanted private events fully and for what they are, without getting entangled or caught up in them or trying to push them away (Hayes et al., 1999). Defusion techniques are intended to help clients notice

the *process* of thinking and transform the relationship they have with their private experience, by developing a more observing perspective toward internal experiences in general. One of the central concerns is to enable clients to develop a functional perspective on thinking: noticing thoughts that serve them well and thoughts that do not, and practicing mindfulness to get more "wiggle room" between themselves and unhelpful thoughts. ACT metaphors such as "being hooked" or "buying into" thoughts were used to create distance, as well as encouraging clients to make the habit of saying, "I get the thought that . . . " As an example, Sarah started saying to herself, "I get the thought that I'm losing control, that I'm falling into the black hole, and that I will end up hurting myself," and Maria started saying, "I'm having the thought that I'm worthless and I can't handle this." Also, creating images to externalize negative thoughts were used. Sarah referred to her self-critical thoughts and thoughts about self-harm as a radio constantly playing in the corner of the room—one that she could choose to tune in to and out of and did not have to be attentive to all the time. John's voices were sometimes comforting but often disturbing, closely tied to his worries about having a relapse. In both instances he got "pulled into" the voice content, and ended up spending too much time and energy on them. He learned to appreciate the "positive" side of the voices ("It's my longing for intimacy"), and be more accepting and compassionate of the negative; trying to "hold both lightly" and not letting them interfere with his daily life. The defused perspective on voices allowed him to notice when he got entangled in the voice content and approach this more functionally. He experimented with allocating only half an hour a day to listening to the voices, which created further distance and a greater sense of control, and more freedom to pursue other interests. In this way, he could benefit from the "personally meaningful" aspects of the voice content, which often contained information about what was important to him.

Persons who have experienced traumatic events, especially childhood abuse, often feel somewhat "broken," "damaged," or "unlovable" and believe that they have to be "fixed" to be whole again (Walser & Westrup, 2007). They therefore wish to forget or "cut off" the uncomfortable thoughts, feelings, and memories to be whole again and start living their lives. ACT starts from the premise that they are already whole. The skill of flexible perspective

taking helps clients to get in touch experientially with this understanding, and experience their sense of self as a consistent and stable perspective, from which thoughts, feelings, history, and bodily sensations can be observed. It can be seen that this observing and hierarchical perspective of experience (described as deictic framing in Relational Frame Theory; McHugh et al., 2012) helps clients to realize they are more than their history or present experiences, and that these experiences do not define who or what they are (Barnes-Holmes, McHugh, & Barnes-Holmes, 2001). This work needs to be done carefully and sometimes be adapted slightly for persons with trauma and psychosis. As noted in Batten and Hayes (2005), childhood sexual abuse survivors often have difficulty identifying a sense of self distinct from their private events; also, they are more under the control of public stimuli to label how they are feeling. The recognition of a private observer-self who will remain intact and constant, in spite of emotional turmoil, will often require more work in these persons. In addition, both persons with psychosis and persons that have experienced significant traumas often experience intense negative emotions and are prone to experience dissociation (a form of experiential avoidance). Grounding and mindfulness exercises (e.g., "dropping anchor" or body scans) helped the clients reorient to the present moment when triggered by traumatic material, including intrusive memories and flashbacks. Maria and Sarah often tended to go "numb" and these experiences had earlier developed into frank psychotic experiences; therefore, mere hints of dissociative experiences involved intense anxiety. For Sarah the "numbness" often left her feeling painfully "empty" and not connected to her boyfriend. The tendency to "check out" in emotionally difficult situations was validated, normalized, and linked to their earlier traumas ("many people learn to leave their bodies in an overwhelming situation").

Two metaphors were used in sessions to convey the stable observer perspective: *stormy weather in the sky* ("Stormy weather does not define or destroy the sky, it changes constantly, and disappears quickly") and *waves on the sea* ("The bottom of the ocean is always calm, no matter how wild the surface"). Working with this notion, Maria came up with her own metaphor of seeing challenging private events as items on a conveyer belt in a factory: “You

can pick it up, have a look at it, inspect it, but not too long before you put it down again and let it go, otherwise the whole factory stops." This was a clear sign that she understood the concept of defusion and mindfulness, and could begin to use it to relate differently to her unwanted private events. In addition, Maria's observing and hierarchical relationship to her experiences (responding as though she was a factory manager, rather than one of the items on the conveyor belt) strengthened her ability to use these skills. Sadly, during the time of therapy, Maria's grandfather died, which caused her to interrupt therapy for a few weeks. During this period she found the acceptance approach particularly helpful, allowing herself to feel the pain and loss, without worrying about breaking down, losing control, or self-harm. This was important evidence of progress to her and she proudly reported not having taken sleeping pills or tranquilizers. And in her own words: "Earlier I would have become psychotic with this kind of stress."

Exposure and Committed Action — Taking the Monster Along for the Ride

The final phase of therapy revolved around helping clients to engage in more value-guided behavior and personally meaningful activities. Committed action incorporates traditional behavior change procedures, which, in the frame of ACT, involve enacting one's values while treating oneself as the context where inner experiences occur—practicing acceptance, defusion, and being present. To do this, the therapist and client developed plans identifying specific actions to be completed. The therapist's task was as follows: help the client to discover and get in touch with their values; translate these into goal-directed actions; and provide feedback and validation with regard to the process.

Exposure was a central element of this phase and an important part of the ACT approach to trauma, PTSD, and psychosis. While the process of exposure seems similar to that in exposure-based treatments (e.g., Prolonged Exposure), the goal is different. In ACT, the aim is to provide the clients with opportunities to practice willingness in the presence of these events so they can do what matters to them (Thompson et al., 2013). The aim is therefore to

promote contact with experiences and contexts that narrow the person's repertoire of responses, so that increased behavioral, cognitive, and emotional flexibility can be strengthened. From this perspective, exposure exercises within ACT combine active acceptance and engagement in value-based behaviors, where clients discover that they can do things that are important to them *and* be anxious at the same time (Eifert et al., 2009). A fear and avoidance hierarchy within the context of valued life goals was created together with the client. The exposure exercises were presented as a logical extension of the defusion and mindfulness skills that were well practiced at this point. Clients were encouraged to stay with whatever they were experiencing, and choose to be open to their experience with a nonjudgmental and compassionate posture. Some examples of these exercises were: being in a room with men; walking along the street without looking at the ground (thus, having the possibility of making eye contact); stating one's opinion; writing about the traumatic event; being intimate and, later on in therapy, having sexual intercourse with partner; and putting on hand cream in spite of feeling greasy and getting flashbacks. Maria and Sarah also voiced a feeling of success by being able to sit with a male therapist, which was an exposure exercise in its own right. For John, opening up and talking about the experience of being acutely psychotic and forced admission, as well as the content of his current voices, was an important first step that quickly was followed by disclosure to friends and family. Later exposure exercises included approaching women and eventually inviting them out while accepting negative thoughts and voices such as "you're no good" or "I may relapse again because my symptoms are increasing when I put myself out there." In each session the week was reviewed in terms of engaging in meaningful activities, including how inner experiences had come in their way and had served as barriers. Of central importance in this phase was helping the client to handle barriers and lack of motivation along the way, as well as reinforcing their use of skills to stay with difficult situations, thoughts, and feelings. In other words, at this stage of therapy, the focus was to set goals in relation to their values, to try these out, and then to evaluate, discuss, and relate the experiences to the model in sessions. There was often a recurrent practicing of defusion skills and mindful acceptance.

Data Analysis

This study used visual examination of graphed data and statistical analysis using the Reliable Change Index (Jacobson & Truax, 1991) to determine whether there were clear treatment effects following the introduction of the intervention. Scores on the BAI, BDI-II, IES-R, and PCL-C were used as outcome measures, while PANSS established the general symptom level of the participants. The AAQ-II was used as a process measure, to measure any changes in levels of psychological flexibility. Finally, for the main outcome variable (IES-R) the occurrence of clinically significant change was defined by any participant's scores falling below the clinical cut-off (IES-R total ≥33).

Results

All three clients who completed treatment appeared to do well and reported improvement on all self-reported measures. There were few cancelations, only due to illness and, for one of the clients, death in the family. The qualitative data revealed no reports of adverse impacts and there was a general acceptability and satisfaction with regard to the intervention. PANSS data suggested that participants were experiencing minimal or mild symptoms of psychosis (Leucht et al., 2005), including voices and intermittent paranoia (total PANSS scores: Maria 47; Sarah 50; John 56). The results are presented in Table 2 and the main outcome variable (IES-R) is shown in Figure 1.

Reliable Change Indices were calculated for the clients' outcome and process data (Table 2). Reliable improvements were found across all outcome measures for clients, when compared to baseline, at the follow-up time points, suggestive of improvements in PTSD, anxiety, and depression symptoms (all $p < .05$). There was also a reliable change in levels of psychological flexibility for the clients at follow-up, suggesting that they were responding with greater mindfulness and acceptance toward their experiences (again at $p < .05$). In addition, it can be observed that for the main outcome variable of PTSD symptoms (measured

using the IES-R), clients' end- and follow-up scores all were below the clinical cut-off (≥33). Based on these results, it was concluded that all three clients demonstrated clinically significant change, as defined by reliable change and end therapy scores falling below the clinical cut-off (Jacobson & Truax, 1991), at the end of ACT, and at 2-month follow-up.

Discussion

In this case series, three clients with comorbid PTSD and psychosis were engaged in ACT, resulting in clinically significant decreases in depression, anxiety, and PTSD severity. In addition, there were reliable improvements in levels of psychological flexibility for the clients, suggestive of the ACT process of change. This study adds to the literature on the effectiveness of acceptance and mindfulness-based approaches for psychosis. There are some case studies on ACT for PTSD and one for psychosis, but to the best of the authors' knowledge, this is the first to combine the two, thus examining the usefulness of ACT for these complex comorbid conditions.

While emotion and psychosis have been separated in psychiatry since the mid-20th century, influenced by Jaspers' (1963) suggestions to "separate affective disorders from madness proper," recent years have seen a remarriage of "neurosis and psychosis" through normalization of psychotic symptoms, and seeing them as extreme states on the continuum with normal experiences (Birchwood, 2003; Freeman & Garety, 2003; Johns & Van Os, 2001). As discussed earlier, there is a considerable overlap in symptom presentation between PTSD and psychotic disorders. Studies have also found earlier traumatic experiences to be connected in form and content to one's psychotic experiences (Read, van Os, Morrison, & Ross, 2005). In the two cases presenting with trauma symptoms related to childhood sexual abuse, both experienced suspiciousness and paranoia related to being offended or attacked by men. Trauma and PTSD are risk factors that complicate the course of illness in persons with psychosis (Lysaker, Nees, Lancaster, & Davis, 2004; Mueser et al., 2010). Persons with psychosis often do not get the opportunity to work on dealing with their traumas, as reported

in both qualitative studies (Jansen, Pedersen, et al., 2015) and quantitative studies (Calhoun et al., 2007; Grubaugh et al., 2011). According to Read et al. (2007) and Becker et al. (2004), one of the reasons for this is that therapists are worried that talking about these experiences may destabilize the client and exacerbate psychotic symptoms. Another is that therapists supporting persons with psychosis often feel that there are other, more immediate, needs and concerns to attend to. The opportunity to deal with traumatic experiences early in the course of illness, as part of a comprehensive early intervention service, may preempt a negative illness trajectory and increase the possibility of a full recovery. The current case series suggests that engaging young people recovering from psychosis in an acceptance-based therapy for traumatic experiences is feasible, acceptable to the clients, and may be done without risking adverse events or significant psychotic symptom exacerbation.

Evidence-based approaches, such as Prolonged Exposure (Foa et al., 2007), Cognitive Processing Therapy (Shipherd et al., 2006) and EMDR (Shapiro & Maxfield, 2002), often work for specific trauma symptoms, but are less directed toward broader arrays of problems, such as emotional reactions, including guilt, shame, and anger, as well as existential concerns. For people with psychosis, PTSD and trauma-related symptoms can be associated with a range of difficulties, some of which are related to the psychotic illness, and others to understandable, but unhelpful, ways of trying to cope with the difficulties, often in the form of attempts to avoid and control unwanted thoughts, feelings, and memories. Emotion and thought suppression, experiential avoidance, and preoccupation can increase the centrality of traumatic intrusions, along with anomalous experiences, at the cost of meaning and purpose for the young person recovering from psychosis.

Common to both PTSD and psychosis is the profound challenge to the person's sense of self. ACT may address this issue by identifying a sense of self distinct from their private events. Flexible perspective taking, helping the client get in touch experientially with a sense of self as a consistent and stable perspective, can also reduce the impact of self-stigma and feeling of being "broken" or "destroyed," which is common. Moreover, this change in

perspective can also buffer societal exclusion and (self) stigma, which have been found to play a role in the development of postpsychotic PTSD (Bentall, 2006).

ACT presents several advantages as an early phase treatment: it is a transdiagnostic therapy, based on the idea that common factors influence multiple types of psychopathological presentations; it is based on empirical principles of behaviour therapy, with demonstrated benefits across various disorders; and it takes a "whole person view" to understanding and helping people to pursue life directions. There are indications that ACT may be a useful approach to help people with psychosis reduce depression (White et al., 2011) and improve well-being and quality of life (Johns et al., 2016). Furthermore, the focus of ACT on workability, instead of challenging the veracity of symptoms, and the focus on well-being, agency, and meaningfulness, despite the presence of symptoms, is very much in line with the recovery approach to mental illness (Davidson, Schmutte, Dinzeo, & Andres-Hyman, 2008; Deegan, 2001).

The present study is only a preliminary step towards evaluating the efficacy of ACT in the treatment of PTSD in persons with psychosis, and more rigorous research is needed to account for some of the confounders (e.g., spontaneous recovery or nonspecific factors, such as contact time, demographic variables such as ethnicity, socioeconomic status, and education, and ratings done by the therapist). Although it is noted that studies of ACT have demonstrated effects across diverse samples, with respect to ethnicity, socioeconomic status, and education: e.g., ACT for epilepsy study with low socioeconomic status, Black South African sample (Lundgren, Dahl, Melin, & Kies, 2006); ACT for psychosis with majority Black and minority ethnic and low-socioeconomic samples (Gaudiano & Herbert, 2006; Johns et al., 2016). While this study only administered process measures at four time points, future studies would benefit from administering acceptance-based process on a weekly basis to assess mechanisms and timing of change. However, it is noteworthy that these clients had severe psychological disturbances with comorbid conditions, and can be considered so-called "complex cases." It should be noted that, while diagnosed with a psychotic disorder, the clients' psychotic symptoms were in remission and their condition fairly stable. This

represents many clients seen in specialized early psychosis services. They describe that "working through" the traumatic experiences and related symptoms were some of their biggest current concerns. Working with these difficulties may keep subthreshold symptoms at bay, prevent symptom exacerbation and relapse, and increase likelihood of full recovery. While the small number of cases clearly makes generalizations tenuous, these initial findings are promising and add to the body of research showing that acceptance and mindfulness-based therapies can be used for people with psychosis (Bloy, Oliver, & Morris, 2011; Chadwick, Hughes, Russell, Russell, & Dagnan, 2009; Chadwick et al., 2005). The findings would appear to justify a more controlled evaluation of a brief ACT intervention for persons with PTSD and trauma-related problems, as a stand-alone intervention, integrated with other contextual therapies (e.g., Follette, Palm, & Pearson, 2006), or integrated within specialized first-episode services.

References

Achim, A. M., Maziade, M., Raymond, E., Olivier, D., Mérette, C., & Roy, M.-A. (2011). How prevalent are anxiety disorders in schizophrenia? A meta-analysis and critical review on a significant association. *Schizophrenia Bulletin*, *37*(4), 811–21. doi:10.1093/schbul/sbp148

Barnes-Holmes, Y., McHugh, L., & Barnes-Holmes, D. (2001). Perspective-taking and Theory of Mind: A relational frame account. *The Behavior Analyst Today*, *5*(1), 15–25.

Batten, S. V, & Hayes, S. C. (2005). Acceptance and commitment therapy in the treatment of comorbid substance abuse and post-traumatic stress disorder: A case study. *Clinical Case Studies*, *4*(3), 246–262. doi:10.1177/1534650103259689

Beck, A. T. (1996). *Beck Depression Inventory* (2nd ed.). San Antonio: TX: The Psychological Corporation.

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, *56*(6), 893–897. doi:10.1037/0022-006X.56.6.893

Becker, C. B., Zayfert, C., & Anderson, E. (2004). *A survey of psychologists' attitudes towards and utilization of exposure therapy for PTSD*. *Behaviour research and therapy* (Vol. 42). doi:10.1016/S0005-7967(03)00138-4

Bendall, S., Jackson, H. J., Hulbert, C. A., & McGorry, P. D. (2008). Childhood trauma and psychotic disorders: A systematic, critical review of the evidence. *Schizophrenia Bulletin*, *34*(3), 568–79. doi:10.1093/schbul/sbm121

Bentall, R. P. (2006). The environment and psychosis: Rethinking the evidence. In W. Larkin & A. P. Morrison (Eds.), *Trauma and psychosis: New directions for theory and therapy* (pp. 7–22). London, UK: Routledge.

Bernard, M., Jackson, C., & Jones, C. (2006). Written emotional disclosure following first-episode psychosis: Effects on symptoms of post-traumatic stress disorder. *British Journal of Clinical Psychology*, *45*(3), 403–415. doi:10.1348/014466505X68933

Birchwood, M. (2003). Pathways to emotional dysfunction in first-episode psychosis. *British Journal of Psychiatry*, *182*(MAY), 373–375. doi:10.1192/bjp.182.5.373

Bloy, S., Oliver, J. E., & Morris, E. (2011). Using acceptance and commitment therapy with people with psychosis: A case study. *Clinical Case Studies*, *10*(5), 347–359. doi:10.1177/1534650111420863

Bond, F. W., Hayes, S. C., Baer, R. a, Carpenter, K. M., Guenole, N., Orcutt, H. K., … Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, *42*(4), 676–88. doi:10.1016/j.beth.2011.03.007

Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *The American Journal of Psychiatry*, *162*(2), 214–27. doi:10.1176/appi.ajp.162.2.214

Buckley, P. F., Miller, B. J., Lehrer, D. S., & Castle, D. J. (2009). Psychiatric comorbidities and schizophrenia. *Schizophrenia Bulletin*, *35*(2), 383–402. doi:10.1093/schbul/sbn135

Calhoun, P. S., Stechuchak, K. M., Strauss, J., Bosworth, H. B., Marx, C. E., & Butterfield, M. I. (2007). Interpersonal trauma, war zone exposure, and posttraumatic stress disorder among

veterans with schizophrenia. *Schizophrenia Research*, *91*, 210–216. doi:10.1016/j.schres.2006.12.011

Chadwick, P. (2006). *Person-based cognitive therapy for distressing psychosis*. Chichester: John Wiley & Sons.

Chadwick, P., Hughes, S., Russell, D., Russell, I., & Dagnan, D. (2009). Mindfulness groups for distressing voices and paranoia: A replication and randomized feasibility trial. *Behavioural and Cognitive Psychotherapy*, *37*(4), 403–12. doi:10.1017/S1352465809990166

Chadwick, P., Taylor, K. N., & Abba, N. (2005). Mindfulness groups for people with psychosis. *Behavioural and Cognitive Psychotherapy*, *33*(3), 351–359. doi:10.1017/S1352465805002158

Creamer, M., Bell, R., & Failla, S. (2003). Psychometric properties of the Impact of Event Scale—Revised. *Behaviour Research and Therapy*, *41*(12), 1489–1496. doi:10.1016/j.brat.2003.07.010

Davidson, L., Schmutte, T., Dinzeo, T., & Andres-Hyman, R. (2008). Remission and recovery in schizophrenia: Practitioner and patient perspectives. *Schizophrenia Bulletin*, *34*(1), 5–8. doi:10.1093/schbul/sbm122

de Bont, P. A. J. M., van Minnen, A., & de Jongh, A. (2013). Treating PTSD in patients with psychosis: A within-group controlled feasibility study examining the efficacy and safety of evidence-based PE and EMDR protocols. *Behavior Therapy*, *44*(4), 717–30. doi:10.1016/j.beth.2013.07.002

Deegan, P. E. (2001). Recovery as a self-directed process of healing and transformation. In *Recovery and wellness: Models of hope and empowerment for people with mental illness*. (pp. 5–21). Haworth Press, New York, NY.

Eifert, G. H., Forsyth, J. P., Arch, J., Espejo, E., Keller, M., & Langer, D. (2009). Acceptance and commitment therapy for anxiety disorders: Three case studies exemplifying a unified treatment protocol. *Cognitive and Behavioral Practice*, *16*(4), 368–385. doi:10.1016/j.cbpra.2009.06.001

Foa, E. B., Hembree, E. A., & Rothbaum, B. O. (2007). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences: Therapist guide*. New York: Oxford University Press.

Follette, V. M., Palm, K. M., & Pearson, A. N. (2006). Mindfulness and trauma: Implications for

treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *24*(1), 45–61. doi:10.1007/s10942-006-0025-2

Freeman, D., & Garety, P. A. (2003). Connecting neurosis and psychosis: The direct influence of emotion on delusions and hallucinations. *Behaviour Research and Therapy*, *41*(8), 923–947. doi:10.1016/S0005-7967(02)00104-3

Frith, C. D. (1992). *The cognitive neuropsychology of schizophrenia*. Sussex: Erlbaum.

Frueh, B. C., Grubaugh, A. L., Cusack, K. J., Kimble, M. O., Elhai, J. D., & Knapp, R. G. (2009). Exposure-based cognitive-behavioral treatment of PTSD in adults with schizophrenia or schizoaffective disorder: A pilot study. *Journal of Anxiety Disorders*, *23*(5), 665–75. doi:10.1016/j.janxdis.2009.02.005

Gaudiano, B. A., & Herbert, J. D. (2006). Acute treatment of inpatients with psychotic symptoms using Acceptance and Commitment Therapy: Pilot results. *Behaviour Research and Therapy*, *44*(3), 415–37. doi:10.1016/j.brat.2005.02.007

Grubaugh, A. L., Zinzow, H. M., Paul, L., Egede, L. E., & Frueh, B. C. (2011). Trauma exposure and posttraumatic stress disorder in adults with severe mental illness: A critical review. *Clinical Psychology Review*, *31*(6), 883–99. doi:10.1016/j.cpr.2011.04.003

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational Frame Theory: A post-Skinnerian account of human language and cognition*. New York: Kluwer Academic/Plenum.

Hayes, S. C., Hayes, L. J., Reese, H. W., & Sarbin, T. R. (1993). *Varieties of scientific contextualism*. Reno, NV: Context Press.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, *44*(1), 1–25. doi:10.1016/j.brat.2005.06.006

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford Press.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and Commitment Therapy: The process and practice of mindful change*. New York: Guilford Press.

Jablensky, A. (1997). The 100-year epidemiology of schizophrenia. In *Schizophrenia Research* (Vol.

28, pp. 111–125). doi:10.1016/S0920-9964(97)85354-6

Jackson, C., Trower, P., Reid, I., Smith, J., Hall, M., Townend, M., … Birchwood, M. (2009). Improving psychological adjustment following a first episode of psychosis: A randomised controlled trial of cognitive therapy to reduce post psychotic trauma symptoms. *Behaviour Research and Therapy*, *47*(6), 454–62. doi:10.1016/j.brat.2009.02.009

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*(1), 12–19. doi:10.1037/0022-006X.59.1.12

Jansen, J. E., Haahr, U. H., Harder, S., Trauelsen, A. M., Lyse, H., Pedersen, M. B., & Simonsen, E. (2015). Caregiver distress in first-episode psychosis: the role of subjective appraisal, over-involvement and symptomatology. *Social Psychiatry and Psychiatric Epidemiology*, *50*(3), 371–378. doi:10.1007/s00127-014-0935-8

Jansen, J. E., Pedersen, M. B., Hastrup, L. H., Haahr, U. H., & Simonsen, E. (2015). Important first encounter: Service user experience of pathways to care and early detection in first-episode psychosis. *Early Intervention in Psychiatry*, (June 2010), n/a–n/a. doi:10.1111/eip.12294

Jansen, J. E., Pedersen, M. B., Trauelsen, A. M., Lyse Nielsen, H.-G., Haahr, U. H., & Simonsen, E. (2016). The Experience of Childhood Trauma and Its Influence on the Course of Illness in First-Episode Psychosis. *The Journal of Nervous and Mental Disease*, *204*(3), 210–216. doi:10.1097/NMD.0000000000000449

Jaspers, K. (1963). *General psychopathology*. Manchester: Manchester University Press.

Johns, L. C., Oliver, J. E., Khondoker, M., Byrne, M., Jolley, S., Wykes, T., … Morris, E. (2016). The feasibility and acceptability of a brief Acceptance and Commitment Therapy (ACT) group intervention for people with psychosis: The "ACT for life" study. *Journal of Behavior Therapy and Experimental Psychiatry*, *50*, 257–263. doi:10.1016/j.jbtep.2015.10.001

Johns, L. C., & Van Os, J. (2001). The continuity of psychotic experiences in the general population. *Clinical Psychology Review*, *21*(8), 1125–1141. doi:10.1016/S0272-7358(01)00103-9

Kay, S. R., Fiszbein, A., & Opler, L. A. (1987). The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophrenia Bulletin*, *13*(2), 261–76. doi:10.1093/schbul/13.2.261

Lang, A. J., Schnurr, P. P., Jain, S., Raman, R., Walser, R., Bolton, E., … Benedek, D. (2012). Evaluating transdiagnostic treatment for distress and impairment in veterans: a multi-site randomized controlled trial of Acceptance and Commitment Therapy. *Contemporary Clinical Trials*, *33*(1), 116–23. doi:10.1016/j.cct.2011.08.007

Leucht, S., Kane, J. M., Kissling, W., Hamann, J., Etschel, E., & Engel, R. R. (2005). What does the PANSS mean? *Schizophrenia Research*, *79*(2-3), 231–8. doi:10.1016/j.schres.2005.04.008

Lundgren, T., Dahl, J., Melin, L., & Kies, B. (2006). Evaluation of acceptance and commitment therapy for drug refractory epilepsy: A randomized controlled trial in South Africa: A pilot study. *Epilepsia*, *47*(12), 2173–2179. doi:10.1111/j.1528-1167.2006.00892.x

Lundgren, T., Luoma, J. B., Dahl, J., Strosahl, K., & Melin, L. (2012). The Bull's-Eye Values Survey: A psychometric evaluation. *Cognitive and Behavioral Practice*, *19*(4), 518–526. doi:10.1016/j.cbpra.2012.01.004

Lysaker, P. H., & Buck, K. (2008). Is recovery from schizophrenia possible? An overview of concepts, evidence, and clinical implications. *Primary Psychiatry*, *15*(June 2008), 60–65.

Lysaker, P. H., Buck, K. D., & Ringer, J. (2007). The recovery of metacognitive capacity in schizophrenia across 32 months of individual psychotherapy: A case study. *Psychotherapy Research*, *17*(6), 713–720. doi:10.1080/10503300701255932

Lysaker, P. H., Nees, M. A., Lancaster, R. S., & Davis, L. W. (2004). Vocational function among persons with schizophrenia with and without history of childhood sexual trauma. *Journal of Traumatic Stress*, *17*(5), 435–438. doi:10.1023/B:JOTS.0000048957.70768.b9

Marx, B. P., & Sloan, D. M. (2005). Peritraumatic dissociation and experiential avoidance as predictors of posttraumatic stress symptomatology. *Behaviour Research and Therapy*, *43*(5), 569–83. doi:10.1016/j.brat.2004.04.004

McGorry, P. D., Chanen, A., McCarthy, E., Van Riel, R., McKenzie, D., & Singh, B. S. (1991). Posttraumatic stress disorder following recent-onset psychosis. An unrecognized postpsychotic syndrome. *The Journal of Nervous and Mental Disease*, *179*(5), 253–8.

McGorry, P. D., Killackey, E., & Yung, A. (2008). Early intervention in psychosis: Concepts, evidence and future directions. *World Psychiatry*, *7*(3), 148–56. doi:10.1002/j.2051-5545.2008.tb00182.x

McHugh, L., Stewart, I., & Hooper, N. (2012). A contemporary functional analytic account of perspective taking. In L. McHugh, I. Stewart, & M. Williams (Eds.), *The self and perspective taking: Contributions and applications from modern behavioral science* (pp. 55–71). Oakland, CA: Context Press.

Morris, E., Garety, P., & Peters, E. (2014). Psychological flexibility and nonjudgemental acceptance in voice hearers: Relationships with omnipotence and distress. *The Australian and New Zealand Journal of Psychiatry*. doi:10.1177/0004867414535671

Morris, E., Johns, L. C., & Oliver, J. (Eds.). (2013). *Acceptance and commitment therapy and mindfulness for psychosis*. Oxford: John Wiley & Sons. doi:10.1002/9781118499184

Morrison, A. P., & Baker, C. A. (2000). Intrusive thoughts and auditory hallucinations: A comparative study of intrusions in psychosis. *Behaviour Research and Therapy*, *38*(11), 1097–106. doi:10.1016/S0005-7967(99)00143-6

Morrison, A. P., Frame, L., & Larkin, W. (2003). Relationships between trauma and psychosis: A review and integration. *The British Journal of Clinical Psychology / the British Psychological Society*, *42*(Pt 4), 331–53. doi:10.1348/014466503322528892

Moskowitz, A., Schäfer, I., & Dorahy, M. J. (2008). *Psychosis, trauma, and dissociation: Emerging perspectives on severe psychopathology*. West Sussex, UK: Wiley-Blackwell.

Mueser, K. T., Lu, W., Rosenberg, S. D., & Wolfe, R. (2010). The trauma of psychosis: Posttraumatic stress disorder and recent onset psychosis. *Schizophrenia Research*, *116*(2-3), 217–27. doi:10.1016/j.schres.2009.10.025

Orsillo, S. M., & Batten, S. V. (2005). Acceptance and commitment therapy in the treatment of posttraumatic stress disorder. *Behavior Modification*, *29*(1), 95–129. doi:10.1177/0145445504270876

Öst, L.-G. (2008). Efficacy of the third wave of behavioral therapies: a systematic review and meta-analysis. *Behaviour Research and Therapy*, *46*(3), 296–321. doi:10.1016/j.brat.2007.12.005

Peralta, V., & Cuesta, M. J. (1994). Psychometric properties of the positive and negative syndrome scale (PANSS) in schizophrenia. *Psychiatry Research*, *53*(1), 31–40. doi:10.1016/0165-1781(94)90093-0

Powers, M. B., Zum Vorde Sive Vording, M. B., & Emmelkamp, P. M. G. (2009). Acceptance and commitment therapy: A meta-analytic review. *Psychotherapy and Psychosomatics*, *78*(2), 73–80. doi:10.1159/000190790

Read, J., Hammersley, P., & Rudegeair, T. (2007). Why, when and how to ask about childhood abuse. *Advances in Psychiatric Treatment*, *13*(2), 101–110. doi:10.1192/apt.bp.106.002840

Read, J., van Os, J., Morrison, A. P., & Ross, C. A. (2005). Childhood trauma, psychosis and schizophrenia: A literature review with theoretical and clinical implications. *Acta Psychiatrica Scandinavica*, *112*(5), 330–50. doi:10.1111/j.1600-0447.2005.00634.x

Rothbaum, B. O., Meadows, E. A., Resick, P., & Foy, D. W. (2000). Cognitive-behavioral therapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 60–83). New York: Guilford Press.

Ruggiero, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD Checklist-Civilian Version. *Journal of Traumatic Stress*, *16*(5), 495–502. doi:10.1023/A:1025714729117

Santor, D. A., Ascher-Svanum, H., Lindenmayer, J.-P., & Obenchain, R. L. (2007). Item response analysis of the Positive and Negative Syndrome Scale. *BMC Psychiatry*, *7*, 66. doi:10.1186/1471-244X-7-66

Seligowski, A. V, Lee, D. J., Bardeen, J. R., & Orcutt, H. K. (2015). Emotion regulation and posttraumatic stress symptoms: A meta-analysis. *Cognitive Behaviour Therapy*, *44*(2), 87–102. doi:10.1080/16506073.2014.980753

Shapiro, F., & Maxfield, L. (2002). Eye Movement Desensitization and Reprocessing (EMDR): Information processing in the treatment of trauma. *Journal of Clinical Psychology*, *58*(8), 933–46. doi:10.1002/jclp.10068

Shipherd, J. C., Street, A. E., & Resick, P. A. (2006). Cognitive therapy for posttraumatic stress disorder. In V. M. Follette & J. I. Rosef (Eds.), *Cognitive-behavioral therapies for trauma* (pp. 96–106). New York: Guilford Press.

Thompson, B. L., Luoma, J. B., & Lejeune, J. T. (2013). Using acceptance and commitment therapy to

guide exposure-based interventions for posttraumatic stress disorder. *Journal of Contemporary Psychotherapy*, *43*(3), 133–140. doi:10.1007/s10879-013-9233-0

Trauelsen, A. M., Bendall, S., Jansen, J. E., Nielsen, H. L., Pedersen, M. B., Trier, C. H., … Simonsen, E. (2015). Childhood adversity specificity and dose-response effect in non-affective first-episode psychosis. *Schizophrenia Research*, *165*(1), 52–59. doi:10.1016/j.schres.2015.03.014

Tull, M. T., Gratz, K. L., Salters, K., & Roemer, L. (2004). The role of experiential avoidance in posttraumatic stress symptoms and symptoms of depression, anxiety, and somatization. *The Journal of Nervous and Mental Disease*, *192*(11), 754–61.

Twohig, M. P. (2009). Acceptance and commitment therapy for treatment-resistant posttraumatic stress disorder: A case study. *Cognitive and Behavioral Practice*, *16*(3), 243–252. doi:10.1016/j.cbpra.2008.10.002

Udachina, A., Varese, F., Myin-Germeys, I., & Bentall, R. P. (2014). The role of experiential avoidance in paranoid delusions: an experience sampling study. *The British Journal of Clinical Psychology / the British Psychological Society*, *53*(4), 422–32. doi:10.1111/bjc.12054

Varese, F., Smeets, F., Drukker, M., Lieverse, R., Lataster, T., Viechtbauer, W., … Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: A meta-analysis of patient-control, prospective- and cross-sectional cohort studies. *Schizophrenia Bulletin*, *38*(4), 661–71. doi:10.1093/schbul/sbs050

Walser, R. D., & Hayes, S. C. (2006). Acceptance and commitment therapy in the treatment of posttraumatic stress disorder. In V. M. Follette & J. I. Ruzek (Eds.), *Cognitive-behavioral therapies for trauma* (2nd ed., pp. 146–172). New York: Guilford Press.

Walser, R. D., & Westrup, D. (2007). *Acceptance and commitment therapy for the treatment of post-traumatic stress disorder and trauma-related problems*. Oakland, CA: New Harbinger.

Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology*, *53*(1), 5–13. doi:10.1037/0022-3514.53.1.5

Weiss, D., & Marmar, C. (1997). The Impact of Events Scale - Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD: A handbook for practitioners* (pp. 399–411).

New York: The Guilford Press.

White, R., Gumley, A., McTaggart, J., Rattrie, L., McConville, D., Cleare, S., & Mitchell, G. (2011). A feasibility study of Acceptance and Commitment Therapy for emotional dysfunction following psychosis. *Behaviour Research and Therapy*, *49*(12), 901–7. doi:10.1016/j.brat.2011.09.003

WHO. (1992). *The ICD-10 International classification of mental and behavioural disorders*. *Clinical descriptions and diagnostic guidelines*. Geneva: WHO.

Figure 1. result of the intervention on the main outcome variable

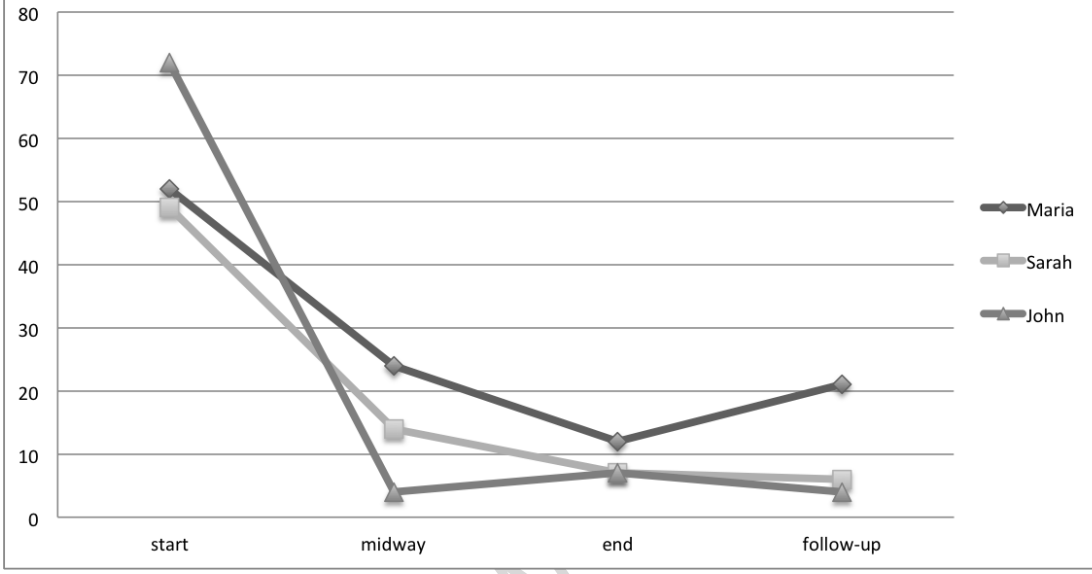

Table 1
Descriptive Information Regarding Clients

Participants	Age	ICD-10 Diagnoses	Length of treatment in FEP service	Trauma	Presented complaints
Maria	21	F20.3 Schizophrenia, Undifferentiated	12 months	Childhood sexual abuse and sexual abuse when she was 18	Anxiety, PTSD symptoms, depression, shame and guilt
Sarah	23	F29 Unspecified psychosis not due to a substance or known physiological condition F61.0 Mixed personality disorders	17 months	Childhood sexual abuse	Anxiety, PTSD symptoms, depression, shame and guilt
John	27	F20.0 Paranoid Schizophrenia	21 months	Experience of acute psychosis and forced hospital admission	Anxiety, PTSD symptoms, depression, fear of psychotic relapse

Note: FEP = First-Episode Psychosis

Table 2.
Results of the Intervention

	BAI					**BDI-II**					**IES-R**					**PCL-C**					**AAQ-II**				
	B	M	E	F	RCI	B	M	E	F	RCI	B	M	E	F	RCI	B	M	E	F	RCI	B	M	E	F	RCI
1	36	31	14	18	-4.4	40	28	7	14	-7.0	52	24	12	21	-3.6	67	52	32	31	-7.0	50	36	26	30	-3.1
2	27	14	5	6	-5.1	28	12	4	7	-5.7	49	48	7	6	-4.9	43	35	22	24	-3.7	48	33	17	16	-4.9
3	21	10	4	4	-4.1	19	7	1	0	-5.2	72	4	7	4	-7.8	42	25	22	25	-3.3	33	29	17	19	-2.2

Note: 1=Maria; 2=Sarah; 3=John; B=Baseline; M=Mid-treatment; E=End of treatment; FU=Follow-up; BAI=Beck Anxiety Inventory; BDI-II=Beck Depression Inventory; IES-R=The Impact of Event Scale-Revised; PCL-C=PTSD Checklist-Civilian version; AAQ-II=Acceptance and Action Questionnaire II; RCI=Reliable Change Scores for Follow-Up (all $p < .05$).

Highlights

- Three patients with comorbid PTSD and schizophrenia were treated within a case series
- A manual-guided 12-session Acceptance and Commitment Therapy (ACT) is presented as a promising approach to deal with this comorbidity
- Patients showed clinically relevant improvement on all measures, including PTSD symptoms, anxiety, and depression
- There was also reliable improvement in psychological flexibility, which is suggested as the process of change in ACT