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REVIEW ARTICLE

Acceptance and commitment therapy for psychosis: Current status, lingering questions and future directions

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Abstract

Purpose: Acceptance and Commitment Therapy for psychosis (ACTp) is a contextual behavioural intervention that promotes psychological flexibility by fostering active acceptance, cognitive defusion, values construction and committed action to enhance well-being and recovery. Multiple studies have shown that ACTp is acceptable and efficacious, but questions remain as to its distinction from similar approaches and the conditions under which it would be implemented most effectively.

Methods: We present the current evidence for processes and outcomes of ACTp and summarise the qualitative findings of experiences of service users in ACT programmes. We compare ACTp with other cognitive behavioural therapies and mindfulness-informed interventions for psychosis.

Results: Acceptance and commitment therapy for psychosis is promising as a pragmatic, process-driven intervention model. Further efforts are needed to investigate psychological flexibility in the context of psychosis with observational, experimental and intervention studies that will inform model scope and treatment refinement. Additionally, implementation research is the necessary next step, including how support persons can be trained in ACTp. Lower intensity and technology-assisted approaches have the potential to reduce barriers to accessing ACTp and extend impact.

Conclusions: Over the last 20 years, ACTp has demonstrated meaningful effects in individual and group formats in a range of settings, targeting outcomes such as rehospitalisation, depression, psychotic symptom distress and impact. Future

work should focus on how best to integrate ACTp with other current evidence-based interventions for psychosis.

KEYWORDS
acceptance and commitment therapy, cognitive behavioural therapy for psychosis, mindfulness, psychotic disorders

BACKGROUND

Cognitive Behavioural Therapy (CBT) is a family of psychotherapies encompassing a range of theoretical perspectives and philosophies. Contemporary CBT for psychosis reflects this diversity of perspectives, in a field that includes approaches based on cognitive models (Freeman et al., 2021; Garety et al., 2001; Garety et al., 2021; Morrison, 2001), social relating and power differentials (Birchwood et al., 2018; Hayward et al., 2018), along with 'third wave' interventions informed by metacognitive (Moritz et al., 2019), compassion-focused (Gumley et al., 2010) and contextual behavioural frameworks (Bach & Hayes, 2002; Gaudiano & Herbert, 2006; Morris et al., 2013). Approaches such as Acceptance and Commitment Therapy (ACT), Person-Based Cognitive Therapy and Compassion-Focused Therapy can be described as mindfulness-informed interventions (e.g., Khoury et al., 2013; Morris et al., 2013; Shapiro & Carlson, 2017), with common aims to support the person with psychosis to develop a changed relationship to unusual experiences, emotions, appraisals and urges, in ways that are experientially open, observing, curious and compassionate. These mindfulness-informed interventions utilise similar behaviour change methods to other CBTs, while emphasising the practice of acceptance, mindfulness and compassion, not necessarily seeking to change symptoms themselves (Gaudiano et al., 2010; Perez-Alvarez et al., 2008).

Introducing acceptance and commitment therapy

Acceptance and Commitment Therapy (ACT—said as one word) is a contextual form of CBT that promotes psychological flexibility as a general capacity for responding across situations (Hayes et al., 1999). The key process goal in ACT is to strengthen *psychological flexibility*, defined as 'contacting the present moment as a conscious human being, fully and without needless defense, and persisting with or changing a behaviour in the service of chosen behaviours' (Hayes et al., 2006). Psychological flexibility has been found to be a major determinant of well-being and personal effectiveness, buffering against negative feelings and linked to better health outcomes (Kashdan & Rottenberg, 2010). Psychological flexibility is promoted in ACT through using experiential exercises, metaphors and imagery within the therapeutic relationship to create a context for greater openness and flexibility. ACT was originally developed as a behaviour analytic model of outpatient therapy, designed to support behaviour change in addressing experiential avoidance and excessive literality for people with depression, anxiety disorders and substance use disorders (Cullen, 2008). There is now a significant empirical literature on ACT's efficacy and effectiveness across a range of problems and settings (A-tjak et al., 2015; Gloster et al., 2020). There is a growing body of evidence demonstrating that changes in psychological flexibility mediate well-being and quality of life outcomes (Hayes et al., 2022).

The ACT model takes a *functional contextual perspective* to understanding behaviour, which includes a person's current situation and their personal history as contexts. This functional analytic stance extends to the role of language and cognition, which is also considered behaviour selected by consequences and under contextual influence. As language enables humans to relate anything to anything, we can be influenced by abstract consequences (i.e. only existing in language), with the potential to experience distress by verbally contacting sources of pain from our histories (e.g. remembering, ruminating), along with anticipated pain (e.g. worrying; Törneke et al., 2008). Relational Frame Theory hypothesises that

arbitrary relating—the ability to create bidirectional links between things not based on environmental cues—is fundamental to human language (Barnes-Holmes et al., 2001; Dymond & Roche, 2013). This theory informing ACT means the client is encouraged to observe the automatic and arbitrary nature of language, and notice when deliberately taking an observing stance towards the processes of language allows for more options for how to act in the present moment.

In ACT, the client is introduced to the idea of *workability*, judging their choices in terms of whether these take them in chosen life directions (personal values). Core to this behavioural perspective is pragmatism (Hayes et al., 2013): when overt actions and covert behaviours (thinking, sense-making, narratives) do not advance chosen directions, or when thoughts, stories and inner experiences are encountered as barriers to action, the client is encouraged to explore whether alternate, flexible approaches may open possibilities. This pragmatic conversation seeks to validate the client's actions through awareness of the functions of their behaviours, supporting the client in exploring whether certain behaviours are long-term creating costs in terms of distress, preoccupation, and/or being unworkable, resulting in the person not being able to do what matters to them (i.e. are self-defeating or creating suffering). By understanding the functions of behaviours, there is a possibility of validation and exploration of other means of achieving ends, including actions being guided by personal values. Skills are emphasised and strengthened, involving mindfulness, active acceptance, decentring/defusion (the Acceptance parts of ACT; Open and Aware skills). Behaviour change is supported by strengthening the client's capacity to respond flexibly to their experiences and learn experientially as they engage in behavioural activation, exposure and other behaviour therapy methods (the Commitment parts of ACT; Active skills; Hayes et al., 2011).

Acceptance and commitment therapy for psychosis

Acceptance and Commitment Therapy has been developed as a model to support the well-being, functioning and personal recovery of people with psychosis (ACT for psychosis: ACTp [Bach & Hayes, 2002; Gaudiano & Herbert, 2006; Johns et al., 2016; White et al., 2011]). Compared to other versions of CBT for psychosis (CBTp), the ACT model puts less emphasis on the reappraisal of unusual experiences, situations or self and identity, and instead focuses on encouraging people to respond in open, aware and active ways with their experiences, and promotes skilful action based on personal values. It can be argued that with this emphasis on personal values, ACTp is consistent with principles of Personal Recovery (Morris, 2018; O'Donoghue et al., 2018).

Clinical approach

Similar to other CBTp approaches, ACTp takes a dimensional view to unusual experiences (such as voices, ideas of persecution, salience, etc), with the assumption that it is not the experiences themselves that are disordered, rather it is the ways a person relates to their experiences that can result in prolonged distress, preoccupation and limited functioning (Gaudiano et al., 2010; Morris et al., 2013; Perez-Alvarez et al., 2008). This contextual perspective considers understanding the antecedents and consequences of behaviour to be the focus, including how contexts of personal history, social environments and the person's own experience of themselves exert influence (Biglan & Hayes, 1996). This includes behaviour that constitutes psychosis: perceptual experiences, meaning-making, preoccupation, responses and reactions, influenced by history and current circumstances (such as stress, challenging social environments, etc.).

Cognitive fusion and experiential avoidance in psychosis

The psychological flexibility model underpinning ACTp identifies processes of *inflexibility* that may play maintaining roles in distress and poor functioning. Cognitive fusion describes contexts where a

person responds in literal ways to their thinking and narratives, in ways that are life limiting (Gillanders et al., 2014). Experiential avoidance is when a person seeks to control, avoid or suppress their psychological experiences, at personal cost (Hayes et al., 1996). Limited present moment awareness (limited mindfulness) is when a person has reduced awareness of their immediate experience (Baer et al., 2006). Cognitive fusion, experiential avoidance and limited present moment awareness have been found to be associated with greater distress, preoccupation and impact related to psychosis and unusual experiences (Böge et al., 2022; Castilho et al., 2017; Chadwick et al., 2005; Dudley et al., 2018; Goldstone et al., 2011; Hodann-Caudevilla et al., 2021; Moran et al., 2021; Morris et al., 2014; Núñez et al., 2021; Perona-Garcelán et al., 2016; Sood & Newman-Taylor, 2020; Udachina et al., 2009, 2014; Udachina & Bentall, 2013; Varese et al., 2016). While psychological inflexibility is considered to be the result of normative language processes (Assaz et al., 2018; Fletcher & Hayes, 2005; Hayes et al., 1996), it limits learning from experience and making changes, when circumstances alter, amplifies sources of distress, and/or results in a person acting in ways that are harmful or self-defeating.

Individualised formulation

The ACTp model takes a here-and-now approach to working with client problems. This is not to say the client's history is not important or considered; particularly when engaging people who have experienced psychosis, there may be crucial work in understanding personal history and the impacts of life events, childhood adversity and trauma, important relationships, experiences of mental health treatment, personal, familial and cultural understandings of unusual experiences, and expectations about roles. These aspects are considered within a personalised formulation; it may be important to support the client to make sense of their life experiences, particularly in validating ways. For example, the ACT therapist may help the client to develop greater self-acceptance and compassion in appreciating how they have responded to challenging life experiences in ways that make sense and/or doing the best with the resources available. Similarly, it is useful to explore how the client has had moments of present moment awareness, connection with personal values, openness to experience, holding thinking and other inner experiences lightly or with distance, to develop a sense of continuity and to support the use of these skills in the current circumstances.

An important aspect of ACTp is in supporting the client to notice their own experiences and the sense they make of them, along with awareness of the effects of their behaviours, to invite curiosity about how their history and current circumstances influence the choices that seem possible. In ACT, the client is supported to strengthen an observing perspective towards their experiences, and where useful, to notice that their observation can be a consistent perspective across moments (Hayes et al., 2011; Zettle, 2016). This part of ACT—strengthening self-validation and emphasising experiential learning—is key to the empowerment being promoted: It is possible to respond flexibly to life moment-to-moment, even when there are highly painful and preoccupying experiences and situations that make this difficult to do.

Therapeutic relationship: Creating a context for change

The therapist's stance is important in ACTp: it is essential to be sensitive to how people with psychosis can be invalidated and stigmatised. ACTp therapists need to be interpersonally sensitive, as many service users with psychosis can have histories and repertoires that make it challenging to develop close, trusting relationships with clinicians. People with psychosis can frequently experience social isolation, discrimination and marginalisation (Pearce et al., 2019; Thornicroft et al., 2009). The ACTp therapist is aware of how the language processes that lead to 'othering' and invalidation can be present in interactions with the client; it is recognised that both therapist and client are influenced by contexts that encourage experiential avoidance and over-literal responding to appraisals, judgements and emotions. The ACTp therapist is sensitive to this, treating people with psychosis with a sense of common humanity,

validation and curiosity about their lived experience. It is recognised that the client is the expert of their own experiencing, which supports understanding the workability of their actions. We find that several principles help guide the ACTp therapeutic relationship (Simsion et al., 2022), listed in Table 1.

Engagement and adaptations in ACTp

Engagement is a key focus—the ACTp therapist needs to be flexible about the length and format of sessions; meetings may be variable in their emotional tone and sense of coherence. Working in emotionally evocative ways can be less useful, compared to ACT with other populations: this is because of the known associations of perceived stressors and dysregulation for people with psychosis (Khoury & Lecomte, 2012). Helping the client experience ACTp as a safe and secure context is ideal, to allow for exploring of personal values, trying new skills and planning steps involving a degree of vulnerability. ACTp involves several adjustments from typical ways ACT is offered to engage people with psychosis, and help make ACT easier to understand and remember, particularly for people who may have cognitive deficits, be preoccupied, have a low tolerance for uncertainty, have trauma histories and/or paranoid thinking (Butler et al., 2016). See Table 2.

CURRENT STATUS

Summary of evidence for ACTp

Systematic reviews

Multiple systematic reviews have concluded that overall ACTp is safe and efficacious across a range of clinical outcomes and processes, including psychotic symptoms, depression, anxiety, functioning, help-seeking, satisfaction, rehospitalisation reduction, mindfulness and psychological flexibility (Aust & Bradshaw, 2017; Lincoln & Pedersen, 2019; Martins et al., 2017; Wakefield et al., 2018; Yıldız, 2020). Additionally, these reviews have highlighted ACTp research that has been conducted in individuals with complex comorbidities (substance use and trauma), early psychosis, acute presentations and residual symptoms of psychosis, and across a range of settings (inpatient vs. outpatient), formats (individual vs. group), lengths (days vs. months) and countries. Furthermore, Yıldız (2020) conducted a systematic review of 11 randomised controlled trials (RCTs) of ACTp and reported that 64% used blinded assessors, with methodological quality scores ranging from 6 to 9 out of 10. Frequently cited limitations in the ACTp literature include the use of non-active comparison conditions, smaller sample sizes and shorter follow-up periods. However, there are exceptions to each of these criticisms depending on the particular

TABLE 1 ACT for psychosis therapeutic principles.

Appreciation	*Appreciation* of the person experiencing psychosis, of the whole person living in their current environment with the history they have;
Connection	*Connection* around the shared experience of being human, including the common challenge with living a meaningful life in the face of experiences that invite struggle;
Addition	*Addition* of coping methods to what the person is already doing, including acceptance, mindfulness and value-based action and judging the effectiveness of these by the client's own experience of workability rather than the therapist's 'expertise';
Construction	*Construction* of a life worth living, today. Choosing valuing as action to create life meaning and purpose as a daily decision, rather than anchoring personal values to the achievement of a long-term goal or change in the client's experiences or circumstances. Using radical acceptance to find purpose today, setting a direction in the present moment, as personal liberation and recovery

TABLE 2 Adjustments to ACT for people with psychosis.

Use of a clear session structure and repetition	The therapist provides structured and predictable sessions, describes experiential exercises before engaging in them, and is transparent in describing their intentions (based on their personal values)
Use of a central metaphor	The therapist simplifies sessions by reducing the number of metaphors typically used, linking learning and session points around one main metaphor designed to be memorable, that can be repeated and elaborated on across sessions (two such central metaphors—Passengers on the Bus; Tug of War with a Monster—are described in Morris et al. (2013))
Engaging in briefer and more conversational mindfulness exercises	The therapist uses briefer instructions, fewer pauses, not requiring eyes to be closed and provides more anchors and grounding (e.g. following the therapist's voice during the exercise) to support the safe and effective use of mindfulness with psychosis (Chadwick et al., 2005). For many people with psychosis, there may be frequent intrusions (such as hearing voices) and difficult internal experiences (including worries, shame, painful memories). Flexibility about mindfulness in daily life is an important consideration, promoting present moment awareness to everyday activities and experiences, to support values-based action
Physicalising experiential exercises	The therapist uses abstract metaphors and efforts to make experiential exercises easier to follow, acting out metaphors and making them more concrete and memorable by using props, drawings, videos, etc
Values work as discovery and construction	The client is engaged in exploration of chosen life directions, as pragmatic ways for personal recovery. The ACTp therapist is sensitive to the possibility the client may not have had opportunities to reflect on life's purpose in this way before, or that life has not been examined in this way for a lengthy period. There is recognition that histories many service users come with (e.g., invalidation, trauma and exclusion) could contribute to a lack of clarity about what they value. There is encouragement to explore whether approaching life as a 'work in progress' is useful, even when this may be uncertain, messy and unfinished. The ACTp style is to reinforce taking small steps, focus on effort and recognising that participating in therapy may be part of a valued direction in itself
Use of therapist self-disclosure	The therapist models ACT processes (particularly present moment awareness and cognitive defusion) by self-disclosing their own experiencing of exercises and moments during the sessions. Similarly, in ACT groups facilitators may share about their own valued actions and experiences O'Donoghue et al. (2018). This is important for at least two reasons: it helps to normalise many experiences and responses and it may strengthen perspective-taking skills (i.e., through the client experiencing another's perspective)

study reviewed (e.g. use of supportive therapy comparison conditions, fully-powered trials and follow-up periods lasting up to 1 year).

Meta-analytic findings

Although several meta-analyses have combined ACTp trials along with other mindfulness-informed therapies for psychosis (Chai et al., 2022; Khoury et al., 2013; Wood et al., 2020), a few have focused on ACTp studies exclusively. See Table 3 for a summary. Tonarelli et al. (2016) examined four RCTs and concluded that ACTp had moderately strong effects for reducing negative symptoms and rehospitalisations. Cramer et al. (2016) analysed four RCTs of ACTp and reported moderately strong effects for decreasing positive symptoms and rehospitalisations. The differences between the Tonarelli et al. (2016) and Cramer et al. (2016) findings for negative versus positive psychotic symptoms are likely explained by the inclusion of slightly different sets of trials in their respective analyses. Additionally, Jansen et al. (2020) meta-analysed eight RCTs of ACTp and reported moderate to strong effects for improving depression, acceptance and rehospitalisations rates. Most recently, Yip et al. (2022) analysed five RCTs of ACTp and reported a significant moderately sized effect for reducing affective symptoms. However, the

TABLE 3 Summary of meta-analytic findings.

Authors, date published	Total no. of studies included	Total *N* participants	Clinical outcomes	Effect sizes [95% CI] reported
Cramer et al. (2016)	4	191	Positive symptoms Rehospitalisations	SMD = −0.63 [−1.05, −0.22] OR = 0.41 [0.18, 0.95]
Tonarelli et al. (2016)	4	187	Negative symptoms Rehospitalisations	SMD = 0.65 [0.17, 1.13] RR = 0.54 [0.31, 0.95]
Lansen et al. (2020)	8	387	Depression Acceptance Rehospitalisations	SMD = −0.63 [−1.18, −0.07] SMD = −0.86 [−1.65, −0.07] OR = 0.37 [0.17, 0.81]
Yip et al. (2022)	5	245	Affective symptoms	*g* = −0.64 [−1.15, −0.12]

aforementioned meta-analyses have not always found consistent effects on psychotic symptoms or other clinical outcomes, likely due to differences in their inclusion criteria and the particular studies analysed.

Critiques of meta-analyses

It has been difficult to interpret ACTp-specific effects at times in meta-analyses that have combined ACTp with other mindfulness-informed therapies for psychosis (e.g., Louise et al., 2018). Furthermore, conclusions from previous meta-analyses have tended to differ from one another due to their inclusion of only a small subset of ACTp trials (e.g., Tonarelli et al., 2016 vs. Cramer et al., 2016). Additionally, some of the larger ACTp outpatient trials have been conducted using active, time-and-attention matched comparisons (e.g., 'befriending' therapy; e.g. Shawyer et al., 2017), whereas inpatient studies have tended to use treatment as usual alone as the comparison (e.g., Bach & Hayes, 2002). As has been the case with ACTp, trials of traditional CBTp have noted smaller effects when compared to active control conditions (Lynch et al., 2010). This also is consistent with the larger psychotherapy literature finding that the size of clinical effects is a function of the strength of the comparison condition used (e.g., the more active the comparison, the smaller the effect magnitude; Marcus et al., 2014), and this has been found with ACT trials for non-psychosis samples in general (A-tjak et al., 2015). Furthermore, primary and secondary outcomes reported in ACTp trials have tended to vary by study, and thus there have been too few studies collecting the same outcomes in many cases for meta-analytic purposes. Recently, Gaudiano and Ellenberg (2022) identified 13 independent RCTs of ACTp conducted through 2020 and more have appeared since that time. Therefore, a more comprehensive meta-analysis that is inclusive of the full range of ACTp RCTs and outcomes is urgently needed.

Effectiveness research

Additional research has also supported the effectiveness of ACTp when delivered in routine settings. Studies of ACTp for inpatients have reported that frontline hospital staff view the treatment as feasible and acceptable and can be trained to deliver it effectively and with fidelity (Gaudiano & Ellenberg, 2022; Tyrberg et al., 2017a, 2017b). For example, Gaudiano and Ellenberg (2022) showed in an open trial with 26 inpatients that ACTp delivered by frontline staff not previously experienced in the therapy produced significant improvements in patients' overall symptoms (d = 0.91), distress (d = 0.66) and mindfulness (d = −0.68) through 4-month follow-up. Similarly, studies in outpatients with psychosis have demonstrated that ACTp is feasible and acceptable and can be delivered as part of community mental health services in the UK by frontline staff alone or co-facilitated by service users and their caregivers (Butler et al., 2016; Johns et al., 2016; Jolley et al., 2020). For example, Johns et al. (2016) reported significant pre- to post-treatment changes in functioning (d = 0.40) and mood (d = 0.40) from brief ACTp groups

delivered to 65 patients by community psychosis teams. Similarly, Burhan & Karadere (2021) reported that 16 people with psychotic disorders who received six sessions of group ACTp in a community mental health centre in Turkey improved significantly in psychotic symptoms, experiential avoidance and quality of life over a 6-month follow-up. In general, the research on the effectiveness of ACTp is relatively limited and deserves further attention to determine how best to implement the intervention more widely.

Potential mechanisms and moderators of effects

Several studies have provided support for potential mediators and moderators of ACTp effects. Studies of ACTp for outpatients with depression and psychosis found that improvements in depression were correlated with increases in psychological flexibility, mindfulness and valued living over the course of treatment (Gaudiano et al., 2013; White et al., 2011). Research on ACTp for inpatients showed that changes in the believability of patients' psychotic symptoms mediated the effects of ACTp on patient distress at post-treatment and reduced rehospitalisation rates through 4-month follow-up (Bach et al., 2013; Gaudiano et al., 2010). Regarding predictors of treatment response, Spidel et al. (2019) reported that lower session attendance and having an avoidant attachment style moderated (decreased) improvements in a study of outpatients with psychosis and childhood trauma receiving ACTp.

Finally, two studies of digital interventions involving ACTp recently investigated mediators and moderators of treatment effects. Browne et al. (2021) found that engagement (i.e., number of interactions) with an ACT smoking cessation smartphone app in people with severe mental illness including psychosis mediated the effect of the intervention on decreased number of cigarettes smoked per day compared with a non-ACT smoking cessation app. A recent multi-centre RCT of ACTp combined with ecological momentary intervention versus treatment as usual in people with early psychosis found that 'momentary openness' improved more in ACTp and higher client-rated working alliance moderated (improved) this outcome (Van Aubel et al., 2022).

Qualitative research

Qualitative studies have examined service users' experience of ACTp, including their understanding of the therapy, factors they have found helpful or challenging, and their perspectives on the change processes during therapy. These studies have interviewed nine or 10 patients following individual or group ACTp and have analysed the responses inductively, using thematic analysis, to generate key themes. In community and forensic mental health service contexts, patients have reported finding ACT useful to their recovery (Bacon et al., 2014; Bloy et al., 2021; Davies et al., 2019; Langlois et al., 2021). Within these qualitative studies, participants describe being able to use the Open, Aware and Active skills to focus on the present moment, to relate differently to internal experiences, with less avoidance and more observation, and to reduce the impact of psychotic symptoms and negative thoughts and emotions. Using these ACT skills helped the patients to respond more flexibly and move in their valued direction in daily life despite ongoing symptoms. In terms of the experience of therapy, Bacon et al. (2014) learned that participants found some aspects of the therapy difficult to understand, while patients interviewed in the Davies et al. (2019) study found that the metaphors and visual prompts used helped them to understand the concepts. Bloy et al. (2021), who interviewed participants following an ACTp group programme, also identified a theme of 'leaning on others', which was related to the supportive group context.

Clinical practice guidelines

Acceptance and Commitment Therapy for psychosis has begun to be recognised as an evidence-based therapy by some organisations based on the empirical research base. ACTp was evaluated by the Society

of Clinical Psychology of the American Psychological Association (APA, n.d.) according to the original Chambless and Hollon (1998) criteria for empirically supported therapies and found to have 'modest research support' based on a review of three early RCTs. Öst (2014) later evaluated four ACTp randomised controlled trials (RCTs) and concurred with the APA's conclusion. Additionally, the Australian Psychological Society (2018) concluded that ACTp was a 'Level II' evidence-based psychological intervention based on the presence of at least one well-designed RCT demonstrating efficacy. However, it does not appear that the UK's National Institute for Health and Care Excellence (NICE, 2014) has systematically evaluated ACTp for inclusion in its treatment guideline on psychosis and schizophrenia in adults. This is despite calls for ACTp's inclusion in the NICE guidelines by the British Psychological Society (Whomsley et al., 2013). Furthermore, early ACTp studies were included in meta-analyses of CBTp (e.g., Wykes et al., 2008), and RCTs of ACTp are cited to support the inclusion of CBTp as part of the NICE's (2014) current treatment recommendations.

Implementation

As discussed, less research to date has focused on the implementation of ACTp in routine practice settings. This has clearly been an obstacle to the dissemination and uptake of ACTp internationally relative to other evidence-based therapies commonly offered to those with psychosis, such as CBTp and family interventions. This is despite evidence that ACT is a model showing cross-cultural validity with many intervention studies conducted in non-English speaking, low- and middle-income countries (Association for Contextual Behavioral Science, 2023), and ACTp studies involving diverse samples in multiple countries and regions (e.g., Gaudiano & Herbert, 2006; Jeong et al., 2022; Johns et al., 2016; Jolley et al., 2020; Myin-Germeys et al., 2022; Shi et al., 2023). ACTp has only recently begun to find its way into clinical practice guidelines as an evidence-based treatment and much more work is needed to assemble all the pieces of research necessary to support strong recommendations for its use. The success of ACT for chronic pain could be a useful model to consider as this application has been formally recognised in NICE (2021) guidelines. To improve future implementation efforts, there is a need to study the barriers and facilitators of ACTp use among various community partners, including service users, clinicians, administrators, policy makers and purchasers of services. To date, one of the greatest barriers to uptake is that most inpatient and community clinicians do not have the specialised training necessary to deliver ACTp, even though there appears to be a high degree of interest and willingness in third-wave approaches. One strategy that could facilitate the wider transmission of ACTp would be to develop training programmes to teach clinicians how to deliver the treatment in a safe and effective way, along with models of clinical supervision to support competency development and treatment fidelity. A successful approach to implementing the 'Recovery ACT' programme in Australia offered ACT training and supervision, delivered by local experts, as a professional development opportunity for clinicians (Gates et al., 2022).

In addition, the limited availability of ACTp in community settings is likely the result of (real and perceived) similarities between ACTp and CBTp. For example, traditional CBTp has increasingly emphasised idiographic assessment, functional analysis, self-compassion and acceptance, personal values and meaning, stigma reduction, functional recovery and patient-centred outcomes, and has even started to incorporate formal mindfulness practices in certain iterations (e.g., Beck et al., 2021). Nevertheless, ACTp has several unique features and differences from CBTp in terms of its emphasis on changing the person's relationship to symptoms instead of their content, and the use of alternative acceptance and defusion strategies for managing psychosis. Therein lies the potential for ACTp to offer patients a complementary approach to other therapies, including traditional CBTp. Furthermore, additional research is needed into how ACTp could be used in conjunction with other evidence-based, multi-disciplinary approaches for people with psychosis, including case management, CBTp, family therapy, vocational services, peer support, rehabilitation therapies and pharmacotherapy. Many clinicians may struggle with how to blend the functional contextual philosophy of

ACTp with a more traditional biomedical models of illness and other therapies that tend to focus primarily on symptom reduction, which are commonly utilised in treatment settings. For example, Tyrberg et al. (2017a, 2017b) found that nurses on an in-patient ward who had received ACTp training plus regular supervision struggled to implement the approach and make ACT part of the ward culture. Finally, it is important to note that the challenges of fostering the greater implementation of ACTp may differ across countries due to dramatic variations in health care systems and payment structures (e.g., public vs. private funding). Thus, the strategies to increase uptake will also have to be attuned to the local region where it will be implemented.

LINGERING QUESTIONS

Processes of change in ACTp

Acceptance and Commitment Therapy is an intervention designed to support behaviour change by enhancing response styles that work together to build psychological flexibility. These response styles, the Open, Aware and Active skills, and can be considered the 'active ingredients' of ACT. However, less is known about the causal mechanisms of change and how these skills improve well-being and functioning for people with psychosis. Most studies examining the processes of change have analysed mediators and moderators of outcomes in RCTs of ACTp (described earlier). However, an interventionist-causal approach, conducting controlled manipulations of hypothesised processes in experimental studies or ecological momentary interventions (Kendler & Campbell, 2009; Reininghaus et al., 2016), is also needed to understand the causal mechanisms underlying ACT skills. This approach has been used to advance the precision and efficacy of CBTp (Freeman et al., 2021). The interventionist-causal approach is consistent with the goals of contextual behavioural science (identifying factors that predict and influence behaviour in context: Hayes et al., 2022), and ACT mechanisms broadly are supported by experimental evidence (see Levin et al., 2012); however, there are fewer psychosis-focused studies (for examples: Sood & Newman-Taylor, 2020; Vaessen et al., 2019).

While psychological flexibility itself is cited as the mechanism of change in ACT (Ciarrochi et al., 2010; Hayes et al., 2022), this has recently been criticised (McLoughlin & Roche, 2022). The criticism partly relates to the definition of psychological flexibility; it is a way of responding—a 'middle-level term' that is the result of the Open, Aware and Active skills. The criticism also relates to the scales used to measure psychological flexibility, which are imprecise in what they are measuring and have poor psychometric properties (Arch et al., 2022). It has been suggested that, instead of focusing on one mechanism of change resulting from the combined ACT skills, it would be more productive to investigate the separate ACT processes and to draw on existing non-ACT literature to shed light on potential mechanisms of change (McLoughlin & Roche, 2022), for example, emotional differentiation and regulation (Fogarty et al., 2015; Hill & Updegraff, 2012). This would avoid focusing on mechanisms that mirror the skills themselves, for example, acceptance and mindfulness exercises improving acceptance and mindfulness skills (Johannsen et al., 2022). The use of non-self-report measures can also help to understand how ACT skills lead to psychological flexibility, for example, experimental lab tasks, wearable devices and ecological momentary assessment across contexts of ACT skill use and time-lagged physiological, cognitive and behavioural responses (e.g., Van Aubel et al., 2022; Van der Gucht et al., 2019).

There is some evidence to suggest that the key ACT skills might mediate functional outcomes through stress management and reward-related processes. Acceptance is an adaptive emotion regulation strategy (Blackledge & Hayes, 2001), and emotion regulation skills predict stress responses in patients with psychosis (Lincoln et al., 2015). Practising the Open and Aware skills may result in less reactivity to stress and more efficient recovery from stress. As part of the Active skill, individuals learn to invest in what is most important to them by setting specific goals that are in line with their personal values. By engaging

in values-based committed actions, individuals may experience greater anticipatory pleasure and reward learning, processes recently targeted in CBT for anhedonia (Craske et al., 2019; Dunn et al., 2019).

Developments in supporting people with cognitive deficits

There is a need to develop further versions of ACTp that can engage people with cognitive deficits. To this end, it may be instructive to be informed by the empirical developments in ACT for people with acquired brain injuries (Whiting et al., 2019), where adaptations for memory and executive functioning have been made, including combining ACT with cognitive remediation interventions (Sathananthan et al., 2021). In a similar vein, more nuance understandings of how valuing as a repertoire (creating and identifying with personal values, constructing chosen valued directions; linking values with actions in daily life) can be learned and supported for those with executive and memory difficulties (e.g., Miller et al., 2022) will be useful for ACTp development.

Refinement of functional contextual perspectives on psychosis

While ACTp shows promise in supporting the personal recovery and well-being of people with psychosis, and ACT-based programmes show efficacy in promoting the well-being of carers (Jolley et al., 2020), there is a need for further refinement of contextual perspectives about psychosis. It can be argued the ACT model for supporting people with psychosis lacks specificity: while psychological inflexibility processes have been demonstrated to be associated with symptom impact, distress and outcomes like quality of life, there currently is limited knowledge on *particular* functional relationships to inform refinement of ACTp interventions. While drawing upon the broad ACT model has been useful for establishing the efficacy of ACTp in multiple contexts, there is now a need for more fine-grained understandings of how contexts influence unusual experiences and psychosis and responses to these. This need may be met through the development of models or frameworks that are informed by functional contextual perspectives, helping us to identify targets for intervention. We believe that to refine ACTp, these more specific frameworks are required for understanding how a person can be influenced by history and their (social) environments can be impacted by unusual experiences.

For example, in the case of a challenge such as distressing auditory hallucinations, further developments are needed to understand the functional relationships between a person, their voices and the environments (historical and situation) in which voice hearing is experienced and responded to, in impactful ways to the person's well-being, functioning and capacity to engage in values-based actions. Similarly, while there are indications that limited mindfulness, cognitive fusion, experiential avoidance and self-as-content play important roles in paranoia and persecutory thinking (Ellett et al., 2022; Kingston et al., 2019; Newman-Taylor et al., 2021; Sood & Newman-Taylor, 2020), and promising research about the role that value connection and commitment processes can play in reducing paranoia impact (Davies et al., 2021; Parker & Kingston, 2022), there are no detailed models of understanding the contextual factors that influence how troubled a person will be by thoughts that others are actively working against them and intending harm.

An important area to develop further is a role of perspective-taking and self-processes in influencing the form and function of unusual experiences, and how meaning is made of these experiences through better understanding of the contingencies that influence a person's responses to their own experiences (McEnteggart et al., 2017). Additionally, Thomas (2015) proposed a model of how ruminative thinking, negative reinforcement and withdrawal from aversive contingencies contribute to the maintenance of preoccupation with psychotic experiences and how ACTp targets these factors. Further, it would be advantageous to better understand how certain social environments operate to punish the person with unusual experiences, reinforcing avoidance and over-control (e.g., Collip

et al., 2011), which may drive greater preoccupation and cognitive fusion. In a related vein, it will be useful to discern the social and personal contingencies that create and maintain sense-making of unusual experiences in ways that foster a variety of inflexible responses (such as in the case of delusional beliefs). Finally, a related area of further research is understanding the role of adverse life and traumatic life events for people with psychosis from a functional contextual stance, particularly in how these influence self and perspective-taking, self-awareness and experiential openness and capacity to connect with personal values.

Lower intensity/technology-assisted approaches

Another area that deserves further attention is the use of ACTp as a lower intensity approach, including technology-assisted delivery, which could ultimately facilitate implementation. One of the potential advantages of ACTp is that it has been used successfully to treat psychosis in as few as three sessions (Bach & Hayes, 2002; Gaudiano & Herbert, 2006; Tyrberg et al., 2017a, 2017b). An advantage to ACTp relative to other longer-term psychosocial approaches is its potential to engage patients during acute periods of illness in a rapid way, given that it does not focus on directly changing beliefs about psychotic symptoms, which can require a longer period of rapport and alliance building, as seen in traditional CBTp. Additional ways to think about utilising ACTp as a lower intensity approach is to leverage technology. For example, Vilardaga et al. (2020) reported that individuals with severe mental illness including psychosis ($n = 62$) randomised to a mobile health app that included ACTp strategies showed reduced daily cigarette consumption compared with those receiving a standard smoking cessation app. Also, a study for people with early psychosis ($n = 148$) reported that those randomised to ACT in Daily Life, which combined traditional therapy with a mobile intervention, produced greater improvements in global functioning, negative symptoms and momentary psychotic symptom distress compared with treatment as usual (Myin-Germeys et al., 2022). Additionally, Wood et al. (2021) described the implementation of a four-session ACTp group for first episode psychosis patients delivered via telehealth, which had high adherence and client satisfaction.

CONCLUSION

Over the last 20 years, ACTp has demonstrated meaningful effects in individual and group formats, in a range of settings across multiple countries. There are indications that the processes that ACTp aims to promote—present moment awareness, openness and curiosity towards experiences and experiential learning, and valued action—are associated with well-being, quality of life and rehospitalisation outcomes. The potential of ACTp as a treatment model will depend on further refinement of contextual understandings of psychosis, effectiveness research in practice settings, low intensity and digital modes and developing training models. The pragmatic nature of the ACTp model means that mindfulness and acceptance are combined with other evidence-based procedures to promote personal recovery, such as exposure, behavioural activation and skills training. ACTp may have potential as a complementary approach alongside other evidence-based care, including other forms of CBTp.

AUTHOR CONTRIBUTIONS

Eric M. J. Morris: Conceptualization; writing – original draft; writing – review and editing. **Louise C. Johns:** Conceptualization; writing – original draft; writing – review and editing. **Brandon A. Gaudiano:** Conceptualization; writing – original draft; writing – review and editing.

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All authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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