ACT FOR PEOPLE WITH PSYCHOSIS: Research from Melbourne

Dr John Farhall
Senior Lecturer, Psychological Science
La Trobe University
The Hobo-Dyer Equal Area Projection

This new map belongs to the family of Cylindrical Equal Area projections in which the latitude and longitude lines form a rectangular grid. Other projections in this family include the Lambert, Gall, Behrmann, Edwards, and Peters projections. In the present case the “cylinder” is imagined to wrap round the globe and cut through it at 35° north and south. In order to preserve the equal area property the shapes of the landmasses become progressively flattened towards the poles, but shapes between 45° north and south are well preserved.
Overview

• How will we proceed?
• Origins of our interest in ACT
• The TORCH study
• The *Lifengage* ACTp Trial
• ACTp from the inside
• What I’m not going to talk about (well, maybe a little...)
Origins: How people cope with voices - I

- Survey of hospitalised patients (n=35) with persisting voices
- Self-rated effectiveness of strategies used
- Unexpected higher ratings
  - Prayer/meditation/yoga;
  - Listen & accept what the voices say
- Unexpected lower ratings
  - Listen to loud music to drown out; Ear plugs

Farhall & Voudouris (1996) *Behaviour Change* 13(1) 112-123
Origins: How people cope with voices - II

- Hospitalised & community clinic patients (n=81).
- Structured I/V: Coping strategies; Self-ratings of Control; Distress; and Success of coping efforts
- Factor analysis on frequency of use of strategies
  - Factor 1: ‘Active acceptance’ (e.g. Listen to voices & accept what they say)
  - Factor 2: Passive coping (e.g. Put trust in God; Medications..)
  - Factor 3: Resistance coping (e.g. Yell back; Deliberate distraction)

Origins: How people cope with voices – II cont.

• Were coping strategy factors associated with self-rated emotion control (distress)?
  – ‘Passive coping’ predicted emotion control (p<.01)
  – ‘Resistance coping’ negatively predicted emotion control (p<.001)

• Were coping strategy factors associated with self-rated ability to control voices?
  – ‘Active acceptance’ may relate to perceived control of voices (p=.05)

TORCH: Treatment of resistant command hallucinations


A Randomised Controlled Trial of Acceptance-Based Cognitive Behavioural Therapy for Command Hallucinations in Psychotic Disorders.

Behaviour Research and Therapy 50(2), 110–121
Origins of the study – I
Coping styles and their consequences

Applying Chadwick & Birchwood’s conceptualisation of response to voices...

Does engagement or resistance help?

- Engagement with CHs that have dangerous content may risk compliance (Fox et al., 2004; Shawyer et al, 2003)
- Resistance is limited in preventing people acting on CHs (Fox et al., 2004; Shawyer et al, 2003)
- Resistance is associated with distress (Farhall & Gehrke, 1997; Farhall et al 2007)
Origins of the study – II
CHs risk factors study (Shawyer et al., 2008)

What predicts acting on dangerous commands?
• History of violence?
  – No - was protective
• Appraising voice as a threat?
  – No – *Positive/ neutral/challenge appraisal was a better predictor*
• Having delusions congruent with voices?
  – Yes

Conclusion:
Acting on CHs was not primarily a function of dispositional traits but more related to delusional beliefs and engagement with the voice.
TORCH therapy Elements - I
Treatment Of Resistant Command Hallucinations

1) To address the risk factor of congruent delusions and individual appraisals of content:

**Belief modification**

BM was not only focused on threat appraisals, but any appraisals that support maladaptive behaviours

- The power/omnipotence of the voice
- The supposed intent of the voice to do “good”
- Consequences of compliance and non-compliance
- Beliefs about self that are activated/amplified by CHs
- Delusions that are associated with or reinforce CHs
TORCH therapy Elements - II

2) To introduce an alternative to engagement and resistance response styles:

Acceptance and mindfulness

i.e. Adoption of Acceptance & Commitment Therapy (ACT) processes to facilitate accepting the presence of voices but acting independently of them

- Cultivating mindfulness of voices and associated thoughts (curious observing) ...vs. believing and acting on them
- Acceptance of voice presence ...despite not liking them
- Pursuing valued goals ...even where voices are ongoing
TORCH therapy Elements - III

3) To address other prominent therapeutic needs evident in individualised formulations:

(Optional) supporting modules

- Motivational interviewing to enhance changing behaviour
- Personalised psychoeducation to make sense of experiences and provide a rationale for interventions
- Enhancing self-efficacy
- Relapse prevention
- Coping strategy enhancement
- Assertion
TORCH case formulation

**BM intervention:** Evidence about omnipotence

- Listens for more
- Appraises content as positive
- Feels compelled to listen
- Appraises content as negative
- Expects response

1a

- Hears comments, commands, etc
- Believes voices are powerful

2

- COMPLIES with commands
- Feels disempowered
- Feels bad

3

- Augmenting cycles
- Power Cycle

3 – Self-efficacy cycle
4 – Resistance cycle

**ACT intervention:** Mindfulness, & values directed action

- Feed Skippy
- 1 – Augmenting cycles
  2 – Power Cycle
  3 – Self-efficacy cycle
  4 – Resistance cycle
Comparison Therapy - Befriending

- Used as a control condition for ‘non-specific’ factors in therapy (e.g. therapist contact time and emotional support)
- Conversation-based or low-key activity-based (play a game; have a coffee; go for a walk)
- Focus is on good things that are happening and topics of interest to participants; symptoms and problems are explicitly not talked about
- Originally developed as a treatment for depression
- Not a “no-treatment” condition (some efficacy in depression; some evidence it can reduce symptoms of psychosis in the short-term, e.g. Sensky et al., 2000)
- Assumed to have different mechanisms of action
Study Design - I

- **RCT**
  - Two treatment groups (TORCH Therapy; Befriending) plus wait list comparison

- **Each therapy:**
  - 15 x 50m weekly sessions + 2 f/ups

- **Therapists:**
  - 5 psychologists trained in CBT, ACT and Mindfulness

- **Manual:**
  - Core and supporting modules
  - Used flexibly
Study Design - II

- **Participants**
  - DSM IV Schiz/SZA
  - CHs persisting over 6 months despite medication
  - CHs cause distress &/or dysfunction

- **Target**: 30 per group

- **Measures**
  - Primary outcomes: Compliance & ratings of confidence re voices
  - Secondary outcomes: PANSS; PSYRATS; QoL
  - Process: Acceptance (VAAS); Beliefs (BAVQ)

- **Blind assessment time points**:
  - Baseline, Post therapy, 6-mth Follow-up
  + Waitlist group had pre-wait assessment 4 mths before Baseline
Assessed for eligibility \((n = 168)\)

Excluded: \(n = 124\)
- Not meeting selection criteria: \(n = 86\)
- Declined participation: \(n = 38\)

Enrollment: \(n = 44\)

Randomised

Excluded: \(n = 1\) (found to be ineligible)

Allocation

Allocated to TORCH \((n = 12)\)
- Received \(\geq 12\) sessions \((n = 11)\)
- Received < 12 sessions \((n = 1)\)

Allocated to Waitlist \((n = 17)\)

Allocated to TORCH \((n = 9)\)
- Received \(\geq 12\) sessions \((n = 9)\)
- Received < 12 sessions \((n = 0)\)

Allocated to Befriending \((n = 14)\)
- Received \(\geq 12\) sessions \((n = 13)\)
- Received < 12 sessions \((n = 1)\)

Lost to follow up \((n = 1)\)

Analysed \((n = 20)\)

Follow-Up

Lost to follow up \((n = 1)\)

Analysis

Lost to follow up \((n = 1)\)

Analysed \((n = 20)\)
Results – Consumer feedback

• Satisfaction ratings
  – Client Satisfaction Questionnaire (Attkisson & Zwick, 1982)
  – Means: TORCH = 27 (2.9); BF = 25 (5.7)  (Max score = 32)

• “Did sessions make you feel better or worse?”
  – no sig differences between groups ($M = 4.3$ vs $4.1$)
  – 85% said sessions made them feel “better” or “much better”

• “Did sessions made the problem of CHs better or worse?”
  – Mean rating significantly greater for TORCH vs. Befriending
    Means: 4.3 vs 3.8;  ($p = .02$)
  – 90% TORCH participants said sessions made the problem of CHs
    “better” or “much better”, vs. 59% of Befriending participants.

Note. Data from End of Therapy self-report questionnaires
Main Analyses

• TORCH vs Befriending Vs. Waitlist
  – Not viable due to small obtained sample (12;14;17)
• Next step in analysis: TORCH vs Befriending
  – Improved sample size: TORCH ($n = 20$) vs. BF ($n = 20$),
• TORCH vs Befriending Results
  – Primary outcome measure (Compliance) not viable as an outcome measure due to low base rate
  – No significant between-groups differences on any main variables of interest...
Can we conclude anything?

• Underpowered: treatment effects not evident?
• No effects?

Two important observations...
• Consumers reported benefit from both therapies, but significantly more from TORCH
• both groups improved over time

Were both therapies effective??
→ Combine Torch & Befriending and compare with WL
Therapy vs. waitlist analyses

Results summary
- Significant *between-groups* differences in favour of therapy for half of the 10 main variables, some large effect sizes
- 7 of 10 *within-group* comparisons favoured therapy
- No comparison favoured wait list

Conclusions:
- Therapy is better than waitlist
- Was it placebo? Did both work?

Next step
- Examine within group differences to see if TORCH and Befriending therapies similar
Did TORCH & BF have different within-groups results?

• Advantages of TORCH
  – significant effects on a broader range of outcome measures (illness severity; quality of life; process measures)
  – effects tended to persist or emerge in the follow up period.

• Advantages of Befriending
  – significant effects on distress (only significant at end of therapy)
    (Why? BF focuses attention away from problems and symptoms to topics that are positive or interesting: ACT focuses more directly on behaviour rather than distress)
  – Befriending also had effects on clinical variables (Acceptance of CHs; reduced omnipotence)
    (Why? Perhaps via focus on activity & real world interests)
Conclusions
(extrapolating from results)

• Both TORCH & Befriending *may* be efficacious

• This combination of ACT & CBT treatment was acceptable
  – However, we observed that the breadth of agenda risked introducing too many elements for consumers to easily learn

• Befriending warrants more research attention
  – May provide more than just control for non-specific factors
  – Change via mechanisms of social support? (Milne et al 2006)
  – Easier to train & disseminate than CBT or ACT
The *Lifengage* Trial:
A Randomised Controlled Trial of ACT vs. Befriending for medication-resistant positive symptoms

John Farhall, Frances Shawyer, Neil Thomas,
Steven Hayes,
David Castle, David Copolov
ACT and psychosis treatment trials

• Bach and Hayes, 2002
  – 80 inpatients with positive symptoms randomized to either ACT or usual treatment
  – Brief intervention: 3 hours of ACT (4 sessions)
  – Significant reduction in believability of delusions and in hospital re-admission rates in the following 4 months

• Gaudiano & Herbert (2006)
  - Similar study showing improvements in overall symptoms (BPRS) and reduction in distress associated with hallucinations

• White et al. (2011)
  – N=27, Non-acute presentations. 10 sessions, ACT vs. TAU
  – Focus on emotional dysfunction (depression, anxiety, fear)
  – Improvements in depression & negative symptoms
Appraising these clinical trials

• Importance
  – Demonstration that ACT is feasible for people with acute & non-acute psychosis
  – Evidence that a brief ACT intervention may impact on the illness presentation (re-hospitalisation; Symptoms)
  – Some evidence that change is mediated by believability (of psychotic symptoms) and mindfulness (in Depression)

• Limitations
  – No standardised control treatments
  – Unblinded assessments (except White et al)
  – Use of an unvalidated primary outcome measure (Believability) in the Bach, & Gaudiano, trials
Is the evidence base sufficient for ACT to be a recommended psychosis treatment?

*No! (not yet)*

- ACT (in general) does not yet meet the criteria for an ‘empirically supported treatment’ (Ost, 2008), due to insufficient quality in research studies
- ACT *for psychosis* has not yet been subjected to a randomised controlled trial that meets CONSORT criteria for rigor

*And*

- … there is an alternative with more substantive evidence
  - CBT for psychosis
The solution?

A proper RCT!
Design features

• A RCT meeting most CONSORT criteria
• A credible comparison treatment (Befriending)
• Targets community-residing consumers with medication-resistant symptoms
• Uses validated measures expected for RCTs of persisting psychotic symptoms
• Careful attention to blinding
• Independent blind rating of audiotapes for treatment fidelity
• Inclusion of process measures/ add on studies
Add-on studies

• Suzanne Pollard (MPsych)
  – developed & piloted the *ACT for Psychosis Adherence and Competence Scale* - APACS

• Megan Trickey (DPsych)
  – Pilot of contribution of non-specific & specific factors in each therapy

• Tory Bacon (DPsych)
  – Study of therapy process via in-session verbal events, esp. the extent to which the consumer’s verbalisations indicate adoption of ACT principles
  – Consumer perception of helpful therapy elements (Interview study)
Measures

- **Symptom-related outcomes**
  - Psychotic Symptom Rating Scales (PSYRATS)
  - Positive and Negative Syndrome Scales (PANSS)
- **Behaviour-related outcomes**
  - Time Budget Measure
  - Social Functioning Scale (SFS)
- **Process measures**
  - Acceptance and Action Questionnaire
  - Voices Acceptance and Action Scale
The therapies - I

• Both therapies
  – Brief course of therapy: Eight x 50 min sessions
  – Four therapists deliver both therapies
  – Local peer supervision for Befriending & ACT, plus specialist ACT supervision from Steven Hayes

• Manualised Befriending intervention (Bendall et al)
  – Conversation-based or low-key activity-based (play a game; have a coffee; go for a walk)
  – Focus is on good things that are happening and topics of interest to participants; symptoms and problems are explicitly not talked about
The Therapies - II

• Manualised ACT intervention
  – Six modules relating to the six components of ACT
  – Elements from modules conducted flexibly in parallel across the course of sessions

• Adaptations of ACT to psychosis
  – Emphasis on concrete and physical illustrations/learning of ACT components via exercises
  – Audio-recorded mindfulness exercises for homework
  – Written materials, sessions audio-recorded
  – Avoid direct confrontation of delusional content
How does therapy proceed?

We know from previous experience with psychosis that clients may not present with struggle/distress:

- Symptoms may be positively valued
- Symptoms seen as literal external reality
- Passivity, mutual accommodation, ‘given up’
- Avoidance – cognitive, behavioural

(As a result, the symptom-related distress/disability criterion for entry to the project is
EITHER distress/struggle
OR interference/disability)
If struggle is present...

Start by undermining attempts to control inner experience

- Creative hopelessness exercises
  - Review results of current methods to control, avoid or get rid of problems
  - Experiential exercises of letting go of struggle, (e.g. Chinese finger trap; Tug of war with a monster)
- Introduce strategies for letting go of struggle
  - mindfulness, defusion, observer self

Then begin to identify and work toward committed actions in daily life
If struggle not present...

Two options:

- Start at values and committed action
  - e.g. values card sort, values bulls-eye, 80th birthday party
    → Exercises or attempts to act on values may uncover struggle or avoidance

- Take a more educational stance: ‘would you like to learn some helpful tools for mental health?’:
  - Mindfulness training: raisin, breath, thoughts, sounds, body
  - Introduction to defusion unrelated to problems e.g. describing a chair; lemon, lemon
    → Opportunities for ‘aha’ experiences
Sequencing: doing what when...

- Therapists as ‘pragmatic opportunists’: using ACT principles, doing what works, being mindful, present moment, using client material...
- Try to cover each point of the hexaflex in 8 sessions - often competes with point above!!!
- Often becomes iterative – alternate between valued action and letting go of struggle, either within one session or from one session to next
- Repeatedly refer back to metaphors and exercises across sessions, applying to current discussions, (“Christmas tree”)
- Holding things lightly – some examples don’t seem to work; some responses may appear in later sessions; or maybe after therapy completed?
Where are we up to in the trial?
What have we learned?

- $n = 96$ participants randomised
- All therapy completed
- All 6-month follow-ups should be completed in July
Reflections on the work...

• Most elements of ACT seem possible to apply - but may need some modification

• Very good response by consumers, esp. to:
  – Values work
  – Cost & coping
  – Mindfulness
  – In-session experiences (exercises)

• 8 sessions is just a start
  – ?unrealistic given disabilities/chronicity
  – Generalization may be an issue where therapy has been symptom specific and cognitive deficits present
Lifengage Team

Chief Investigators
Dr John Farhall
Dr Fran Shawyer
Dr Neil Thomas
Prof David Castle
Prof David Copolov
Prof Steven Hayes

Research assistants
Kate Ferris
Paula Rodger
Emma White

Postgraduate students
Tory Bacon
Suzanne Pollard
Megan Trickey
ACTp from the inside: Client experiences of therapy

Tory Bacon
John Farhall
Ellie Fossey
Rationale

• There is some evidence for efficacy of ACTp
• If this is so, how does it work?
  – The ACT model proposes that change is mediated by the 6 hexaflex processes
  – Studies with other populations show change is mediated by Experiential Avoidance (an amalgum)
  – ‘Believability’ (rather than hexaflex) studied in psychosis so far
• Therapy process investigation in *Lifengage*
  – Main trial: Some process measurement (AAQ; VAAS; TAF etc)
  – Tory’s Study 1: A qualitative study of clients’ experiences of therapy
  – Tory’s Study 2: Are in-session verbal behaviours of clients related to outcomes (frequency and depth of ‘getting it’)


Study 1: Clients’ experiences of therapy

Specific aims:

1. To describe how ACTp participants view and understand the therapy and its six core processes.
2. To identify ACT processes that participants consider helpful components of their therapy.
3. To identify any non-specific therapy factors that participants viewed as helpful.
Method

Participants
• 5 men, 4 women (All Lifengage participants who were randomised to ACT in final 6 mths were invited).
• Recruited at their post-therapy RCT assessment, and interviewed within 3 weeks of completion

Therapists
• N=4; Experienced with psychosis; trained in ACT, supervised by SH
<table>
<thead>
<tr>
<th>Question</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you think about the therapy you received as part of the project?</td>
<td>General information about the participant’s experience of therapy.</td>
</tr>
<tr>
<td>What was helpful about therapy?</td>
<td>Access whether helpful experiences related to ACT, non-specific factors, other therapies.</td>
</tr>
<tr>
<td>(Probe:) – can you tell me more about that?</td>
<td>To further clarify</td>
</tr>
<tr>
<td>Do you feel there were any positive changes for you since therapy? If so, what helped to make this change?</td>
<td>To understand how “effective” the identified components of therapy are?</td>
</tr>
<tr>
<td>Have you changed the way you deal with your voices/thoughts/emotions? If so, what do you helped you make this change?</td>
<td>To attempt to narrow in on ACT processes and the relationship to outcome.</td>
</tr>
<tr>
<td>Were there any exercises you did in therapy or between therapy sessions that was helpful?</td>
<td>To gain an understanding of the impact of ACT processes in therapy.</td>
</tr>
</tbody>
</table>
Data analysis

• Thematic analysis chosen due to our interest both in predetermined themes and in vivo themes
• Interviews transcribed
• Surface meanings coded rather than interpretations made
• The number and prevalence of categories were analysed to aid theorising about the data
## Results – identified themes & subthemes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Usefulness of therapy</td>
<td>1.1 Useful</td>
</tr>
<tr>
<td></td>
<td>(a) Generally therapy was useful</td>
</tr>
<tr>
<td></td>
<td>(b) Recommend ACT</td>
</tr>
<tr>
<td>1.2 Processes</td>
<td>(a) Values and goals</td>
</tr>
<tr>
<td></td>
<td>(b) Mindfulness</td>
</tr>
<tr>
<td></td>
<td>(c) Defusion</td>
</tr>
<tr>
<td></td>
<td>(d) Acceptance</td>
</tr>
<tr>
<td>2. Outcome</td>
<td>2.1 Symptoms</td>
</tr>
<tr>
<td></td>
<td>(a) Continued to act despite symptoms</td>
</tr>
<tr>
<td></td>
<td>(b) Changed perspective</td>
</tr>
<tr>
<td></td>
<td>(c) Reduced intensity &amp; impact of symptoms</td>
</tr>
<tr>
<td>2.2 Behavioural</td>
<td></td>
</tr>
<tr>
<td>3. Understanding therapy</td>
<td>3.1 Connection with therapy</td>
</tr>
<tr>
<td>3.2 Understanding of therapy &amp; exercises</td>
<td></td>
</tr>
<tr>
<td>4. Non-specific factors</td>
<td>4.1 Therapist factors</td>
</tr>
</tbody>
</table>
Experiencing ACT processes - *Mindfulness*

Mindfulness helped to distract or redirect attention ($n=8$)
- “if I’m hearing voices it will bring me back to focussing on what’s real...it’s really beneficial” [P6].
- “It helps me focus on something other than the voices so they don’t become as distressing.” [P3].
- “it ...eased my mind, made me more relaxed and got rid of all the stress and stuff” [P1].
Experiencing ACT processes - Defusion

Defusion as helpful
- “Just the defusion technique was worth the eight hours I spent there” [P5].
- “…the defusion techniques to get rid of the voices to make them less persistent...ease its impact...” [P5]
- “…to try and look at my voices as a character... so they weren’t as scary... so I can cope with it” [P8].

Limitations to some defusion exercises
- “defusion worked a bit too, but not so much with the funny voices...’ [P4]
- “... when it comes to suicide for instance ...not so easy to make fun of [thoughts]... something like...“poor me story” [helps]” [P5].
Changes attributed to ACTp

Reduced intensity and impact of symptoms.

- Seven participants described changes in the way that symptoms were experienced, e.g., “...now I’ve been doing the mindfulness I haven’t been distressed” [P3], and “…I guess it’s [paranoia] got a bit weaker...but I’ve got new ways of coping with it” [P4]

Metacognitive change?

- Helpful changes in metacognitions were described by six participants, e.g. “it sort of changes my perspective of the voices... [they’re] not as intimidating as what they were” [P1] and “ACT actually helps you to see that you can’t control your thoughts but you can control your behaviour and that’s definitely a very important thing to learn” [p5].
Difficulties & Misunderstandings

• Two participants explicitly reported therapy concepts and exercises were difficult
  – “I found it more comical than useful...I didn’t see the relevance” [P1]
  – “...I didn’t know what she’s on about” [P2].

• Two participants reported misunderstandings about therapy and exercises
  – “…the whole objective of her methods and technique was just how to relax”
Clinical implications

• ACT aims to avoid using verbal language and maximise symbolic and experiential techniques
• However, concrete thinking in psychosis populations, may limit making connections to the underlying meaning
• Some defusion exercises and mindfulness were not useful - overloaded attention control; clients felt overwhelmed.
• Even with our modifications (simpler metaphors; more written materials; therapy recordings..), these difficulties were reported
• Further simplifying or shortening exercises and targeting this in training may be useful
The Voices Acceptance & Action Scale (VAAS)


*Journal of Clinical Psychology, 63*(6), 593-606
Piloting an ACT for distressing voices group intervention

Kirk Ratcliff
(DPsych Thesis)
The emergence and persistence of auditory hallucinations: Does EA play a role?


*Same samples* (Non-clinical sample \( n = 133 \); Schizophrenia sample \( n = 100 \))

*Path analysis results:*
Early childhood trauma and current cognition were predictors of current hallucinatory activity (LSHS)

*Non-clinical sample:* Childhood emotional trauma and metacognitions
*Clinical sample:* Childhood sexual abuse and Experiential Avoidance
The emergence and persistence of delusions: Does EA play a role?


*Path analysis results:*

Three pathways to delusions

(i) childhood emotional trauma combined with subsequent experiences of life hassles;

(ii) heredity in combination with experiential avoidance; and

(iii) early cannabis use combined with proximal methamphetamine use.
The emergence and persistence of delusions: Does EA play a role?


**Samples:**
Non-clinical sample $n=133$; Schizophrenia sample $n=100$

**Results:**
Experiential avoidance (AAQ II) mediated the relationship between life hassles and extent of delusional experience (PDI), esp. in clinical sample
Thank You

j.farhall@latrobe.edu.au