Acceptance and Commitment Therapy (Relational Frame Theory)

Steven C. Hayes

It's Not Bottom Up vs Top Down

Everyone takes responsibility for the whole
Reticulated development versus silos

Areas

- RFT
- Lab models
- Population models
- Process of change
- Time series
- Open trials
- RCTs
- Mediation
- Moderation
- Social scaling
- Combinations
- Dissemination
- Training

ACT RCTs

ACT State of the Evidence

Grassroots ACT BootCamp, Reno 2015
**Correlational and Longitudinal**

- Psychological flexibility predicts most forms of psychopathology and quality of life in children, adults, and the elderly.
- Mediates the effects of many is not most key targeted processes in evidence based treatment: e.g., anxiety sensitivity, cognitive reappraisal and so on.

**Example**

Spinovhen, Drost, de Rooij, van Hemert & Penninx, 2014, BT

- 2,316 adults assessed with diagnostic interviews and AAQ over a four year period.
- AAQ predicted changes in distress (major depressive disorder, dysthymia, generalized anxiety disorder) and in fear disorders (social anxiety disorder, panic disorder with or without agoraphobia, agoraphobia without panic) two years later.
- AAQ mediated over 4 years the longitudinal association of fear disorders with distress disorders and vice versa.

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Testing the Model: Component and Lab Studies

Adjusted Cumulative GPA

How it Works: Don’t Think of Baer

Targeted Outcomes Vs. Inactive Comparisons

Treatment Mediation

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Pediatric Chronic Pain

- 32 patients with longstanding pediatric pain
- 25 female; ~15 y o, 32 mo pain duration
- Randomly assigned to ACT or multidisciplinary Rx & medication (MDT). 2 drop outs.
- Pre / post / 3.5mo f-up / 6.5 mo f-up
- ACT = 12 session; MDT = 23

ACT for Diabetes Management

- Randomized controlled trial with poor, mostly minority clients
- 40 / group: ACT plus diabetes education (one six-hour workshop) or diabetes education (also a six hour workshop)
- Pre, post, 3-month follow-up

Controlled Studies on an Amazing Range of Areas

- work stress, pain, smoking, anxiety, depression, diabetes management, substance use, stigma toward substance users in recovery, adjustment to cancer, epilepsy, coping with psychosis, borderline personality disorder, trichotillomania, obsessive-compulsive disorder, marijuana dependence, skin picking, racial prejudice, prejudice toward people with mental health problems, whiplash associated disorders, generalized anxiety disorder, chronic pediatric pain, weight-maintenance and self-stigma, exercise, chess playing, tinnitus, eating disorders, clinicians’ adoption of evidence-based pharmacotherapy, and training clinicians in psychotherapy methods other than ACT.

Follow up Change Outcomes: Post Mediators

<table>
<thead>
<tr>
<th>Study</th>
<th>Problem</th>
<th>Comparison</th>
<th>Mediator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapper, 2009</td>
<td>Weight</td>
<td>Diet</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Woods, 2006</td>
<td>Trichotillomania</td>
<td>Wait list</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Goodman, 2008</td>
<td>Psychosis</td>
<td>Enhanced CMI</td>
<td>Defusion</td>
</tr>
<tr>
<td>Bond, 2006</td>
<td>Work stress</td>
<td>Wait list</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Wicksell, 2009</td>
<td>Pain</td>
<td>TAU</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Gaudiano, 2009</td>
<td>Psychosis</td>
<td>Enhanced TAU</td>
<td>Defusion</td>
</tr>
<tr>
<td>Bond, 2000</td>
<td>Work stress</td>
<td>Wait list</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Wicksell, 2008</td>
<td>Pain</td>
<td>MDT</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Lazzaroni, 2009</td>
<td>Work stress</td>
<td>Wait list</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Zettle, 1986</td>
<td>Depression</td>
<td>CT</td>
<td>Defusion</td>
</tr>
<tr>
<td>Hayes, 2004</td>
<td>Stigma</td>
<td>Psychoeducation</td>
<td>Defusion</td>
</tr>
<tr>
<td>Lappalainen, 2007</td>
<td>Outpatient misc</td>
<td>CBT</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Lillis, 2009</td>
<td>Weight</td>
<td>Wait list</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Lillis, 2007</td>
<td>Ethnic prejudice</td>
<td>Education</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Gifford, under review</td>
<td>Smoking</td>
<td>Medications</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Lundgren, 2008</td>
<td>Epilepsy</td>
<td>Supportive treatment</td>
<td>PF/EA</td>
</tr>
<tr>
<td>Gregg, 2007</td>
<td>Diabetes</td>
<td>Education</td>
<td>PF/EA/Manage</td>
</tr>
<tr>
<td>Varla, 2005</td>
<td>Resistance to ESTs</td>
<td>Psychoeducation</td>
<td>PF/EA/Enhance</td>
</tr>
<tr>
<td>Zettle, in press</td>
<td>Depression</td>
<td>CT</td>
<td>Defusion</td>
</tr>
<tr>
<td>Gratz, 2006</td>
<td>BPD</td>
<td>TAU</td>
<td>PF/EA</td>
</tr>
</tbody>
</table>

Average Proportion Mediated: 0.53 (unweighted by n), 0.47 (weighted); Total n = 903

Large effect size Proportion Mediated Controlled Studies on an Amazing Range of Areas
**Weight Maintenance**

Lillis et al., 2009

- 87 participants – all had completed at least 6 months of organized weight loss intervention involving regular meetings, diet, and exercise
- Randomized to 1 day ACT workshop \( n = 43 \) or TAU Control \( n = 44 \)
- Measures at baseline and 3 months
- Minimal drop out / missing data (4%)

**Focus: Self-Stigma and Values**

- Six hours of ACT focused on self stigma, acceptance, values, and psychological flexibility
- Used “Get Out of Your Mind and Into Your Life” to reduce patterns of avoidance toward weight-related thoughts, feelings, and bodily sensations, especially shame / stigma; and increase values-based action
- No diet, physical activity, self-monitoring, or weight education component

**Pre to Follow-Up Weight Change**

- 3 month follow-up
- \( p < .001 \)
- \( d = 1.21 \)

**Psychological Adjustment Among Cancer Patients: ACT and CBT**

Rost, Wilson, Hildebrandt, & Mutch, 2012

- Stage 4 cancer patients randomly assigned either to ACT or to a form of traditional CBT (cognitive restructuring plus relaxation): \( 30 / \) group
- 12 sessions with each participant during chemotherapy visits: pre and sessions 4, 8, and 12.
- No follow up, in part due to the relatively high likelihood of death (12 died during the study)

**Health Behavior Change Among Colorectal Cancer Survivors**

Hawkes et al., 2013

- 410 colorectal cancer survivors randomly assigned either to telephone ACT or to usual care
- 11 phone calls over six months
- 6 and 12 month follow up
- Targets: physical activity, diet, weight, smoking, alcohol
- At one year: lower fat intake, lower BMI, higher exercise
**ACT for High Functioning ASD**

Pahnke, Lundgren, Hurst, Hirvikoski, 2014 *Autism*

- 28 ASD students (13 – 21 y o)
- RCT: pre, post, 2mo F-Up
- 6 week ACT based skills group in special school setting
- 2 40 min group / week; 6-10 min mindfulness exercise each day
- Measure: teacher and SR stress and Strengths and difficulties questionnaire

**ACT for Asperger’s Syndrome**

Lundren et al in prep

- 33 individuals with Asperger’s
- RCT: pre, post, 3mo F-Up
- Similar ACT protocol
- Primary measure: social responsiveness, stress, quality of life

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**Post Traumatic Growth**

<table>
<thead>
<tr>
<th>Mean Self-Reported Score</th>
<th>Pre</th>
<th>6 mo</th>
<th>1 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>55</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>TAU</td>
<td>50</td>
<td>55</td>
<td>65</td>
</tr>
</tbody>
</table>

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**Moderate + Vigorous Exercise**

<table>
<thead>
<tr>
<th>Minutes Per Weeks</th>
<th>Pre</th>
<th>6 mo</th>
<th>1 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>90</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>TAU</td>
<td>70</td>
<td>60</td>
<td>50</td>
</tr>
</tbody>
</table>

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**Stress**

**Social Responsiveness**
Quality of Life (SWLS)

Exposure and Defusion
Eilers & Hayes, in press

- 3 children with autism (3-7 y o)
- Each referred for behavioral excesses
  - Several hours of crying when toys broke
  - Crying, aggression when rules of play broken
  - Crying, aggression to novel food items
- Exposure / RP and word repetition in silly voices (e.g., train track broke)

Experiential Avoidance and MH Stigma
Masuda et al., 2007

- RCT comparing education focused on prevalence and costs of stigma toward mental health problems, and accurate information about them
- ACT focused on defusion from and mindfulness of prejudicial thoughts, acceptance of difficult prejudicial feelings, and values

ACT for Mental Health Stigma

ACT for Shame
Luoma, Kohlenberg et al., JCCP

- 134 participants in a 28 day in-patient drug program
- Randomly assigned in waves to receive treatment as usual or that plus a 6-hour ACT group focused particularly on self-stigma and shame
- Thus the total difference in the program is minimal – about 3-5% of the treatment hours
- 71% available at follow up

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Shame Outcomes: Better for TAU

Quality of Life Outcomes: Better for TAU

Substance Use Outcomes

Group ACT for Shame

But now let’s look at what happens through the rest of follow up.

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Quality of Life Outcomes

- TAU
- ACT

Pre  Post  3 Mo F-Up

Average Score

Depression and Anxiety

Impact of an ACT Workbook

- 236 teachers in wellness program
- Randomly assigned the book
- 8 weeks to read the book
- Pres, post and 4 mo F-up
- 6 10-point quizzes done online
- Standardized feedback given after tests

Result – General Mental Health

- DASS-21 Depression scores 20 or higher
- There were 42 in the sample at that level
- Gives a mean and standard deviation similar to depressed inpatients admitted for depressive disorders,
- A sufficient sample (n = 23 / group) in this study to analyze

Extremely Depressed Subsample

How about clinical significance?

% who get across that green line

Depressed Teacher Subsample

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
**Percentage Clinically Improved**

- 56.5%

**Depressed Teacher Subsample**

**But What About Thriving?**

Bohlmeijer, Lamers, & Fledderus, 2015

- Similar study done with 376 depressed people and an ACT book (Living Life to the Fullest)
- Large decrease in depression; looked at flourishing:
  - emotional well-being (positive affect, happiness, and satisfaction with life);
  - psychological well-being (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance);
  - social well-being (social acceptance, social actualization, social contribution, social coherence, and social integration).

**Percent Newly “Flourishing”**

Majority of Areas Very High

Bohlmeijer, Lamers, & Fledderus, 2015

**ACT for COD**

**Severity of Principle Disorder**

Arch et al 2012

**Smoking**
Objectively Smoke Free at 1 Year
(all missing data scored as smoking)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Percentage Not Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine Patch</td>
<td>30</td>
</tr>
<tr>
<td>ACT alone</td>
<td>25</td>
</tr>
<tr>
<td>Zyban</td>
<td>5</td>
</tr>
<tr>
<td>ACT + FAP + Zyban</td>
<td>20</td>
</tr>
<tr>
<td>CBT</td>
<td>15</td>
</tr>
<tr>
<td>ACT</td>
<td>10</td>
</tr>
</tbody>
</table>

Web-Based
Smoking Cessation
Bricker, Wyzykowski, Comstock, & Heffner, 2013

- 222 patients randomly assigned to “SmokeFree.gov” (the NCI site) or the ACT site
- Pre / post / 3 mo f-up
- Significantly more satisfied w/ ACT site

Telephone-Based
Smoking Cessation
Bricker, Bush, Zbikowski, Mercer, & Heffner, 2013

- 121 patients randomly assigned to 5 telephone ACT or telephone CBT (South Carolina state quit line) sessions
- Pre / post / 6 mo f-up
- Strong results with those who were also depressed or with low acceptance of cravings (data shown)

App-Based
Smoking Cessation
Bricker et al., in press

- 196 patients in double blind randomized trial of ACT app (SmartQuit) versus the NCI app (QuitGuide) Pre / post / 3 mo f-up
- Significantly more use of the ACT app

Smoke Free at Follow Up
(all missing data scored as smoking)

Tinnitus
ACT versus TRT for Tinnitus

Westin et al., 2011

- 64 patients randomly assigned to ACT or Tinnitus Retraining Therapy
- Pre / post / 18 mo f-up

Tinnitus Distress

![Graph showing Tinnitus Distress over time for THT and ACT](image)

Professional Learning

Adopting ESTs

Vara, Hayes, Rogel, & Fisher, JCCP, 2008

- 59 drug and alcohol counselors randomly assigned to
  - One day ACT workshop focused on defusing from the psychological barriers to learning new treatment approaches, and acceptance of the emotions they bring up
  - Control condition: One day workshop on matters not linked to empirically supported treatments (EAP policies; etc)
- Both groups then do a one day educational workshop (the following day) on empirically supported treatments in the drug and alcohol area focusing particularly on the use of agonists and antagonists

Frequency of Perceived Barriers to Using Empirically Supported Treatments

![Graph showing frequency of perceived barriers](image)

ACT group acknowledges the presence of significantly more barriers to using these treatments $p < .05$

Believability of Perceived Barriers to Using Empirically Supported Treatments

![Graph showing believability of perceived barriers](image)

ACT group is significantly less likely to believe that these barriers are real $p < .05$

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Willingness to Use Pharmacotherapy

ACT group reports being significantly more willing actually to use empirically supported treatments (pharmacotherapy score is shown).

Subsequent Use of Pharmacotherapy

Three months later ACT group reports a large increase in actually using pharmacotherapy more frequently.

Psychosis

One Year Impact on Rehospitalization

Elinor Ostrom’s Eight Principles

1) Clearly defined groups
2) Proportional equivalence between benefits and costs
3) Collective-choice
4) Monitoring
5) Graduated sanctions
6) Conflict resolution mechanisms
7) Right to organize
8)Nested enterprises
Reaching the Need:
ACT / PROSOCIAL in Sierra Leone

• 6 M people in Sierra Leone: 1 psychologist; 1 retired psychiatrist
• 2010 Beate Ebert started a clinic in Freetown
• ABCS brought 5 health workers to World Con (2010, 2012)
• ACT trainers flew into Sierra Leone (2011-present)
• Work with indigenous workers, in a “train the trainers” model

Began Doing Workshops

Trained Trainers

Last Spring a New Clinic in Bo

New Clinic in Bo

Desperate Level of Need

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ACT State of the Evidence
Grassroots ACT BootCamp, Reno 2015
Now Here Comes Ebola and the Clinic Director is Named the Bo Ebola Response Director

• The country is isolated; the aid workers leave;
• 1500 have died; 3,000 infected
• Hannah is named director for Ebola prevention in her district by the Ministry of Health and Sanitation
• Her approach: involve the people directly in ACT / PROSOCIAL based workshops

With An Entire Community

Example of Solutions

• Example of their solutions:
  • You must kiss the body of the dead before burial.
  • What to do?
  • Kiss and bury a banana trunk
  • Bo infection infection increase slows

Eight Worst Districts Last 4 Months

If you Want to Help

• To help in specific ways in Sierra Leone, do a Google search for “Commit and Act” or go to
  • http://www.commitandact.com/commit_and_act.com

Steven C. Hayes
http://www.stevenhayes.com/