The third wave of Cognitive Behavior Therapy

How efficacious are newly developed interventions

Peter Wilhelm

11.5.2016
Overview of Today’s Lecture

– What is third wave CBT

– Efficacy of third wave treatments for
  – Depression
  – Anxiety
Historical background: 3 generations of behavior therapy (Forman & Herbert, 2009)

- **1\textsuperscript{st} generation: Behavior therapy (1950s to 1960s)**
  - objective scientific approach to understand psychological problems and their treatment
    - Reaction to shortcomings of Psychodynamic approaches
  - Focus on modification of problematic behaviors

- **2\textsuperscript{nd} generation: CBT (1960s to 1990)**
  - Emphasizing cognitive processes
    - Interpretation of environmental stimuli -> emotional and behavioral responses
    - Focus on modification of maladaptive thoughts, schemas, or information processing styles
      - Rational emotive Therapy (Ellis, 1962)
      - Cognitive therapy (Beck et al., 1979)
Historical background:
3 generations of behavior therapy
(Forman & Herbert, 2009)

- 3rd generation: Acceptance based models of CBT (since the 1990s)
  - identified as a “third wave” that extend and deviate from traditional CBT approaches (Hayes, 2004)

- Common characteristics
  - abandon key assumptions of CBT
    - Shift away from assumption that distressing symptoms (thoughts or feelings) must be changed in content or frequency to improve overall well being
  - less focused on reducing psychological and emotional symptoms
    - Reduction of symptoms is a “side-benefit.”
  - prioritize the holistic promotion of health and well-being
    - ultimate goal: assisting people live and experience fuller, more satisfying lives
  - Integrate new concepts into traditional behavioral interventions
    - metacognition, acceptance, mindfulness, personal values, and spirituality

http://www.3rdwavetherapy.com/what-is-third-wave-cognitive-behavioral-therapy/
Characteristics of third wave of Cognitive Behavior Therapies (Hayes, 2004)

- Grounded in an empirical, principle-focused approach
- Sensitive to context and functions of psychological phenomena, not just their form
- Emphasize contextual and experiential change strategies in addition to more direct and didactic ones
- Support construction of broad, flexible and effective repertoires rather than eliminative approach to narrowly defined problems
- Emphasize the relevance of issues for clinicians as well as clients.
- Reformulate and synthesize previous generations of CBT and carry them forward into domains previously addressed by other traditions
Cochrane Review identified 7 approaches as third wave for treatment of depression

- Intervention is focused on modifying the function of thoughts rather than on modifying their content.

- Seven main categories
  - Acceptance and commitment therapy (ACT)
  - Compassionate mind training (CMT)
  - Mindfulness-based cognitive therapy (MBCT)
  - Dialectical behaviour therapy (DBT)
  - Metacognitive therapy (MCT)
  - Behavioural activation (BA)
  - Functional analytic psychotherapy (FAP)
Dialectical behaviour therapy (DBT)

- Originally developed for chronically suicidal or self-injurious women with borderline personality disorder (Linehan 1993; Koons 2001)

- Trained coping skills are useful for managing life, independent of diagnosis:
  - Radical acceptance
    - acceptance of elements of life that cannot be changed
  - Mindfulness
    - Increased awareness without judgement
    - Attentional control
  - Distress tolerance
    - Tolerance of pain
  - Opposite action
    - Acting opposite to dysfunctional urges (self injuries depressive thoughts)
  - Increasing interpersonal effectiveness (Lynch 2003).

- Hofmann 2008 noted that Marsha Linehan herself does not view DBT as a form of third wave CBT, but rather as a form of CBT that includes acceptance strategies.
Acceptance and commitment therapy (ACT)

- Therapist aims to transform the relationship between experience of symptoms and difficult thoughts/feelings
  - -> no avoidance of symptoms
  - -> reinterpretation of symptoms: uncomfortable transient psychological events
  - -> symptom reduction becomes a by-product (Harris 2006).

- Clients develop psychological flexibility through six core principles:
  - cognitive defusion (perceiving thoughts, images, emotions and memories as what they are, rather than what they appear to be)
  - acceptance (allowing these to come and go without struggling with them);
  - contact with the present moment (awareness of and receptiveness to the here and now);
  - use of the observing self (accessing a transcendent sense of self);
  - personal values (discovering what is most important to one’s true self);
  - committed action (setting goals according to values and carrying them out responsibly) (Hayes 1999).

- ACT uses methods in line with traditional behaviour therapy:
  - exposure, skills acquisition and goal setting.
Mindfulness-based cognitive therapy (MBCT)

- Group-skills training program to prevent relapse of depression (Williams 2008).
- Combines CBT principles with mindfulness meditation
  - Attention is paid to the present moment,
  - Thoughts, feelings, and body sensations are noted with an attitude of curiosity and non-judgement.

- Creates possibility of working with sadness, fear, and worry-emotions that are central to preventing depression.

- Difficult for patients with acute depression
  - Negative thinking
  - Low concentration

- MBCT has not yet been evaluated as a treatment for acute depression.
Compassionate mind training (CMT) (Gilbert, 2005, 2009)

- compassion-focused therapy
- motivating individuals to care for themselves:
  - care for their own wellbeing
  - become sensitive to their own needs and distress
  - extend warmth and understanding towards themselves

- By developing this style of thinking, individuals may promote the generation of prosocial behaviours that others are more likely to engage with and reward

- client is encouraged to employ self-soothing actions
Metacognitive therapy (MCT) (Wells, 2008, 2009)

- Premise: Depression is maintained and intensified by problematic and difficult to control thinking patterns
  - rumination
  - excessive self-focused attention on thoughts and feelings.
- attention training (ATT)
  - increasing awareness of thinking
  - regaining flexible control over it
  - counteract depressive inertia through daily exercises:
    - actively listening
    - focusing attention in the context of simultaneous sounds presented at different loudness and spatial locations
- Focus:
  - Reduction of rumination
  - Reduction of unhelpful coping behaviours,
  - Modification of positive and negative metacognitive beliefs about rumination
    - e.g. ‘thinking about the causes of depression will help me prevent it’
    - e.g. ‘there’s nothing I can do about my thoughts’
- Hofmann 2008 reports that Adrian Wells does not view it as a third wave
Behavioural activation (BA) (Jacobson, 1996; Martell 2001; (Hopko 2003)

- Extended behavioural therapy model (Martell 2001; relying on Lewinsohn 1974) introduces a contextual approach (to depression).
  - Avoidant coping patterns maintain depressed mood
    - (e.g. withdrawal from situations and people)
  - Avoidant coping is targeted as a primary problem
  - Functional analysis:
    - Assessment of how depressive behaviour is carried out and maintained
    - Access to reinforcements such as sympathy and escape from responsibility is weakened,
    - Healthy behaviour is systematically activated through the use of goal setting and increased activities (Hopko 2003).

- Client is taught to formulate and accomplish behavioural goals
- Encouraged to move attention away from prevailing negative thoughts towards direct, immediate experience.
- Traditional behavioural therapy strategies are also used
  - Teaching relaxation skills
  - Increasing pleasant events and
  - Providing social and problem-solving skills training
Functional analytic psychotherapy (FAP) (Kohlenberg, 1991, 2002)

- Cognition is regarded as a form of covert behaviour (activity of thinking, planning, believing and organising)
- Relationship between cognition and behaviour is seen as a sequence of two behaviours.
- The closer in time and place a behaviour is to its consequences, the greater will be the effect of those consequences
- Client-therapist relationship is used as an in vivo teaching opportunity
  • to highlight processes that occur during therapy
  • link this experience to day-to-day life
Review of RCTs that compared third wave CBT with control conditions for the treatment of acute depression (Churchill et al., 2013)

- Examine the effects of third wave CBT approaches compared with control conditions for acute depression

- 4 RCTs (224 participants) that compared 3W CBT with
  - treatment as usual:
    - appropriate medical care during the course of the study on a naturalistic basis, including pharmacotherapy and/or psychological therapy
  - waiting list
  - attention placebo/psychological placebo
  - No quasi-randomised controlled trials

- Patients had standardized clinical diagnosis of acute depression
Review of RCTs that compared third wave CBT with control conditions for the treatment of acute depression (Churchill et al., 2013)

- Examine the effects of third wave CBT approaches compared with control conditions for acute depression

- 4 RCTs (224 participants) that compared 3W CBT with
  - treatment as usual:
    - appropriate medical care during the course of the study on a naturalistic basis, including pharmacotherapy and/or psychological therapy
  - waiting list
  - attention placebo/psychological placebo

- No quasi-randomized controlled trials

- Patients had standardized clinical diagnosis of acute depression
Studies included in review of third wave CBT with control conditions for the treatment of acute depression (Churchill et al., 2013)

- Ekers (2011) Behavioural activation (BA) vs usual care (UC) (N = 47)
  - GP or primary care mental health worker offered interventions deemed appropriate for patients’ condition as per normal practice

- Ekers (2011) Competitive Memory Training (COMET) vs TAU (N = 93)
  - COMET
    - Does not change negative emotions and thoughts themselves but rather the amount of involvement individual has with these thoughts and emotions.
    - Using counter themes of being indifferent or adopting an attitude of acceptance, clients are trained to become more emotionally salient.
    - groups of 6 to 8 participants in 7 manualised sessions of 90 minutes each. Participants also received ongoing treatment as usual
  - TAU
    - pharmacotherapy prescribed by a psychiatrist, with or without psychotherapy conducted by a psychologist, or supportive and structured treatment conducted by nurses
Studies included in review of third wave CBT with control conditions for the treatment of acute depression (Churchill et al., 2013)

• Gawrysiak (2009) Behavioural Activation Treatment for Depression (BATD) vs No treatment control (N = 30)
  – Emphasis on engaging in value-based activities that elicit a sense of pleasure and accomplishment
  – single individual 90-minute face-to-face session

• Pellowe (2006) Acceptance and commitment therapy (ACT) vs Supportive group therapy (SGT)
  – SGT was intended to provide a clinically relevant comparison treatment for ACT but was regarded as a placebo control condition, consisting of relatively unstructured group discussion prompted by facilitators, with avoidance of CBT and ACT
  – 4 sessions in groups
Depression levels at post treatment
(Churchill et al., 2013)

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Third wave CBT</th>
<th>TAU</th>
<th>Std. Mean Difference</th>
<th>Weight</th>
<th>Std. Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean(SD)</td>
<td>N</td>
<td>Mean(SD)</td>
<td>IV(Random,95% CI)</td>
</tr>
<tr>
<td>1 Behavioural activation vs TAU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ekers 2011</td>
<td>16</td>
<td>11.93 (1.84)</td>
<td>22</td>
<td>27.4 (14.01)</td>
<td>21.6 %</td>
</tr>
<tr>
<td>Gawrysiak 2009</td>
<td>14</td>
<td>8.1 (3)</td>
<td>16</td>
<td>14.7 (4.5)</td>
<td>16.7 %</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>30</strong></td>
<td></td>
<td><strong>38</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: Tau² = 0.0; Chi² = 0.81, df = 1 (P = 0.37); I² = 0.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for overall effect: Z = 4.93 (P &lt; 0.00001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ACT vs TAU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pellowe 2006</td>
<td>25</td>
<td>7.16 (5.23)</td>
<td>27</td>
<td>11.89 (9.52)</td>
<td>28.0 %</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>25</strong></td>
<td></td>
<td><strong>27</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: not applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for overall effect: Z = 2.11 (P = 0.035)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Others (COMET) vs TAU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ekers 2011</td>
<td>53</td>
<td>2.46 (4.59)</td>
<td>38</td>
<td>15.31 (4.5)</td>
<td>33.7 %</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>53</strong></td>
<td></td>
<td><strong>38</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: not applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for overall effect: Z = 5.46 (P &lt; 0.00001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>108</strong></td>
<td></td>
<td><strong>103</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: Tau² = 0.08; Chi² = 5.33, df = 3 (P = 0.15); I² = 44%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for overall effect: Z = 5.36 (P &lt; 0.00001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for subgroup differences Chi² = 4.52, df = 2 (P = 0.10), I² = 56%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

favours third wave CBT  
favours TAU
Summary of findings: 3 wave treatments of depression vs. control (Churchill et al., 2013)

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Illusive comparative risks* (95% CI)</th>
<th>Relative effect (95% CI)</th>
<th>No of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assumed risk</td>
<td>Corresponding risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Control</td>
<td>Third wave CBT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical non-response at post-treatment</td>
<td>Study population</td>
<td>RR 0.51 (0.27 to 0.95)</td>
<td>170 (3 studies)</td>
<td>◄ ◄ ◄ ◄ very low&lt;sup&gt;a, b, c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>800 per 1000</td>
<td>408 per 1000 (216 to 760)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>351 per 1000 (186 to 654)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment acceptability (dropout) at post-treatment</td>
<td>Study population</td>
<td>RR 1.01 (0.08 to 12.3)</td>
<td>224 (4 studies)</td>
<td>◄ ◄ ◄ ◄ very low&lt;sup&gt;a, b, e, f&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>206 per 1000</td>
<td>208 per 1000 (16 to 1000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>42 per 1000 (3 to 517)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical non-remission at post-treatment</td>
<td>Study population</td>
<td>RR 0.77 (0.67 to 0.88)</td>
<td>140 (2 studies)</td>
<td>◄ ◄ ◄ ◄ very low&lt;sup&gt;a, c, d, f&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
Summary of findings: 3 wave treatments of depression vs. control (Churchill et al., 2013)

<table>
<thead>
<tr>
<th>Depression levels at post-treatment</th>
<th>Mean depression levels at post-treatment in the intervention groups were 1.12 standard deviations lower (1.53 to 0.71 lower)</th>
<th>211 (4 studies)</th>
<th>very low^a,d,f,g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety levels at post-treatment-behavioural activation vs TAU Beck Anxiety Inventory (BAI)</td>
<td>Mean anxiety levels at post-treatment-behavioural activation vs tau in the intervention groups was 5.5 lower (10.01 to 0.99 lower)</td>
<td>30 (1 study)</td>
<td>very low^a,f,h</td>
</tr>
<tr>
<td>Social adjustment levels at post-treatment- behavioural activation vs TAU Work and Social Adjustment Scale (WSAS)</td>
<td>Mean social adjustment levels at post-treatment-behavioural activation vs tau in the intervention groups was 11.56 lower (17.89 to 5.23 lower)</td>
<td>38 (1 study)</td>
<td>very low^a,b,d,f</td>
</tr>
</tbody>
</table>
Conclusion: 3 wave treatments of depression vs. control (Churchill et al., 2013)

- “Very low quality evidence suggests that third wave CBT approaches appear to be more effective than treatment as usual in the treatment of acute depression.”
### Summary of findings: 3 wave treatments of depression vs. other treatments (Churchill et al., 2013)

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Illustrative comparative risks* (95% CI)</th>
<th>Relative effect (95% CI)</th>
<th>No of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical non-response at post-treatment</strong></td>
<td><strong>Study population</strong></td>
<td>RR 1.14 (0.79 to 1.64)</td>
<td>144 (3 studies)</td>
<td>⬤⬤⬤⬤ very low\textsuperscript{a,b,c}</td>
</tr>
<tr>
<td></td>
<td>427 per 1000</td>
<td>487 per 1000 (337 to 700)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>422 per 1000</td>
<td>481 per 1000 (333 to 692)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical non-response at follow-up: ACT vs other psychological therapies</strong></td>
<td><strong>Study population</strong></td>
<td>RR 0.31 (0.08 to 1.26)</td>
<td>56 (2 studies)</td>
<td>⬤⬤⬤⬤ very low\textsuperscript{a,b,c}</td>
</tr>
<tr>
<td>Follow-up: 2 months</td>
<td>351 per 1000</td>
<td>109 per 1000 (28 to 443)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>347 per 1000</td>
<td>108 per 1000 (28 to 437)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary of findings: 3 wave treatments of depression vs. other treatments  
(Churchill et al., 2013)

<table>
<thead>
<tr>
<th>Treatment acceptability at post-treatment</th>
<th>Study population</th>
<th>RR 1.12</th>
<th>144</th>
<th>very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout rates</td>
<td></td>
<td>(0.47 to 2.67)</td>
<td>(3 studies)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>134 per 1000</td>
<td>150 per 1000 (63 to 356)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>133 per 1000</td>
<td>149 per 1000 (63 to 356)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment acceptability at follow-up: ACT versus other psychological therapies</th>
<th>Study population</th>
<th>RR 1.07</th>
<th>56</th>
<th>very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout rates Follow-up: 2 months</td>
<td></td>
<td>(0.1 to 11.23)</td>
<td>(2 studies)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>135 per 1000</td>
<td>145 per 1000 (14 to 1000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 per 1000</td>
<td>107 per 1000 (10 to 1000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-remission at post-treatment</th>
<th>Study population</th>
<th>RR 0.89</th>
<th>88</th>
<th>very low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(0.6 to 1.3)</td>
<td>(1 study)</td>
<td></td>
</tr>
<tr>
<td>Non-remission at post-treatment</td>
<td>578 per 1000</td>
<td>514 per 1000 (347 to 751)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>578 per 1000</td>
<td>514 per 1000 (347 to 751)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depression levels at post-treatment (HAM-D)</th>
<th>Mean depression levels at post-treatment in the intervention groups was 1.65 lower (4.17 lower to 0.88 higher)</th>
<th>113</th>
<th>very low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(3 studies)</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion: 3 wave treatments of depression vs. other treatments (Churchill et al., 2013)

“Very low quality evidence suggests that third wave CBT and CBT approaches are equally effective and acceptable in the treatment of acute depression.”
NMA of psychological therapies for panic disorder with or without agoraphobia (Pompoli et al., 2016)

- **Objective:**
  - Assessing comparative efficacy and acceptability of different psychological therapies for panic disorder, with or without agoraphobia, in adults.

- **Network meta-analysis (NMA) to compare**
  - 8 forms of PA with
  - 3 control conditions
NMA of psychological therapies for panic disorder with or without agoraphobia (Pompoli et al., 2016)

**Selection criteria**

- RCTs focusing on adults with a formal diagnosis of panic disorder with or without agoraphobia.
- Face-to-face therapies
NMA of psychological therapies for panic disorder with or without agoraphobia (Pompoli et al., 2016)

- 60 studies included
- 2 studies with 3W CBT included
CBT vs. ACT for treatment of anxiety disorders
Patients and Design (Arch et al., 2012)

 Patients:
DSM-IV diagnosis of one or more anxiety disorders (PD/A), social anxiety disorder (SAD), specific phobia (SP), obsessive-compulsive disorder (OCD), or generalised anxiety disorder (GAD)
number of PD/A patients randomised to each arm not specified

 Design
• RCT
• pre-treatment, post-treatment, 6 and 12 months follow-up
• standardized measures
  – Anxiety Disorders Interview Schedule-IV (ADIS-IV),
  – Anxiety Sensitivity Index (ASI),
  – Penn State Worry Questionnaire (PSWQ)
  – Fear Questionnaire (FQ),
  – Main Target Phobia Scale (a single-item avoidance rating for each participant’s ”main phobia“)
  – Quality of Life Inventory (QOLI), Acceptance and Action Questionnaire-16 (AAQ)
CBT vs. ACT for treatment of anxiety disorders

Treatments (Arch et al., 2012)

**CBT (n=78 randomized, 71 ITT)**
Single manual (Craske, 2005) with branching mechanisms for each disorder
- cognitive restructuring
- behavioral exposure

**Acceptance and commitment therapy (n=65 randomized, 57 ITT)**
Manual (Eifert & Forsyth, 2005)
- psychoeducation,
- experiential exercises, and discussion to introduce
  - Creative hopelessness
    - involved a process of exploring whether efforts to manage and control anxiety had “worked” and experiencing how such efforts had led to reduction or elimination of valued life activities
  - Acceptance
    - explored as an alternative to controlling anxiety
  - Valued action
    - Participants were encouraged to behave in ways that enacted their personal values (“”), rather than spend time managing anxiety
- Behavioral exposures, including interoceptive, in-vivo, and imaginal
  - provide opportunities to practice making room for, mindfully observing, and accepting anxiety and to practice engaging in valued activities while experiencing anxiety (in-vivo exposures)

In both treatments
- 12 individual sessions a 60 minutes
- 12 weeks
CBT vs. ACT for treatment of anxiety disorders

Attrition (Arch et al., 2012)

Completers (full 12 sessions of therapy)

- CBT 68% (48/71)
- ACT 65% (37/57)
CBT vs. ACT for treatment of anxiety disorders
Primary outcomes (ITT) (Arch et al., 2012)

- ACT and CBT produced significant improvements from pre- to post-treatment
- were maintained or improved during follow-up, on both anxiety-specific and broader outcomes
CBT vs. ACT for treatment of anxiety disorders
Differential outcomes (Arch et al., 2012)

• CBT:
  – higher quality of life

• ACT:
  – greater psychological flexibility,
  – for completers lower principal anxiety disorder severity over the follow-up.
CBT vs. ACT for treatment of anxiety disorders

Conclusions (Arch et al., 2012)

- Despite differences in underlying treatment models CBT and ACT showed similar immediate and long-term improvements

- Overall ACT is a highly viable treatment alternative to CBT

- Future investigations
  - for whom each treatment approach is most effective
  - shared versus unique mechanisms of therapeutic change
NMA of psychological therapies for panic disorder with or without agoraphobia (Pompoli et al., 2016)

- Objective: Assessing comparative efficacy and acceptability of different psychological therapies for panic disorder, with or without agoraphobia, in adults.

- A network meta-analysis (NMA) to compare
  - 8 forms of PA with
  - 3 control conditions.
NMA of psychological therapies for panic disorder with or without agoraphobia

Figure 24. Short-term improvement: network plot
# NMA Rankings of psychological therapies for panic disorder with or without agoraphobia in adults

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Treatment hierarchy (in descending order)</th>
<th>No of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term remission (follow up: mean 3 months)</td>
<td>(SP)-CBT-PD-CT-BT-PT-NT-WL</td>
<td>2491 (40 RCTs)</td>
<td>✨ ✨ ✨ ✨ LOW 12</td>
</tr>
<tr>
<td>Short-term response (follow up: mean 3 months)</td>
<td>CBT-PD-(SP)-BT-PT-WL-CT-NT</td>
<td>2240 (37 RCTs)</td>
<td>✨ ✨ ✨ ✨ LOW 12</td>
</tr>
<tr>
<td>Short-term dropouts (follow up: mean 3 months)</td>
<td>NT-PD-WL-3W-CBT-APP-PE-PT-CT-BT-SP</td>
<td>2535 (47 RCTs)</td>
<td>✨ ✨ ✨ ✨ LOW 13</td>
</tr>
<tr>
<td>Long-term remission/response (follow up: mean 12 months)</td>
<td>CBT-PD-PT-BT-SP-CT</td>
<td>464 (9 RCTs)</td>
<td>✨ ✨ ✨ ✨ LOW 13</td>
</tr>
<tr>
<td>Short-term improvement as measured on a continuous scale (follow up: mean 3 months)</td>
<td>(PD)-CBT-SP-CT-3W-BT-PT-NT-WL</td>
<td>2318 (57 RCTs)</td>
<td>✨ ✨ ✨ ✨ LOW 13</td>
</tr>
</tbody>
</table>

- psychoeducation (PE), supportive psychotherapy (SP), physiological therapies (PT), behaviour therapy (BT), cognitive therapy (CT), cognitive-behaviour therapy (CBT), third-wave CBT (3W), psychodynamic psychotherapy (PD)
- Comparison: no treatment (NT), waiting list (WL), attention/psychological placebo (APP)
Conclusions from NMA of psychological therapies for panic disorder (Pompoli et al., 2016, p. 2)

- “There is no high-quality, unequivocal evidence to support one psychological therapy over the others for the treatment of panic disorder”

- CBT
  - most extensively studied
  - often superior to other therapies,
  - BUT effect size - compared to others - was small

- Fewer dropouts in 3W CBT and psychodynamic therapy
  - Better tolerated than other therapies