Evidence-based medicine and child and adolescent psychodynamic psychotherapy:

Can’t we just talk?

Chris Brubaker, M.D., Ph.D.

OHSU Psychiatry Grand Rounds
Feb 18, 2014
Disclosures

• None
Outline

• What is “evidence-based” psychotherapy?
• Terminology and tools, and how they shape outcomes
  Randomized controlled trials, efficacy, effectiveness
• Does this work for psychotherapy research?
• What does the evidence actually show?
Why this talk?

Residency taught “evidence-based” psychotherapies (in my case, CBT and DBT) and psychodynamic psychotherapy.

Providers denied payment for psychodynamic psychotherapy

Refusal to refer to psychodynamic treaters
Looking for Evidence That Therapy Works

BY HARRIET BROWN

Mental-health care has come a long way since the remedy of choice was trepanation — drilling holes into the skull to release “evil spirits.” Over the last 20 years, treatments like cognitive-behavioral therapy, dialectical...
Questions for providers:

“What manuals do you use?”

“Do you consider yourself and your approach eclectic? (Therapists who subscribe to an eclectic approach are less likely to adhere to evidence-based treatments.)

“What professional associations do you belong to? (If you’re looking for a CBT therapist, for instance, ask whether the therapist belongs to the Association for Behavioral and Cognitive Therapies, where most top CBT researchers are members.)

PROVIDENCE, R.I. — PSYCHOTHERAPY is in decline. In the United States, from 1998 to 2007, the number of patients in outpatient mental health facilities receiving psychotherapy alone fell by 34 percent, while the number receiving medication alone increased by 23 percent.

This is not necessarily for a lack of interest. A recent analysis of 33 studies found that patients expressed a three-times-greater preference for psychotherapy over medications.
“Many therapists are contributing to the problem [of psychotherapy’s decline] by failing to recognize and use evidence-based psychotherapies (and by sometimes proffering patently outlandish ideas). There has been a disappointing reluctance among psychotherapists to make the hard choices about which therapies are effective and which — like some old-fashioned Freudian therapies — should be abandoned.”

“Evidence-based” treatment as pervasive belief
“There is a belief in some quarters that psychodynamic concepts and treatments lack empirical support, or that scientific evidence shows that other forms of treatment are more effective. The belief appears to have taken on a life of its own. Academicians repeat it to one another, as do health care administrators, as do health care policymakers. With each repetition, its apparent credibility grows. At some point, there seems little need to question or revisit it because “everyone knows it to be so.””

Language contributes to this belief
Division 12 of American Psychological Association (Society of Clinical Psychology)

1995  “Well established” or “Probably efficacious”
      “Empirically validated”
      “Empirically supported”

Present  “Evidence-based”

Wachtel, P. “Beyond “ESTs”: Problematic Assumptions in the Pursuit of Evidence-Based Practice” *Psychoanal. Psychol.* 2010. 27(3) 251-272
Division 12 of American Psychological Association (Society of Clinical Psychology)

1995

“Task Force on Promotion and Dissemination of Psychological Procedures”

“Task Force on Psychological Interventions”

“Standing Committee on Science and Practice”

Present

Wachtel, P. “Beyond “ESTs”: Problematic Assumptions in the Pursuit of Evidence-Based Practice” *Psychoanal. Psychol.* 2010. 27(3) 251-272
Increasingly, cognitive and behavioral therapies are included in “evidence-based” psychotherapies and psychodynamic therapies are not
What are “evidence-based” treatments?
FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†

- 1900: 40 States Have Health Departments
- 1920: Influenza Pandemic
- 1940: Last Human-to-Human Transmission of Plague
- 1952: First Continuous Municipal Use of Chlorine in Water in United States
- 1955: First Use of Penicillin
- 1955: Salk Vaccine Introduced
- 1971: Passage of Vaccination Assistance Act

Source: CDC
How do we know what works?
Randomized Controlled Trials (RCTs) as the “gold standard”

Pyramid of research *technique*, not *quality*

RCTs are great for *efficacy* research, but emphasis on RCTs shapes research, can impede science
Efficacy

- What effect does my intervention have on an outcome in a controlled population?

Examples:

Antibiotics for strep throat

Beta blockers for hypertension

What about psychotherapy for depression or (pick your diagnosis)?
The model shapes the results
Psychotherapy: Interventions

• Is an intervention of 12-20 hours, delivered by different people, the same intervention?

  Solution: Manuals
  Adherence scales

Side effect: Therapies that are easier to manualize are studied more

Side effect: Limited role of relationship in therapy
Psychotherapy: Outcomes

• What are our outcome? When do we measure them?

  Solution: Ratings scales
  Diagnostic criteria

Side effect: Therapies and results tend to be organized by diagnosis

Side effect: Short-term gains prioritized
Lack of long-term followup
Psychotherapy: Study Populations

Patients

• Self-referred
• Higher socioeconomic status & education
• Single diagnosis
• Few comorbidities
• Few no-shows
Does this reflect the real world?
• Manuals are required for research, but are used by less than 10% of practicing psychotherapists even half the time.

• Designed for low to mid-level practitioners

• Challenging to adapt to new knowledge and individual expertise (e.g. neuroscience, DSM-V)

• As many as 80-90% of patients are excluded from research studies, and comorbidities are rarely included.
• While adherence to manualized treatment predicts better outcomes, over-adherence predicts worse outcomes

Challenges even greater with children

- Nonspecific symptoms and diagnoses
- Unclear links between childhood and adult disorders
- Engaging young children with limited language capacity in verbal and cognitive therapies
- Role of family (individual vs systems treatment)
How therapies evolve
Efficacy research:
Make practice more like research

or

Make research more like practice:
Effectiveness research
Efficacy

• How well does the treatment work in a controlled trial or study population

RCT of sertraline for 18-60yo patients with MDD; no substance use, bipolar, PTSD or axis II disorders; measured at 6mo treatment; only completers included in analysis

Effectiveness

• How well does the treatment work in a representative practice population

RCT of sertraline for patients 18 and older with self-reported suicidal thoughts; comorbidities OK, measured at 5 years followup; intent-to-treat analysis
Moving to effectiveness research:

An example
Mentalization-Based Treatment for Self-Harm in Adolescents: A Randomized Controlled Trial

Trudie I. Rossouw, M.R.C.Psych., AND Peter Fonagy, Ph.D., F.B.A.

Objective: We examined whether mentalization-based treatment for adolescents (MBT-A) is more effective than treatment as usual (TAU) for adolescents who self-harm. Method: A total of 80 adolescents (85% female) consecutively presenting to mental health services with self-harm and comorbid depression were randomly allocated to either MBT-A or TAU. Adolescents were assessed for self-harm, risk-taking and mood at baseline and at 3-monthly intervals until 12 months. Their attachment style, mentalization ability and borderline personality disorder (BPD) features were also assessed at baseline and at the end of the 12-month treatment. Results: MBT-A was more effective than TAU in reducing self-harm and depression. This superiority was explained by improved mentalization and reduced attachment avoidance and reflected improvement in emergent BPD symptoms and traits. Conclusions: MBT-A may be an effective intervention to reduce self-harm in adolescents. Clinical trial registration information—The emergence of personality disorder traits in adolescents who deliberately self harm and the potential for using a mentalisation based treatment approach as an early intervention for such individuals: a randomised controlled trial; http://www.controlled-trials.com; ISRCTN95266816. J. Am. Acad. Child Adolesc. Psychiatry; 2012; 51(12):1304-1313. Key Words: self-harm, treatment, borderline, RCT.
85% Female
73% BPD
97% depression
44% alcohol problems

95% cutting
64% at least 1 overdose
80% suicide attempt

FIGURE 3  Self-harm for both groups over time on the Risk Taking and Self-Harm Inventory. Note: Group differential rate of change: $\beta = -0.049$, 95% CI = $-0.09$ to $-0.02$, $t(159) = -2.49$, $p < .013$, $d = 0.39$. 

OK, but what does the data show?
The State of the Evidence Base for Psychodynamic Psychotherapy for Children and Adolescents


• Reviews 33 studies
• “No compelling evidence from RCT data”
• Psychodynamic psychotherapy (PP) does work, but slower than family therapies
• “While the review shows PP to be an effective treatment, it is clearly understudied and its treatment principles may be most efficaciously delivered in non-traditional contexts such as parent–child or family therapy.”
Effect size (ES)

• Measures the size of the effect of an intervention (i.e. how strong it is)
• Gets around problems related to sample size and significance

0.2 is small (e.g. SSRIs for depression)
0.5 is medium (e.g. psychotherapy for depression)
0.8 is large (e.g. antibiotics for pneumonia)
<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Treatment</th>
<th>Effect Size</th>
<th>Ages</th>
<th>n</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>PDP</td>
<td>1.41</td>
<td>6-18</td>
<td>54</td>
<td>(Kronmüller et al., 2010)</td>
</tr>
<tr>
<td></td>
<td>PDP</td>
<td>0.59-0.73</td>
<td>6-11</td>
<td>58</td>
<td>(Muratori et al., 2002)</td>
</tr>
<tr>
<td></td>
<td>CBT</td>
<td>0.34</td>
<td>10-18</td>
<td>809 * (11)</td>
<td>(Klein et al., 2007)</td>
</tr>
<tr>
<td></td>
<td>SSRI</td>
<td>0.26</td>
<td>6-18</td>
<td>941 * (5)</td>
<td>(Jureidini et al., 2004)</td>
</tr>
<tr>
<td></td>
<td>TCA</td>
<td>0.35</td>
<td>6-18</td>
<td>161 * (12)</td>
<td>(Hazell et al., 1995)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>PDP</td>
<td>1.5</td>
<td>5-19</td>
<td>54</td>
<td>(Kronmüller et al., 2010)</td>
</tr>
<tr>
<td></td>
<td>CBT</td>
<td>0.31</td>
<td>7-17</td>
<td>139</td>
<td>(Walkup et al., 2008)</td>
</tr>
<tr>
<td></td>
<td>CBT</td>
<td>1.2</td>
<td>7-18</td>
<td>36</td>
<td>(Nauta et al., 2003)</td>
</tr>
<tr>
<td></td>
<td>SSRI</td>
<td>1.38</td>
<td>5-17</td>
<td>95 * (2)</td>
<td>(Hidalgo et al., 2007)</td>
</tr>
<tr>
<td>Post-trauma</td>
<td>PDP</td>
<td>0.65</td>
<td>6-14</td>
<td>71</td>
<td>(Trowell et al., 2002)</td>
</tr>
<tr>
<td>Mixed Diagnoses</td>
<td>PDP</td>
<td>1.80-1.98</td>
<td>5-10</td>
<td>33</td>
<td>(Odhammar et al., 2011)</td>
</tr>
<tr>
<td></td>
<td>PDP</td>
<td>0.696</td>
<td>6-10</td>
<td>45</td>
<td>(Deakin and Nunes, 2009)</td>
</tr>
</tbody>
</table>

PDP - psychodynamic psychotherapy. CBT - cognitive behavioral therapy. SSRI - selective serotonin reuptake inhibitor. TCA - tricyclic antidepressant. * indicates a meta-analysis, with the number of individual studies listed in parentheses.
My own experience
Decreased Gray Matter Volume Loss in Adulthood after Childhood Lead Exposure Reduction

Kim M. Cecil, Stephanie Wess

1 Cincinnati Children's
University of Cincinnati
Ohio, United States

Environmental Health

Funding: This work was supported by grants from the National Institutes of Health, NIEHS ES011261, NIEHS R01 ES013524, and the Environmental Protection Agency R8 311252. These grants had no role in the study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing interests: None declared.

Academic Editor: John W. Kaiser, University of California, San Francisco, United States


Received: August 20, 2007
Accepted: April 9, 2008
Published: May 7, 2008

Discussion

Our study showed that higher mean childhood lead concentration is associated with region-specific adult gray matter volume loss. The findings suggested that childhood lead exposure is associated with very considerable portions of the prefrontal cortex, the ACC and the VLPFC. The ACC, a component of the brain's limbic system, is positioned about the rostral corpus callosum, processes cognitive and emotional information separately with distinguishable territories, and is involved in arousal, motivation, and attention.
CSI SVU “Lead,” Airing 3/10/09
In Conclusion...

• It’s complicated
• We need more effectiveness research
• “Evidence-based” treatments are great, but are not “all that works”
• An over-emphasis on efficacy research has serious limitations, particularly for therapy, particularly for kids
## Adult treatments

**Table 1**

<table>
<thead>
<tr>
<th>Treatment type and reference</th>
<th>Description</th>
<th>Effect size</th>
<th>N of studies or meta-analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General psychotherapy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smith et al. (1980)</td>
<td>Various therapies and disorders</td>
<td>0.85</td>
<td>475 studies</td>
</tr>
<tr>
<td>Lipsey &amp; Wilson (1993)</td>
<td>Various therapies and disorders</td>
<td>0.75(^a)</td>
<td>18 meta-analyses</td>
</tr>
<tr>
<td>Robinson et al. (1990)</td>
<td>Various therapies for depression</td>
<td>0.73</td>
<td>37 studies</td>
</tr>
<tr>
<td><strong>CBT and related therapies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipsey &amp; Wilson (1993)</td>
<td>CBT and behavior therapy, various disorders</td>
<td>0.62(^b)</td>
<td>23 meta-analyses</td>
</tr>
<tr>
<td>Haby et al. (2006)</td>
<td>CBT for depression, panic, and generalized anxiety</td>
<td>0.68</td>
<td>33 studies</td>
</tr>
<tr>
<td>Churchill et al. (2001)</td>
<td>CBT for depression</td>
<td>1.0</td>
<td>20 studies</td>
</tr>
<tr>
<td>Cuijpers et al. (2007)</td>
<td>Behavioral activation for depression</td>
<td>0.87</td>
<td>16 studies</td>
</tr>
<tr>
<td>Öst (2008)</td>
<td>Dialectical behavior therapy, primarily for borderline personality disorder</td>
<td>0.58</td>
<td>13 studies</td>
</tr>
<tr>
<td><strong>Antidepressant medication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turner et al. (2008)</td>
<td>FDA-registered studies of antidepressants approved between 1987 and 2004</td>
<td>0.31</td>
<td>74 studies</td>
</tr>
<tr>
<td>Moncrieff et al. (2004)</td>
<td>Tricyclic antidepressants versus active placebo</td>
<td>0.17</td>
<td>9 studies</td>
</tr>
<tr>
<td><strong>Psychodynamic therapy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abbass et al. (2006)</td>
<td>Various disorders, general symptom improvement</td>
<td>0.97</td>
<td>12 studies</td>
</tr>
<tr>
<td>Leichsenring et al. (2004)</td>
<td>Various disorders, change in target problems</td>
<td>1.17</td>
<td>7 studies</td>
</tr>
<tr>
<td>Anderson &amp; Lambert (1995)</td>
<td>Various disorders and outcomes</td>
<td>0.85</td>
<td>9 studies</td>
</tr>
<tr>
<td>Abbass et al. (2009)</td>
<td>Somatic disorders, change in general psychiatric symptoms</td>
<td>0.69</td>
<td>8 studies</td>
</tr>
<tr>
<td>Messer &amp; Abbass (in press)</td>
<td>Personality disorders, general symptom improvement</td>
<td>0.91</td>
<td>7 studies</td>
</tr>
<tr>
<td>Leichsenring &amp; Leibing (2003)</td>
<td>Personality disorders, pretreatment to posttreatment</td>
<td>1.46(^c)</td>
<td>14 studies</td>
</tr>
<tr>
<td>Leichsenring &amp; Rabung (2008)</td>
<td>Long-term psychodynamic therapy vs. shorter term therapies for complex mental disorders, overall outcome</td>
<td>1.8</td>
<td>7 studies</td>
</tr>
<tr>
<td>de Maat et al. (2009)</td>
<td>Long-term psychoanalytic therapy, pretreatment to posttreatment</td>
<td>0.78(^c)</td>
<td>10 studies</td>
</tr>
</tbody>
</table>

\(^a\) Median effect size across 18 meta-analyses (from Lipsey & Wilson, 1993, Table 1.1).

\(^b\) Median effect size across 23 meta-analyses (from Lipsey & Wilson, 1993, Table 1.2).

\(^c\) Pretreatment to posttreatment (within-group) comparison.
“In fact, most therapists don’t tie themselves to any one approach. Instead, they blend elements from different approaches and tailor their treatment according to each client’s needs.”

“While psychoanalysis is closely identified with Sigmund Freud, it has been extended and modified since his early formulations.”

“Psychoanalytic therapies have a strong research base confirming their efficacy.”
A Quality-Based Review of Randomized Controlled Trials of Cognitive-Behavioral Therapy for Depression: An Assessment and Metaregression

Nathan C. Thoma, Ph.D.
Dean McKay, Ph.D.
Andrew J. Gerber, M.D., Ph.D.
Barbara L. Milrod, M.D.
Anna R. Edwards, Ph.D.
James H. Kocsis, M.D.

Objective: The authors assessed the methodological quality of randomized controlled trials of cognitive-behavioral therapy (CBT) for depression using the Randomized Controlled Trial Psychotherapy Quality Rating Scale (RCT-PQRS). They then compared the quality of CBT trials with that of psychodynamic therapy trials, predicting that CBT trials would have higher quality. The authors also sought to examine the relationship between quality and outcome in the CBT trials.

Method: An independent-samples t test was used to compare CBT and psychodynamic therapy trials for average total quality score. Metaregression was used to examine the relationship between quality score and effect size in the CBT trials.

Results: A total of 120 trials of CBT for depression met inclusion criteria. Their mean total quality score on the RCT-PQRS was 25.7 (SD=8.90), which falls into the lower range of adequate quality. In contrast to our prediction, no significant difference was observed in overall quality between CBT and psychodynamic therapy trials. Lower quality was related to both larger effect sizes and greater variability of effect sizes when analyzed across all available comparisons to CBT.

Conclusions: On average, randomized controlled trials of CBT and of psychodynamic therapy did not differ significantly in quality. In CBT trials, low quality appeared to reduce the reliability and validity of trial results. These findings highlight the importance of discerning quality in individual psychotherapy trials and also point toward specific methodological standards for the future.
FIGURE 2. Scatterplot of Quality Score by Year of Publication for Randomized Controlled Trials of Cognitive-Behavioral Therapy and Psychodynamic Therapy

The quality score is the sum of the 24 items of the Randomized Controlled Trial Psychotherapy Quality Rating Scale (possible scores range from 0 to 48). The regression lines do not include the trials that contained both cognitive-behavioral therapy and psychodynamic therapy. There was no significant difference between the two groups in their mean quality scores; their degree of correlation between quality score and time; the slopes of the regression lines; or the intercepts of the regression lines.
Selected Additional reviews on psychodynamic psychotherapy

• Children and adolescents

• Adults