Are clinicians' perceptions of treatment effectiveness consistent with the evidence base?

David Mandell, ScD
Center for Mental Health Policy and Services Research
University of Pennsylvania

Christine Walrath, PhD
ORC Macro

Elizabeth Farmer, PhD
Services Effectiveness Research Program
Duke University

Evidence based treatments (EBTs) in children's mental health

- Many reviews of EBTs for children with mental health problems
- Lack of data on many commonly used interventions
- Lack of information about:
  - what is being used in practice
  - clinicians' perceptions of evidence
  - How these two are related

Goals of this presentation

- Present a hierarchy of interventions based on available evidence
- Compare clinicians' perceptions to what is presented in available research
- Hypothesize factors that may limit the implementation of EBTs

How do we categorize evidence?

Traditional hierarchy of study design

clinical observation ➜ case control ➜ cohort ➜ RCT

Two cautionary tales:

- Writing Group for the Women's Health Initiative Investigators (2002). **Risks and benefits of estrogen plus progestin in healthy postmenopausal women: principal results from the Women's Health Initiative randomized controlled trial**. *JAMA*. 288:321–333
- Smith GCS, Pell JP (2003). **Parachute use to prevent death and major trauma related to gravitational challenge: A systematic review of randomised controlled trials**. *British Medical Journal*. 327:1459-1461

Traditional model of categorization

- Cochrane and Campbell Collaboratives
- well-established vs. probably efficacious
  - well-established:
    - positive effects in ≥ 2 randomized controlled trials or many less controlled studies
    - research conducted by ≥ 2 independent teams.
  - probably efficacious: promising work that has not yet met criteria for "well-established"

Problems with this model

- For many interventions, there is little research
- Big reductions in effect when interventions move from controlled conditions to 'real world'
- Many youth in 'real world' receive many interventions from a range of providers, so challenging to test effects of a given treatment

…leading to little variability in categorization

An alternative model of categorization (Kazdin, 2004)

1. Not Evaluated
2. Evaluated but no, unclear or negative effects
3. Promising: some positive effects, but evidence does not meet traditional standards
4. Well established: positive effects using criteria of the customary evidence systems
5. Better/best treatments: more effective than other well-established techniques

Reviews

- General
  - Brestan & Eyberg, 1998;
  - Burns & Hoagwood, 2002;
  - Burns & Hoagwood, 2004;
  - Epstein, Kutash, Duchnowski, 1998;
  - Pumariega & Winters, 2003
- Based on Kazdin Criteria
  - Bestan & Eyberg, 1998;
  - Compton, Burn, Egger, & Robertson, 2002;
  - Farmer, Compton, Burns, & Robertson, 2002

Better/Best (Level 5)

Cognitive Behavioral Therapy (CBT)	Strong research base for conditions including depression, trauma & anxiety
Stimulants for ADHD	Well-designed RCTs
Webster-Stratton Parents and Children Series	Large body of research; much attention to generalizability, variations in delivery

Well-Established (Level 4)

Multi-systemic therapy (MST)	Strongest evidence among community interventions. Positive results from RCTs; most research conducted by developer
Brief strategic family therapy	Evidence for youth with substance use problems
Behavior therapy	Efficacious for externalizing problems
Modeling	Efficacious for anxiety and externalizing problems
Behavioral parent training	Long history of research. Overlaps with Webster-Stratton. Patterson's Living with Children is prototype.
Interpersonal therapy	Efficacious for depression in adolescents
Problem solving skills training	
Parent-child interaction therapy	Established with younger children. Research ongoing in child welfare
Voucher-based contingency management	Often used with behavioral programs. Long history of research in mental health and education.
Antidepressants	Medication more effective than CBT alone. Concerns about side effects

Promising (Level 3)

Case management	Recent substantial growth in research. Still needs considerable work on definitions and assessing fidelity
Exposure therapy	
Social Skills Training	Difficult to rank. Much research suggesting positive effects, but often not generalizable
Anger coping/management	
Emotive imagery training	Promising for anxiety in very small samples
Self-control instruction training	Promising for ADHD
Relaxation training	Promising for depression
Group CBT	Promising for anxieties in adolescents
Systematic desensitization	For phobias
Behavioral teachers training	
Assertiveness training	

Evaluated but inconclusive (Level 2)

Wraparound	Frequently used intervention, but relatively little research, often using weak designs
Family education and support	Very little research
Respite	Unclear. Little research; only 2 quasi-experimental studies with positive effects for youth with mental health problems.
Mentoring	Unclear. Promising, but little work specifically on youth with mental health problems. Intervention is difficult to study in well-controlled settings.
Rational emotive therapy	Unclear

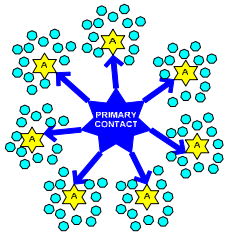
Unevaluated

Common Sense Parenting	Used widely, but lacks systematic controlled research

How we collected information on clinicians' beliefs and practices

- Surveyed mental health service providers for children with SED
- Web-based (hard copies made available)
- 65 items (15-20 minute completion time)
  - Demographic characteristics
  - Training and experience
  - Knowledge of EBTs
  - Perceived effectiveness
  - Use of EBTs (and their guidelines)
  - Employer support of EBTs

Modified Snowball Sampling Approach to Identify Potential Respondents



- 26 funded and 2 unfunded communities
- 571 agencies identified, 76% complied
- 1969 potential respondents identified
  - Range 1-90 per agency; Avg. 5.5
- 1402 appropriate respondents
  - proportional sampling from funded communities with 80 or more potential respondents

Response to Survey

- 5-stage mailing (Dillman, 2000)
- 615 responded (44%)
  - 168 hard copy (27%)
  - 447 web-based (73%)
- 547 were direct children's mental health service providers (89%)

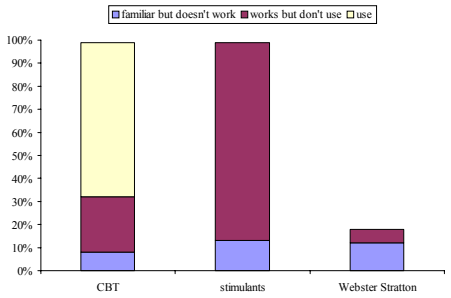
Sample Characteristics

- 84% White,
- 68% Female
- Years as MH Provider to children with SED: M=9.3, range 0-38 yrs

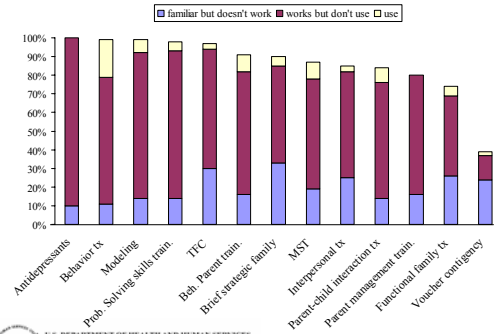
- Primary Position:
  - 50.8% clinician or therapist
  - 13.8% clinical social worker
  - 6.2% counselor
  - 4.1% case manager
  - 3.5% psychologist
  - 3.0% care coordinator
  - 0.8% mental health nurse
  - 0.5% family support provider
  - 17.3% other

Results

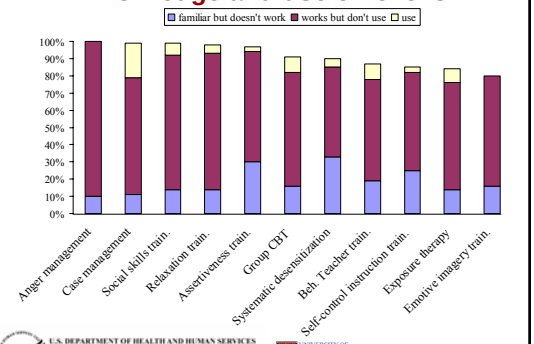
Knowledge and use of Level 5



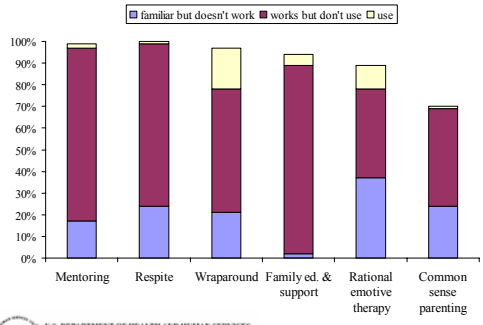
Knowledge and use of level 4



Knowledge and use of level 3



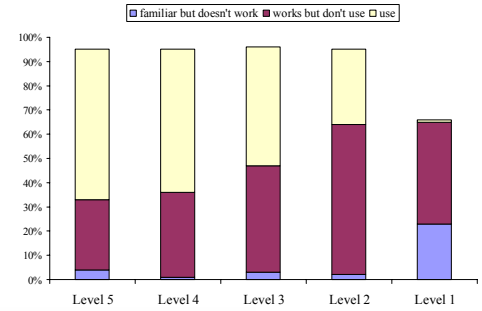
Knowledge and use of levels 2 & 1



Other therapies listed as EBTs

- Parent education
- Family systems theory
- Solution focused therapy
- Play therapy
- Reality based therapy
- Dialectical behavior therapy
- Psychodynamic therapy
- Individual therapy
- Music/Art therapy
- Client centered therapy
- Narrative therapy
- Family preservation

Overall stats for each level



Summary

- Most clinicians familiar with most interventions at all levels
- Clinician beliefs about effectiveness are not associated with the evidence base
- Clinician use of interventions is associated with the evidence base

If clinicians are important in determining the use of EBTs:

- Knowledge and beliefs are not enough
- How recent are knowledge and beliefs?
  - Do they vary across interventions?
  - Are they associated with use?
- Do EBTs match up with client need?
  - Comorbidity
  - Crises
  - Use of multiple treatments
- Is training sensitive to real world scenarios?
  - Resource requirements (cost time training)
  - Focus on EBTs for population of interest

If clinician knowledge & beliefs are NOT rate limiting steps

- Where is the locus of decision making?
  - System
    - Training
    - Insurance/reimbursement
  - Practice setting
    - Continuing education
    - Administrative decisions