What Defines "Evidence-Based" Practice?

and What Does it Mean to Implement Evidence-based Treatment?

NIDA Blending Meeting
October 2006

7 questions about evidence-based treatment (EBT) or practice (EBP)

- William R. Miller, University of New Mexico
  - What are the criteria for EBTs?
  - *Which* addiction treatment methods currently meet these criteria?
- Joan Zweben, University of CA, San Francisco
  - What are the consequences of using different definitions of EBT/EBP?
  - What EBPs emerge from services research?
- Dean Fixsen, University of South Florida
  - What works in implementing EBT?
  - What does not work?
  - What facilitates the implementation of EBT?

Standards of care are changing

- It is abundantly clear that not *all* "treatment works"
- > 1000 clinical trials published in addiction
- Cities, states, and other funding sources are increasingly demanding the use of EBTs
- Closer integration of behavior health with healthcare will apply same standards

The writing is on the wall

- Those who are not providing empirically supported treatment are going to have a harder time getting paid for their services
- “Anything goes” is gone.

EBT and EBP

- An evidence-based treatment (EBT) is typically a treatment method with:
  - Good evidence of efficacy
  - An explicit or implicit underlying theory of cause and change
  - A well-defined set of prescribed (do) and proscribed (don't) procedures (e.g., a manual)

Examples of EBPs

- An evidence-based practice is often more specific, and may be part of an EBT
  - Involve concerned family members in treatment
  - When a client misses an appointment, send a handwritten note or make a phone call to say you care and re-establish contact
  - If heroin use (positive urines) persists during methadone maintenance, *increase* the dose

What are the criteria for EBTs?

- Relies on reviews of treatment outcome literature
- Two refinements to reduce bias in reviews
  - *Systematic* reviews
  - Meta-analysis

What is admissible evidence?

- Strongest evidence: Randomized clinical trials
  - Well-designed randomized trials provide a persuasive, though imperfect, correction for human self-deception.

Experimental and Quasi-Experimental Designs

- Case or group study with A-B-A design
  - Example: Do drug-free urines increase when reinforced?
- Cohort design
  - Example: If we add a job-seeker workshop to our program, will it increase employment and decrease drug use at follow-up?

Correlational Designs

- Is there a consistent relationship (with systematic observation)
  - 12-step meetings and later abstinence
  - Methadone dose and heroin abstinence
  - Therapist empathy and outcome
  - Periods of methadone maintenance and lower criminal activity
- May test predictions about *why* a treatment works (mediational analyses)

A hierarchy of evidence

1. Randomized clinical trials
2. Experimental and quasi-experimental designs that control for some sources of bias
3. Correlational studies with systematic observation
4. Case reports, professional opinion, and “best practice” consensus guidelines

How much evidence is enough for an EBT?

Consistency of evidence

Cross-site replication

Agreement across ten reviews of substance abuse outcome studies

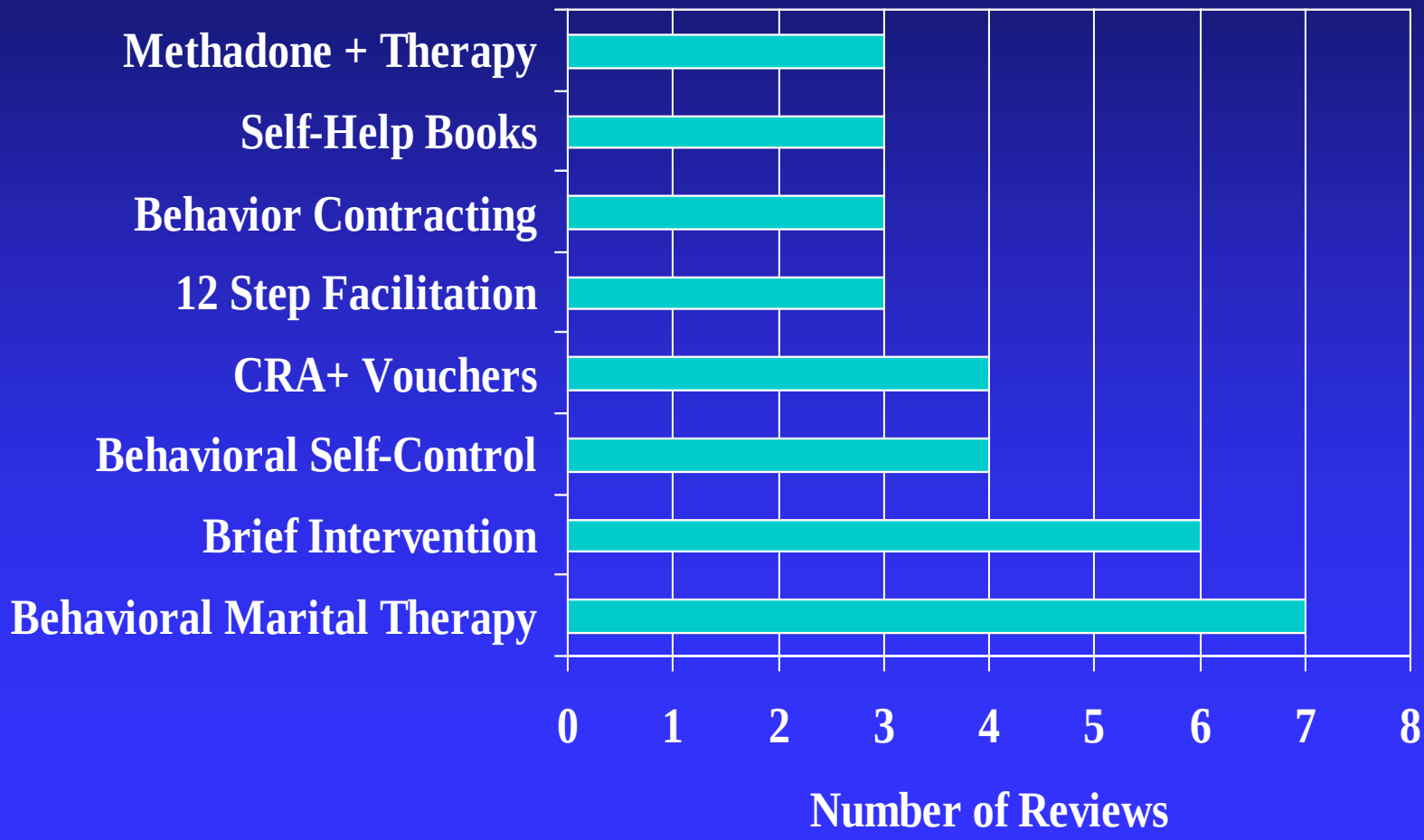
Documentation:

Miller, W. R., Zweben, J. & Johnson, W. R. (2005). Evidence-based treatment: Why, what, where, when and how? *Journal of Substance Abuse Treatment*, *29*, 267-276.

9 out of 10 reviews agree . . .

- Cognitive-behavioral treatment
- Community reinforcement approach
- Motivational interviewing
- Relapse prevention (cognitive-behavioral)
- Social skill training

Less consensus on . . .



Methods shown in multiple clinical trials to be ineffective

- Educational lectures and films
- Exploratory psychotherapies
- Undifferentiated counseling
- Confrontation
- Mandated 12-step meetings
- Time in milieu (inpatient/residential)

Some treatment methods without controlled trials

- CENAPS Relapse Prevention (Gorski)
- Rational Recovery
- Reality Therapy (Glasser)
- Solution-Focused Therapy
- Spiritual Counseling
- Transactional Analysis
- Women for Sobriety

Commonly Practiced Treatments?

- Minnesota Model
- Confrontation
- Education
- Films
- General Counseling
- Group Therapy
- Mandated AA
- Milieu Therapy

The gap “could hardly be larger if one intentionally constructed treatment programs from those approaches with the least evidence of efficacy”

Miller, Wilbourne & Hettema (2003)

Handbook of Alcoholism Treatment Approaches: Effective Alternatives

Is “Evidence-Based” Culture-Specific?

Will a treatment that is effective with white American males also work for:

- Hmong-Laotian families in Minnesota
- Women in rural Mexico?
- Muslims in Arab nations?
- Aboriginals in the Australian outback?
- Zulu women in South Africa?

Within U.S. clinical trials of substance abuse treatments:

- People have generally responded similarly to evidence-based treatments regardless of
  - Gender (men and women)
  - Age
  - Ethnicity (African-American, Hispanic, White Non-Hispanic)

ESIs and CSIs

Hall, G. C. (2001). Psychotherapy research with ethnic minorities: Empirical, ethical, and conceptual issues. *Journal of Consulting and Clinical Psychology*, *69*: 502-510.

- Evidence-supported interventions (ESIs) - treatments, practices and *principles* - represent a good *starting* point when developing services for understudied populations
- Research is also needed to study untested *community-supported interventions* (CSIs) for efficacy

5 Types of Research to Inform Treatment-Population Matching

- Treatment A with Population X
- Overall outcomes for Populations X vs. Y
- Treatment A with Populations X vs. Y
- Treatments A vs. B with Population X
- Treatments A vs. B with Populations X vs. Y

Other Pitfalls with EBTs

- Efficacy versus effectiveness
- Efficacy varies across sites and providers
- Without QA monitoring, EBT policy simply requires *saying* that you deliver EBTs
- Clinician self-reported proficiency can be unrelated to actual proficiency
- Program directors may be clueless about what actually happens behind closed doors

Problems with lists of EBTs

- Arbitrary criteria (e.g. APA Division 12)
- Need for continual updating
- Limitations of available research
- Ossification
- Inhibition of innovation
- What about unevaluated methods?
  - Effective until proven otherwise?

Evidence-Based Relationships

- Consistent evidence that substance abuse treatment providers differ significantly in effectiveness
- Often the largest predictor of clients' outcome is the counselor to whom they were assigned
- Accurate empathy, as defined by Carl Rogers, is a particularly strong predictor

Take-Home Messages

1. It makes a difference *what* we do
2. It makes a difference *how* we do it (and *who* does it)
3. We already know how to do better than we do
4. Changing to EBTs is difficult; requiring it even moreso
5. EBTs are learnable
6. The real beneficiaries are our clients