

Treatment v. Therapist

Cost effective mental health services

Bruce E. Wampold
University of Wisconsin--Madison

Does it work?

Psychotherapy v. No-tx

- Eysenck, science, and behaviorism
- Evidence from RCTs:
 - Smith and Glass (1977)
 - $g = (\text{mean Tx} - \text{mean Control}) / \text{SD}$
- $es = .80$
- Accounts for 13% of variance in outcomes
- Average treated person does better than 80% of untreated persons



NNT: Number needed to treat

- NNT = number of patients needed to be treated to attain one additional success v. the alternative
- Success = Better outcome than randomly chosen patient in control group
- E.g.
 - Tx v. No Treatment, NNT = 10
 - 10 patients treated to have one additional success

v. Evidence-based medicine

NNT

Area	TX	NNT
Cardiology	Aspirin prophylaxis	
Cardiology	Beta Blockers	
Post menopausal osteoporosis	Risedronate	
Influenza	Vaccine	
Hematology thromboembolism	Warfarin	
Smoking cessation	Nicotine Inhaler	
Acute asthma	Budesonide	
Sickle Cell Anemia	Transfusion	
Acute myeloid leukemia	Marrow transplant	
Mental health	Psychotherapy	

v. Evidence-based medicine

NNT

Area	TX	NNT
Cardiology	Aspirin prophylaxis	176
Cardiology	Beta Blockers	40
Post menopausal osteoporosis	Risedronate	20
Influenza	Vaccine	12
Hematology thromboembolism	Warfarin	10
Smoking cessation	Nicotime Inhaler	10
Acute asthma	Budesonide	9
Sickle Cell Anemia	Transfusion	7
Acute myeloid leukemia	Bone marrow transplant	5
Mental health	Psychotherapy	

v. Evidence-based medicine

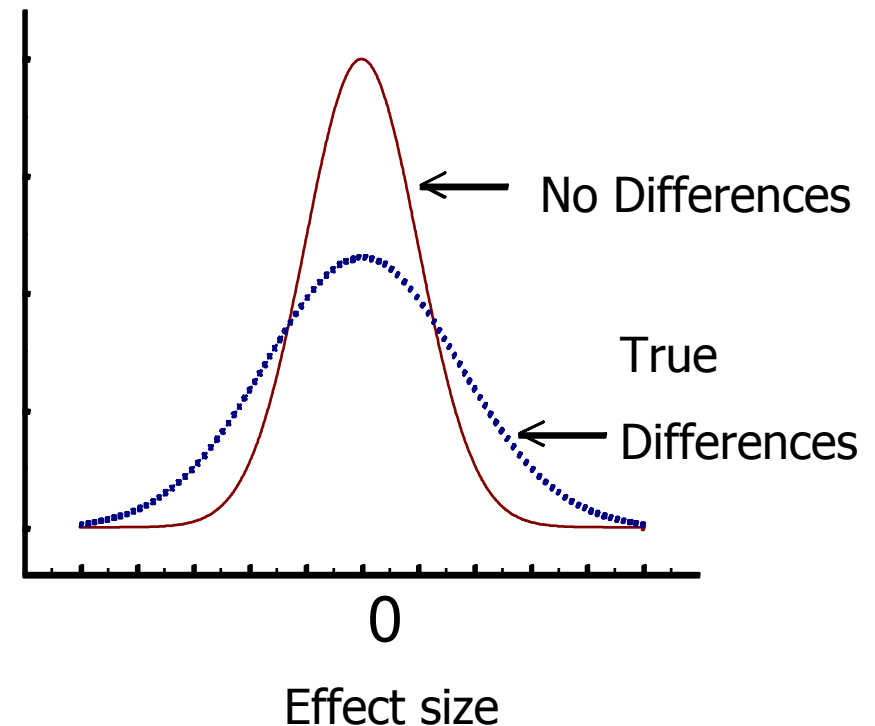
NNT

Area	TX	NNT
Cardiology	Aspirin prophylaxis	176
Cardiology	Beta Blockers	40
Post menopausal osteoporosis	Risedronate	20
Influenza	Vaccine	12
Hematology thromboembolism	Warfarin	10
Smoking cessation	Nicotine Inhaler	10
Acute asthma	Budesonide	9
Sickle Cell Anemia	Transfusion	7
Acute myeloid leukemia	Bone marrow transplant	5
Mental health	Psychotherapy	3

Relative Efficacy

Wampold et al. 1997

- No differences among treatments generally
- At MOST $d = .20$
- **NNT = 9**
- Applies to specific disorders?



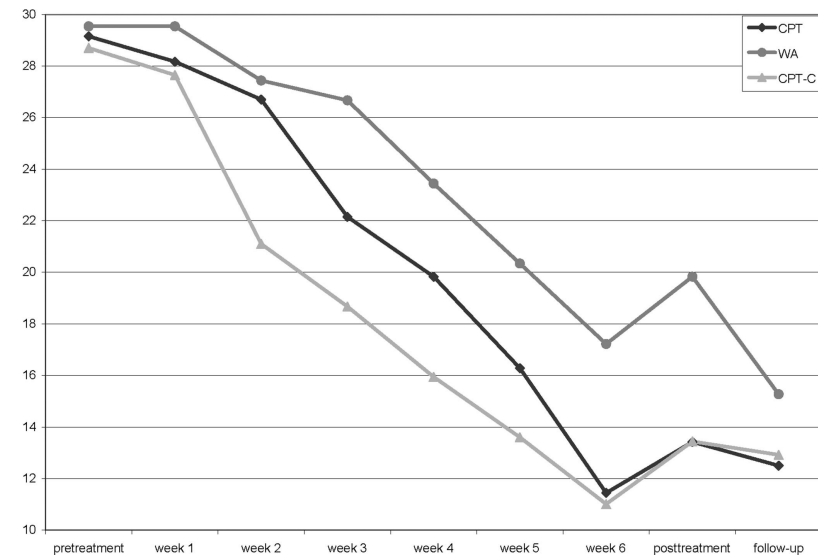
Specific Disorders

Well conducted meta-analyses

- Depression: behavioral therapy, cognitive therapy, interpersonal therapy, brief dynamic therapy, reminiscence therapy, self-control therapy, social problem solving therapy, process-experiential therapy, verbal therapies (intended to be therapeutic), dynamic therapies
- PTSD: Prolonged exposure, CBT, EMDR, hypnotherapy, psychodynamic, trauma desensitization, present-centered therapy, CBT without exposure
- Alcohol Use Disorders: CBT, MI, AA
- Children: CBT = non CBT, no differences
- In practice, Dynamic = Humanistic = CBT
 - Barkham, Stiles, and colleagues
 - CBT not practices as in RCTs
- EBT v. TAU: at most $d = .20$ (NNT = 9)

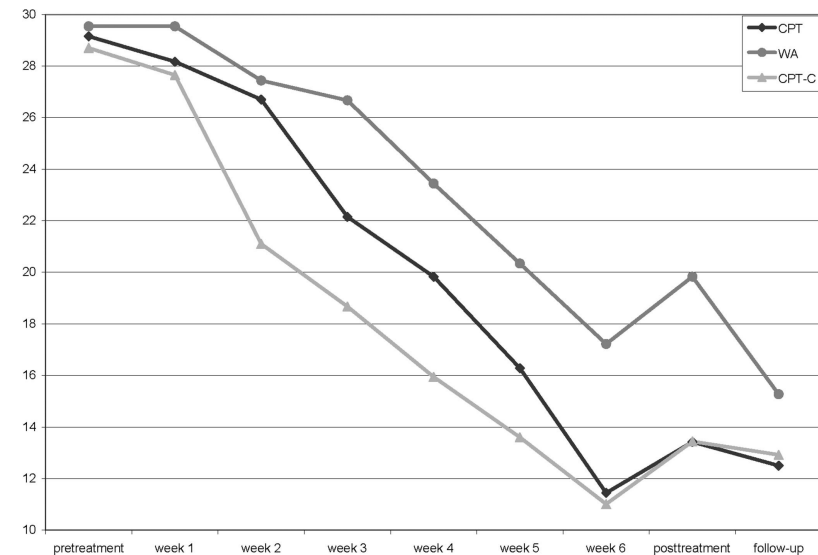
Evidence for Specific Ingredients-- Dismantling

- Jacobson et al. 1996
 - Dismantle CT for depression
 - Behav Activation = BA + Auto thoughts = CT
- Cognitive Processing Therapy for PTSD
 - CPT = CT + Written accounts



Evidence for Specific Ingredients-- Dismantling

- Jacobson et al. 1996
 - Dismantle CT for depression
 - Behav Activation = BA + Auto thoughts = CT
- Cognitive Processing Therapy for PTSD
 - CPT = CT + Written accounts
- Meta-analysis
 - Ahn & Wampold 2001





Exposure

- CBT (PE, In Vivo Exp, CR) v. Present Centered Tx for PTSD (McDonagh et al. 2008)
- Present Centered Therapy: **No Exposure** and **No Cognitive** components
- CBT, PCT > WLC
- Completers: no differences except for % meeting criteria at posttest
- ITT: No differences
- CBT had no effect on general well being
- Drop out: CBT = 41%; PCT = 9%



Therapists

- Question: What accounts for variability in outcomes?
- Do therapists vary in the outcomes achieved by their patients? (Above chance variation)
- Do some therapists consistently produce better outcomes than others, regardless of patient characteristics and treatment delivered?



Therapists

- Treatment of depression (CBT v. IPT)
 - 0% of variance due to type of treatment received
 - 8% of variance due to therapist
- Actual practice:
 - Type of treatment 0%
 - Diagnosis, degree, experience 0%
 - Medication 1%
 - Therapist 5%
 - Top $\frac{3}{4}$ v. entire population: $d = .75$
- Antidepressants: Imipramine v. Placebo
 - 3% due to treatment
 - 9% due to prescribing psychiatrist
 - Better psychiatrists had better outcomes with placebo than poorer psychiatrists administer antidepressant



Therapists make a difference

- Characteristics and Actions of Effective Therapists?
- Consult Buetler (*Handbook of Psychotherapy and Behavior Change*)
 - We don't know
 - And we don't care
- Alliance (Baldwin, Wampold, & Imel, 2007)
 - Therapist contribution is predictive of outcome
 - Therapists who form better alliances with patients generally have better outcomes
 - Accounts for all of the therapist variability in outcomes
 - Patient contribution not predictive
 - Alliance is not a result of outcome
- Statistically, ignoring therapist inflates treatment differences



Implications

- Quality improvement
- Increase benefits to patients at lowest cost
- Treatment v. therapist



Quality Improvement Scenario

VA Outpatient Clinic

- 20 Therapists
- Caseload = 600 patients
- 200 meet PTSD diagnosis
- Goal
 - Improve outcomes for PTSD patients
 - Cost effective



Scenario 1: Roll out evidence based treatment

- Workshop for therapists (2 day)
- Supervision for therapists by master therapist
- Collect evidence for adherence
- Costs:
 - Workshop: \$7000 (2 days)
 - Supervision, 1hr/wk, 15 wks, \$45,000
 - Adherence, \$5000



Scenario 1: Roll out evidence based treatment

- Cost = \$57,000
- Effect, $d = .2$, NNT = 9, 22 successes
- Marginal cost:
 - $\$57,000/22 = \$2591/\text{success}$
 - $\$7000/22 = \318 (Workshop ONLY)



Scenario 2: Measure outcomes and provide feedback

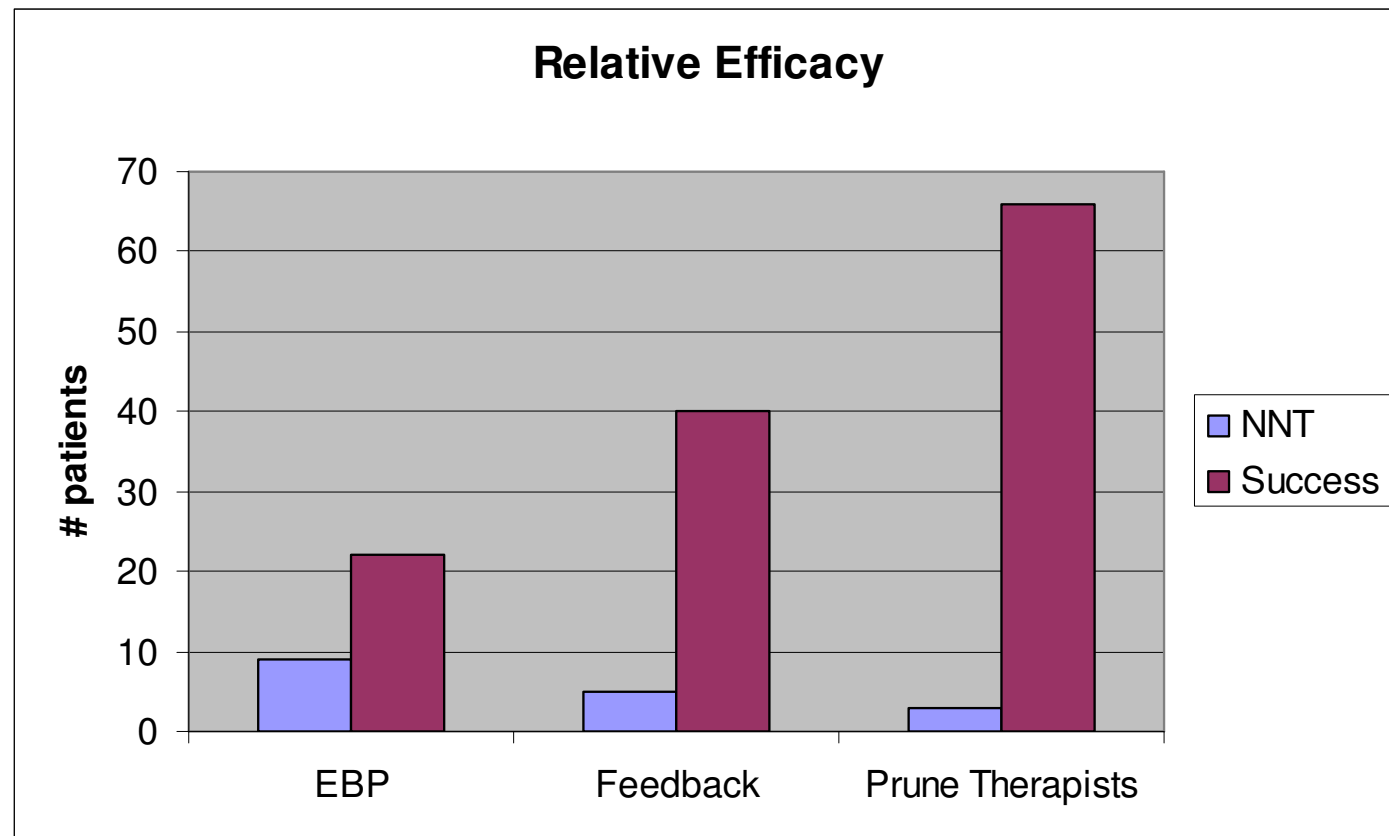
- Lambert's OQ Analyst
- Provide therapist feedback based on expected progress
- Cost: \$1/patient = \$200
- $d = .40$, $NNT = 5$, **40** successes
- Marginal cost:
 - $\$200/40 = \text{\$5/success}$



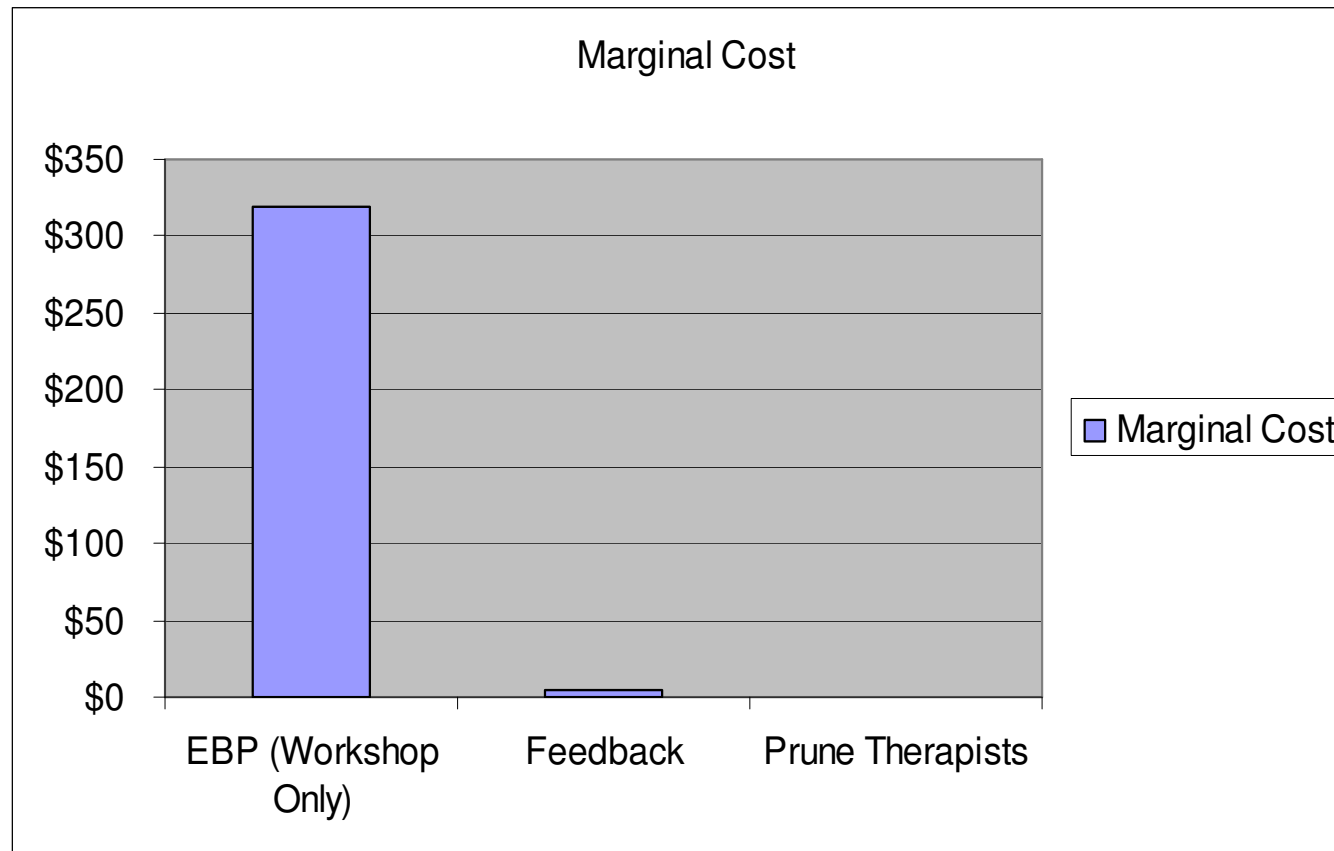
Scenario 3: Select therapists

- Hire based on therapist outcomes
- Use top $\frac{3}{4}$ v. entire population of therapists
- $d = .75$, $NNT = 3$, successes = 66
- Marginal Cost:
- $0\$/66 = \$0/\text{success}$

NNT and Additional Successes



Marginal Costs for an additional success





Conclusions

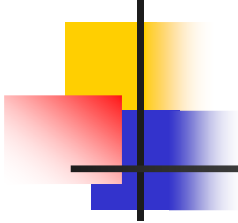
- Particular treatment **UNIMPORTANT**
- Focus on **THERAPIST**
 - Who conducts the therapy is critical
 - Feedback and pruning therapists is cost effective
 - Monitor outcomes in practice

CT v. RT for GAD, PD (w/o agor)

Meta-analysis (Siev & Chambless, 2007)

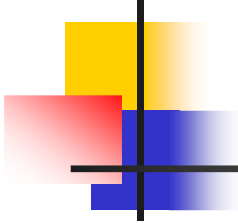
- GAD: CT = RT
- PD (note CT contains interoceptive exp):
 - Panic: CT > RT (k=5)
 - Fear of anxiety: CT > RT (k=4)
 - Panic cognitions: CT > RT (k=3)
 - Anxiety: CT = RT (k=5)
 - Depression: CT = RT (k=5)

Siev & Chambles...Panic (CT – RT)



Study	d
Arntz & van den Hout (1996)	.38
Barlow et al. (1989)	-.20
J. G. Beck et al. (1994)	.09
Clark et al. (1994)	1.02
Öst & Westling (1995)	.32
Weighted	.36 p < .05

Siev & Chambles...Panic (CT – RT)



Study	d
Arntz & van den Hout (1996)	.38
Barlow et al. (1989)	-.20
J. G. Beck et al. (1994)	.09
Clark et al. (1994)	1.02
Öst & Westling (1995)	.32
Weighted	.36 p < .05
Weighted (w/o Clark)	.16 ns



Siev & Chambles...Panic

- D. M. Clark, P. M. Salkovskis, A. Hackman et al.
 - CT developed by D.M.C. and P.M.S.
 - AR developed by Öst
 - Modified by changing rationale and timing of exposure
 - Therapists: P.M.S. and A.H.
 - Supervisor: D.M.C.
- Evidence for Specificity:
 - "The finding that CT and RT do not differ in the treatment of GAD, but do for PD, is evidence for the specificity of treatment to disorder, even for 2 treatments within a CBT class, and 2 disorders within an anxiety class."
- Two alternatives
 - Allegiance
 - Exemplary CBT
 - Therapist effects