Establishing evidence-based training in CBT: A review of current empirical findings and theoretical guidance

Freda McManus
Oxford Cognitive Therapy Centre
& Oxford University, Department of Psychiatry

Sarah G. Rakovshik
DPhil, Student
Oxford University, Department of Psychiatry

Agenda

- Background
  - Supply, demand & the distribution bottleneck
  - Premises
- $64,000,000 question
- Review
- Interpretation & issues arising
- Recommendations for future research

Background: Supply, demand & the distribution bottleneck

- Historically bottleneck = funding for service provision / training
- Accumulation of evidence for talking therapies (NICE; Layard, 2006)
  - Increased funding for provision & training
- Timely to review what can be gleaned from existing literature

Background: Rationale for increased provision

- Increasing training based on 2 premises
  1. Increased training ⇒ increased competence
  2. Increased competence ⇒ improved outcomes
- Some evidence for both of these assumptions
  - not as unequivocal as we would like

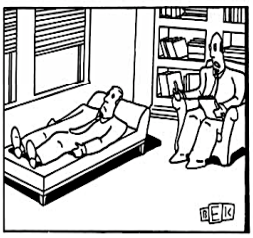
Background : Transferability of CBT

Effectiveness of established CBT protocols not guaranteed when taken out of the research environment

- Some studies show clear transferability
  - e.g., see Hunsley & Lee, 2007; Stewart & Chambless, 2009
- Some show significant improvement but smaller effect size
  - e.g., Grey et al., 2008; Lincoln et al., 2003
- Others show no benefit of CBT
  - e.g., Davidson et al., 2004; King et al., 2002; Tyrer et al., 1988

Background: Supply, demand & the distribution bottleneck

- Therapist competence suggested as significant factor in differences in outcome RCP vs RCT
  - Some differences not related to therapist factors e.g., severity
- Relationship between therapist competence and outcome reported in multiple clinical settings
  - e.g., Davidson et al., 2004; Kingdon et al.,1996; Shaw et al., 1999; Trepka et al., 2004
- Thus to optimise patient care, need well trained therapists



"Woulda, coulda, shoulda. Next!"

Dissemination of CBT: $64,000,000 question

Same query relevant for matching patients & treatment approaches …

Schacht (1984):

"What training, *by whom*, is most effective with which student, who is acquiring the specific knowledge or competency, under which set of circumstances, and *at what cost?*"

What is 'competence'?

- Therapists' self reported increases in knowledge? Skills? Confidence?
  - Unreliable …
- Written assessment?
  - Often not related to observable change in clinical skills
- **Assessor ratings in role-plays or sessions**
  - **Ratings on CTS / CTS-R**
- **Patient outcomes**

"*the ability to appropriately apply CBT interventions that reflect the contemporaneous evidence base for the treatment of that patient's presenting problem*"

In CBT training..
What works for whom, when and to what extent?

1. What we can learn from the existing literature about whether, how and under what circumstances CBT training enhances therapists' competence?
2. Which areas are priorities for research into CBT training and dissemination?
   - What info do we need to be collecting so we can better answer the above question next time round?

In CBT training..
What works for whom, when and to what extent?

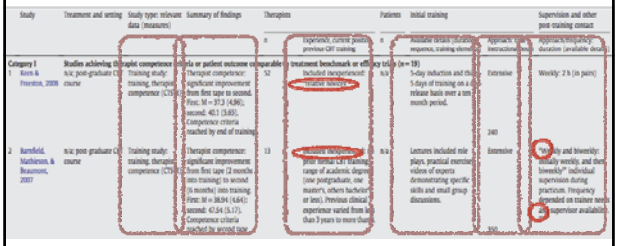
- Articles relevant to the relationship between CBT training & outcome of either:
  - Increased therapist competence (assessor measures) *or* improved patient outcome
  - Individual CBT in adult outpatients

Search strategy and parameters: May (2009)

- Combinations of keywords
  - Databases (PsychInfo, Scopus, PsycNET, Medline, PubMed & Web of Science)
  - Ancestry & author & "related articles" tool

Findings

- 41 studies reporting on 35 clinical trials
  - Only 7 designed to investigate training effects …



Additional information was obtained through personal communication with study authors

Categorisation

3 categories according to therapist or patient outcome

Category I: (n = 19)

Achieved therapist competence criteria / patient outcome comparable to benchmark or efficacy trials

Category II: (n=13)

Demonstrated significant positive impact on therapist competence / patient outcome, but *either* did not reach the patient outcome benchmark, or used therapies or outcome measures that were trial specific so could not be compared with benchmark

Category III: (n = 5)

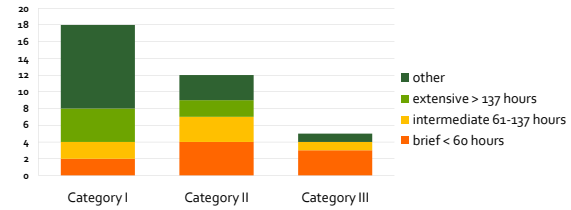
Did not show significant effects for therapist competence or patient outcome as compared either to the pre-intervention baseline, treatment as usual (TAU), or a control group

Paradigms of interpretation

- Dosage
- Active training elements
- Models of learning

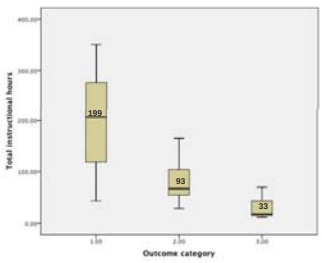
Dosage

Rank ordered according to total duration of instruction



- *N* = 19 studies: available information & study design
- 75%+ included 'inexperienced': 100% of Category III studies
- Can get good results with brief training (esp. with experienced therapists or training limited skills or filtering out after close supervision), but can't get bad results with extensive…

Dosage



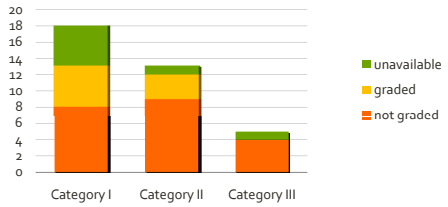
Boxplot of median, range & interquartile range for relevant studies in outcome categories I, II and III

- Overlap between categories in range, but median decreases with degree of positive outcome
- Extensive training (variably) ➡ competence

Dosage

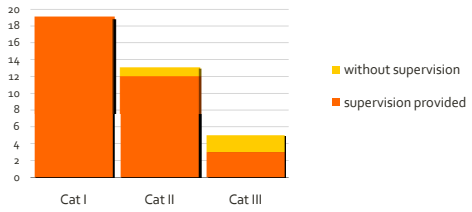
- Relationship between 'dose' and outcome in training
- But 'extensive' >137 hours (mean = 200 hours) is expensive …
  - Little idea about 'active components'
  - Or whether everyone needs that much
- Graded training

Graded training



- 'Graded training' may be effective in training inexperienced or varied therapists
- More economical alternative (uses training resources responsively)

Active components



- Theoretical instruction: all but one (Cat III)
  - Workshop or reading
- Experiential and interactive learning
  - supervision or 'adherence monitoring / practice cases'

Models of learning

- Order and timing: If the order of instructional modalities is salient, then sequence in training might be as important as dosage?
  - Need a particular order? Sequence? Or timing?
  - 'Blended learning' – combining modalities (Cucciare et al., 2008)
  - Breaks to consolidate (Chu, 2008)
  - Scaffolding - prolonged supervision for the consolidation of competence(Vygotsky, 1978)
- Adult learning theory: The constructs of spacing, sequence and scaffolding consistent with Lewin (1946) – Kolb (1984) model of experiential learning
  - Theoretical model of knowledge acquisition, application and generalization
  - Concrete experience – Reflective observation – Abstract conceptualisation – Active experimentation

Issues arising & recommendations for future research

- Study design
- Micro versus macro
- Measurement validity
- Developing evidence-based training

Study design

- Majority of info re: training obtained 'incidentally'
  - Only 7 / 35 were training studies
- Post-hoc analyses of effectiveness trials can yield valuable information for understanding the differential effectiveness of dissemination studies
  - BUT analysis was not part of the original study design, so conclusions can only be tenuous
- Also dangers of comparing across trials …

Study design

EFFICACY RESEARCH		TRAINING RESEARCH
random allocation to treatment condition	→	random allocation to training condition
no-treatment control conditions	→	no-training control conditions
pre-treatment baseline assess'ts	→	Pre-training baseline assess'ts
blind assessment of outcome	→	blind assessment of competence
patient & assessor measures	→	trainee & assessor measures
inter- rater reliability of assessors	→	inter- rater reliability of assessors
Manual & adherence monitoring	→	Manual & adherence monitoring

Micro versus Macro

- More detailed description of training and supervision even in reports of effectiveness trials
  - Lack of agreement & specificity in training terminology renders comparison of training methods imprecise and approximate
    - 'training' & 'supervision' broad temporal descriptions
    - e.g., 'skill-focused' - lack of clarity re: specific interaction
      - Were skills demonstrated or practiced? Role-plays? Feedback?
    - Amount and order – weekly? Length? Ratio?
    - What was actually done? Could I repeat it? Training manual?
    - Content of the interaction for quantitative or qualitative analyses
- Detail about both trainers & trainees
  - Supervisors' & supervisees' levels of experience may impact
  - Importance of expert supervision during consolidation of therapists' skills?
  - Interactions between amount / type of training & trainees' skill / experience?

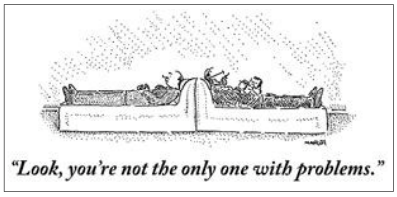
Measurement Validity

- Standardized measures of competence
  - Allow comparisons across studies
- Further validation of existing measures of CBT competence
  - empirically devised 'cut-offs'
  - additional refinement to keep pace with developments in CBT e.g., disorder or protocol specific
- State v. trait
  - Larger sample needed – at least 19? (Keen & Freeston, 2008)
- Existing measures don't take account of patient factors

Using what we know: teaching new beliefs & strategies

- In training clinical skills, we are asking familiar questions:
  - How can we best teach this person to use CBT skills?
    - And to teach others to use them …
  - How does learning occurs? What impedes it?
  - How can we help the person to sustain behavioral change?

Similarities between patients & therapists?



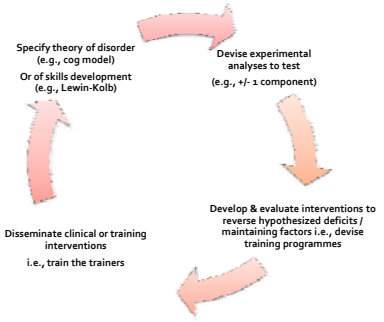
"Look, you're not the only one with problems."

… both are learning to use CBT techniques …

Using what we know: Developing evidence-based training

- Decades of developing evidence-based treatments
  - Theory – experiments – intervention - dissemination
  - Can we use this to inform the dissemination of those treatments?

Models for developing empirically supported treatments (Clark, 2004; Salkovskis, 2002)



28

Conclusions

- Increased training practical solution to bottleneck
- Know a little about how to provide this
  - Extensive – graded
  - With supervision – feedback
  - ?modality / sequence / timing
- Risks to integrity of intervention & to patient care when policy runs ahead of science
  - Sub-optimal treatment
  - Compromised validity of treatments

Conclusions

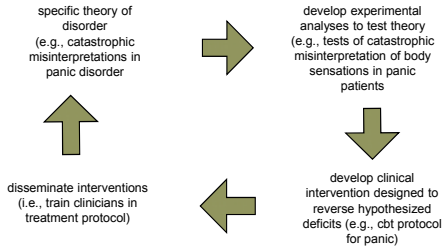
- Need to know more about
  - Active components of interventions
  - How to conceptualise, define & reliably measure 'competence'
  - How to train people to do them / get there …
- Need well designed carefully controlled training studies to evaluate training efficacy & effectiveness
  - Comparisons of training approaches or active ingredients
    - Specification of methods; Qualitative & quantitative assessment
- **What provides greatest skills acquisition for therapists of varying backgrounds?**
- Utilise what we know from doing & developing CBT interventions

Questions?

Rakovshik, S. G., & McManus, F., (2010) Establishing evidence-based training in cognitive behavioral therapy: A review of current empirical findings and theoretical guidance. *Clinical Psychology Review, 30,* 496-516.

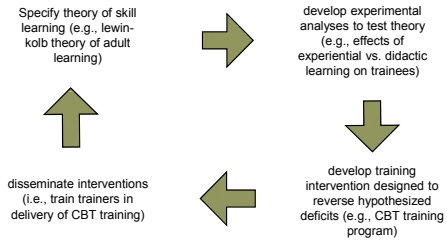
freda.mcmanus@psych.ox.ac.uk

Using what we know: developing evidence-based training



Clark's (2004) model for developing empirically-supported therapies

Using what we know: developing evidence-based training



Clark's (2004) model as applied to the development of efficacious training practices