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Towards a science of competency

Dr. David Gillanders

University of Edinburgh

Association for Contextual Behavioural Science World Conference

Buenos Aires, Argentina, July 2024

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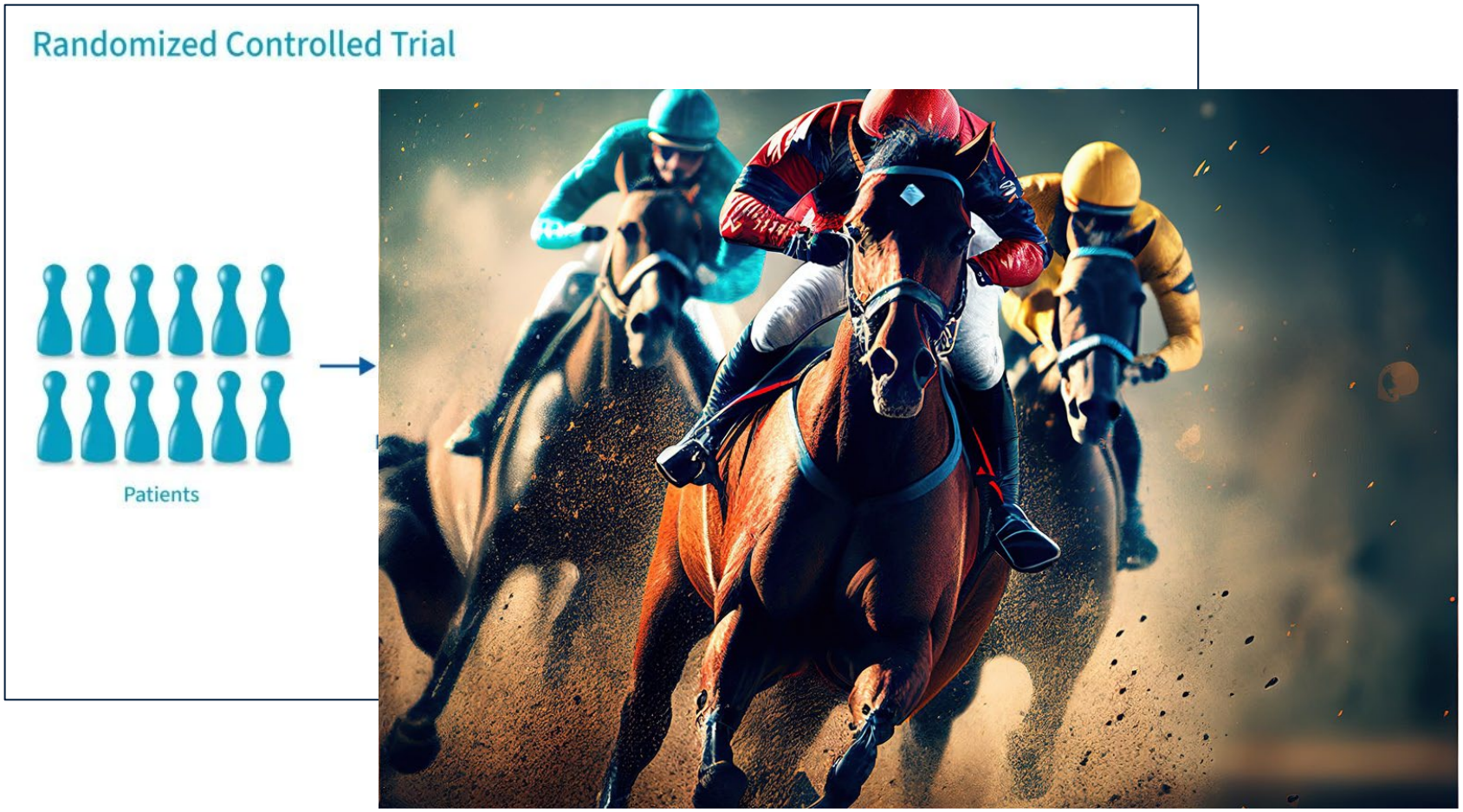
Disclosure Statement

- I am employed full time by the University of Edinburgh
- I have received grant funding from the UK Charities: Marie Curie and from the UK National Institute for Health Research
- As a Peer Reviewed Trainer, I receive free books from New Harbinger
- I have a small independent business providing training and supervision services

The tradition of psychotherapy research



Polarisation

C ific
H

A false dichotomy

- Therapy as a unique context
- Unconventional
- By using technique skillfully alliance is strengthened

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Non specific versus non specified

- Critique of the specific versus non specific factors debate

- Could more concrete operationalization of core therapeutic behaviors (competencies) build a bridge between these positions?

Weinberger, 2014, *Psychotherapy,* 51, (4), 514-518

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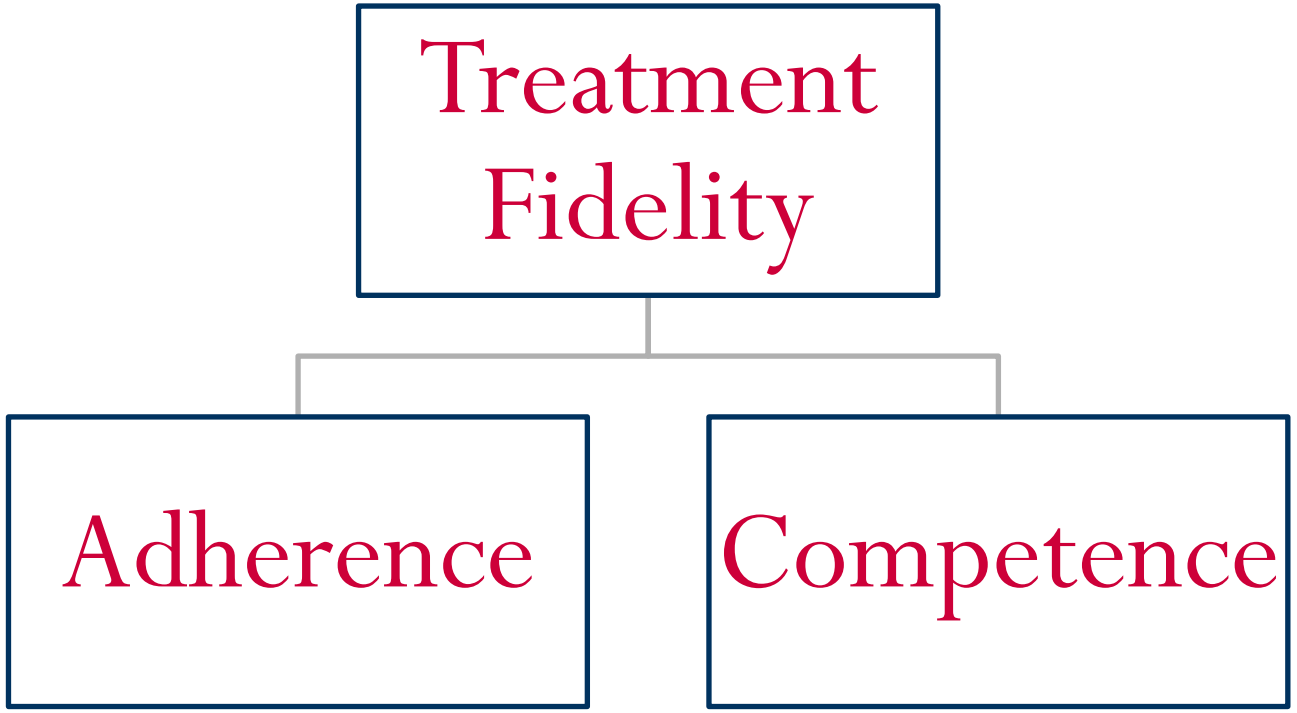
Closely related but distinct concepts



Competency Focused Training

Competency:

"the extent to which a therapist has the knowledge and skill required to deliver a treatment to the standard needed for it to achieve its expected effects."

(Fairburn & Cooper, 2011)

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Do you remember your first ACT workshop?

Then now what?!

"OK, I had a great ACT workshop, but I'm not sure how to use it: Effective ACT Skills Building"

Martin Brock
(Workshop 129)

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Does training lead to good practice?

Training Therapists in Evidence-Based Practice: A Critical Review of Studies From a Systems-Contextual Perspective

Rinad S. Beidas and Philip C. Kendall
Department of Psychology, Temple University

Abstract

Evidence-based practice (EBP), a preferred psychological treatment approach, requires training of community providers. The systems-contextual (SC) perspective, a model for dissemination and implementation efforts, underscores the importance of the therapist, client, and organizational variables that influence training and consequent therapist uptake and adoption of EBP. This review critiques the extant research on training

Keywords

dissemination and implementation; evi
therapist training;

Direct

Clinical Psychology Review

The role of therapist training in the imp
A review and critique with recommenda

Amy D. Herschell [a,*], David J. Kolko [a], Barbara L. Ba

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ARTICLE INFO

Article history:
Received 22 May 2009
Received in revised form 18 February 2010
Accepted 23 February 2010

Keywords:
Therapist training
Implementation
Dissemination
Psychosocial treatments

ABSTRACT

Evidence-based treatmen
for treatment. Underutili
training strategies. The go
in psychotherapy skills an
of 55 studies evaluating
most often and have mos
methods. Studies evaluati
these methods do not rou
Little is known about the
influence training outcom

ailable at ScienceDirect

Clinical Psychology Review

ELSEVIER

Establishing evidence-based training in cognitive behavioral ther
current empirical findings and theoretical guidance

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ARTICLE INFO

Article history:
Received 1 September 2009
Accepted 18 March 2010

Keywords:
Cognitive behavioral therapy
Competence
Training
Dissemination
Effectiveness

ABSTRACT

Cognitive behavior therapy's (CBT) demonstrated efficacy has prompted
to routine clinical practice settings. For the widespread dissemination o
effects similar to the original efficacy trials, there must also be effec
practices. However, as yet, CBT training is not evidence-based. This rev
from existing research into the efficacy and effectiveness of CBT traini
specifically investigating CBT training, CBT effectiveness and dissemina
glean information about potentially effective training practices. In order
training practices, comparisons are drawn between studies according
achieved. Training approaches are compared according to dose and activ
models of learning are applied to interpret the findings. The limitat
discussed, as well as recommendations for improving training research
treatment trials (e.g., random allocation, control conditions, self-report a
monitoring). Finally, the process of developing efficacious CBT treatmen
for developing evidence-based CBT training protocols.

© 20

Therapist training in evidence-based interventions for mental health: A systematic review of training approaches and outcomes

Hannah E. Frank[1], **Emily M. Becker-Haimes**[2,3], **Philip C. Kendall**[1]
[1]Psychology Department, Temple University, Philadelphia, Pennsylvania
[2]Department of Psychiatry, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA
[3]Hall Mercer Community Mental Health, Philadelphia, Pennsylvania

Abstract

A lack of effective therapist training is a major barrier to evidence-based intervention (EBI) delivery in the community. Systematic reviews published nearly a decade ago suggested that traditional EBI training leads to higher knowledge but not more EBI use, indicating that more work is needed to optimize EBI training and implementation. This systematic review synthesizes the training literature published since 2010 to evaluate how different training models (workshop, workshop with consultation, online training, train-the-trainer, and intensive training) affect therapists' knowledge, beliefs, and behaviors. Results and limitations for each approach are discussed. Findings show that training has advanced beyond provision of manuals and brief workshops; more intensive training models show promise for changing therapist behavior. However, methodological issues persist, limiting conclusions and pointing to important areas for future research.

Keywords

dissemination; evidence-based practice; implementation; mental health; training

Beidas RS, & Kendall PC (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice*, 17(1), 1– 30.
Herschell AD, Kolko DJ, Baumann BL, & Davis AC (2010). The role of therapist training in the implementation of psychosocial treatments: A review and critique with recommendations. *Clinical Psychology Review*, 30(4), 448–466.
Rakovshik SG, & McManus F (2010). Establishing evidence-based training in cognitive behavioral therapy: A review of current empirical findings and theoretical guidance. *Clinical Psychology Review*, 30(5), 496–516.
Frank, H. E., Becker-Haimes, E. M., & Kendall, P. C. (2020). Therapist training in evidence-based interventions for mental health: A systematic review of training approaches and outcomes. *Clinical Psychology: Science and Practice,* 27, (3), 1–42).

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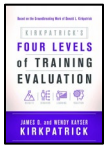
The Kirkpatrick Model

Understanding Principles of Training

Improvements in Training

Reaction → Learning → Behaviour → Results



My own curiosity…

- What happens when we train in ACT?
- What empirical data do we have?
- What would ACT training research look like?

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ACT Training as a Research Study

Independent variable:

[in-di-pen-duhnt vair-ee-uh-buhl] *noun*

An independent variable is the variable you manipulate or vary in an experimental study to explore its effects

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The independent variable of ACT Training

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ACT Training as a Research Study

Dependent variable:

[dee-pen-duhnt vair-ee-uh-buhl] *noun*

A dependent variable is the variable you measure in an experimental study to determine the effect of manipulating the independent variable

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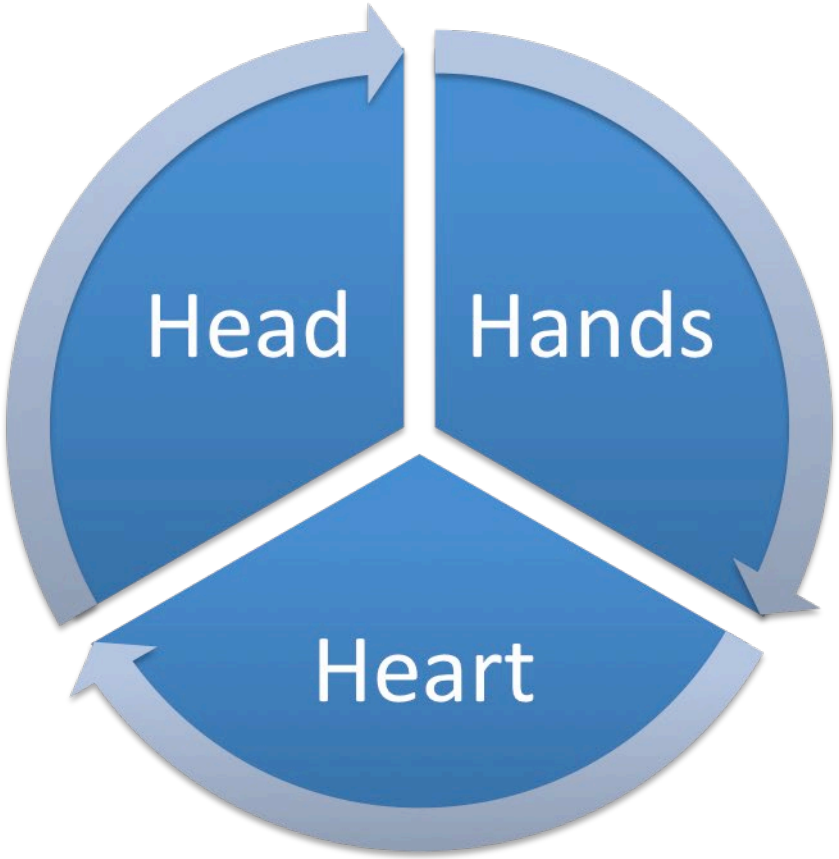
ACT Training as a Research Study

Knowledge & Concepts



Skills & Techniques

Personal Qualities

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ACT Training as a Research Study

- What measures do we already have?

- What data do we already have about the science of ACT training and the development of competency?

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What do we know?

- Gill Kidney https://era.ed.ac.uk/handle/1842/33107

Method

- Pre registered systematic review
- Medline, EMBASE, AMED, PsychINFO
- Manual search of RCT's and ACBS website
- Request on list serve and trainers list for unpublished
- Inclusion: training professionals to deliver ACT
  including a quantitative measure
- Exclusion: qualitative
  ACT as stress management

Findings

- 12 studies
- Three controlled trials with random allocation
- One controlled pre – post study
- Eight uncontrolled pre-post studies
- Diversity of training formats, professionals, amount of training, and training outcome measures

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Findings

- Measures of Knowledge, Therapist flexibility and Skills / competence

- Quality of the studies vary

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So what happens when we train in ACT?

- Improvements in:

  Knowledge

  Self efficacy

  More adaptive beliefs about clients

  Psychological flexibility

  Self reported skills

  Three studies show objective competence measures improved

So what happens when we train in ACT?

- Client outcomes – Five studies

- Significant improvements on client symptoms and functioning

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Update since 2017 (June 2024)

- A further 9 peer reviewed articles and 2 dissertations found
- No contradictory findings
- Replicated findings of increased knowledge, competence and flexibility
- Additional changes from ACT training observed in self care, implementation of behavioural programmes, quality of client interaction, work performance, therapeutic presence, enhanced supervisory relationship
- New measures available of competence, assessment skill, psychological flexibility specific to healthcare professions

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So what do we know?

- ACT training does lead to improvements in:
- Flexibility
- Knowledge
- Skills

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What are the gaps?

- The evidence is of modest quality
- Around three or four studies are high quality
- Measurement in this area is not well developed
- The science can be improved
- Implementation gap?

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The Strategic Pillar on Competency and Dissemination

- Robyn D. Walser (Lead)
- Nanni Presti
- David Gillanders
- Jim Lucas
- Raul Vaz Manzione
- Amy Naugle
- Rachel Skews
- Sean Wright
- Alycia Barlow
- Shinji Tani

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The Strategic Pillar on Competency and Dissemination

- "We envision a scientific community in which members of ACBS could find evidence informed guidelines on how to learn, how to apply, and how to measure their skill development over time".
- Establish a task force that focuses on competency measurement
- Identify where we have limitations in competency measurement
- Consider international issues that surround matters of training and implementation
- Create best practice guidelines on teaching and using CBS
- Recommend continuing education frameworks for competent practice and training

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The Strategic Pillar on Competency and Dissemination

- Reviewed literature for competency measures and data in
  - Acceptance & Commitment Therapy ☑
  - Behaviour Analysis ☑
  - Relational Frame Theory ☒
  - Functional Analytic Psychotherapy ☑
  - Compassion Focused Therapy ☑
  - Mindfulness ☑
  - ACT Supervision and Training ☑

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The Strategic Pillar on Competency and Dissemination

- Next steps:
  - Make the measures more available CLICK HERE
  - Disseminate these ideas
  - Encourage uptake
  - Encourage Competency Focus in Training
  - Develop standards for training and supervision in CBS therapies

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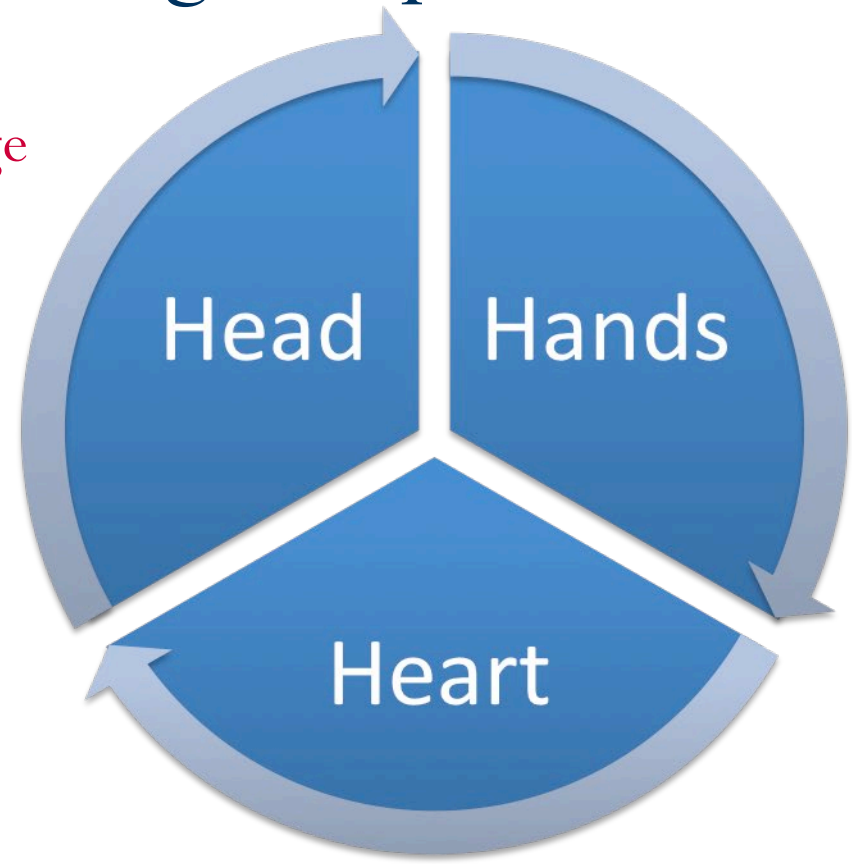
What are the most well developed measures for assessing competencies in ACT?

ACT Knowledge Questionnaire

ACT TASC



ACT Core Competency Rating Form

ACT Therapist Tape Rating Scale

ACT Fidelity Measure

Mindful Healthcare Scale

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What are the most well developed measures for assessing **competencies** in ACT?

ACT Core Competency Rating Form

Hayes, & Strosahl, (2004). *A Practical Guide to Acceptance and Commitment Therapy*. Springer Verlag.

Luoma, Hayes, & Walser, (2017). *Learning ACT* (2nd Ed.), New Harbinger

Walser, Karlin, Trockel, Mazina& Barr Taylor, (2013). Training in and implementation of Acceptance and Commitment Therapy for depression in the Veterans Health Administration: therapist and patient outcomes. *Behaviour Research and Therapy,* 51(9), 555–563.

Trompetter, Schreurs, Heuts, & Vollenbroek-Hutten, (2014). The systematic implementation of Acceptance & Commitment Therapy (ACT) in Dutch multidisciplinary chronic pain rehabilitation. *Patient Education and Counseling*, 96(2), 249–255.

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ACT Core Competency Rating Form

- 30 items developed by expert consensus
- 7 domains:
  1. Therapeutic stance
  2. Developing acceptance / undermining control
  3. Undermining cognitive fusion
  4. Contacting the present moment
  5. Distinguishing the conceptualized self from self as context
  6. Defining valued directions
  7. Building patterns of committed action

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ACT Core Competency Rating Form

1. **no competence**: poor competence; low or never explicitly occurs, no expertise
2. **low competence**: little competence; occurs on occasion but not addressed in an in-depth manner; little expertise.
3. **average competence**: average competence; occurs routinely and in a moderately in-depth manner; average expertise
4. **highly competent**: good competence; occurs with relatively high frequency and in a moderately in-depth manner; high competence
5. **expert:** excellent competence; occurs with great frequency and in a very in-depth manner, expert

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ACT Core Competency Rating Form: Example items

Therapeutic stance

"The therapist is willing to self disclose about personal issues when it serves the interests of the client"

Developing acceptance / undermining control

"The therapist helps the client make direct contact with emotional control strategies and their paradoxical effect"

Undermining cognitive fusion

"The therapist uses various exercises, metaphors and behavioral tasks to undermine the effect of language (e.g., lemon and numbers exercise)"

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ACT Core Competency Rating Form: Example items

Contacting the present moment

"The therapist tracks the function of content at multiple levels and emphasizes the present moment when it is useful"

Distinguishing the conceptualized self from self as context

"The therapist helps the client differentiate self-evaluations from the self that evaluates (e.g., calling a thought as it is, naming the event)."

Defining valued directions

"Therapist helps client clarify valued life directions"

Building patterns of action

Therapist keeps the client focused on larger and larger patterns of action to help the client act on goals with consistency over time."

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ACT Core Competency Rating Form: Findings

- ACT-CCRF was rated by expert consultants using audio recordings of actual sessions (391 therapists and 745 patients)
- Significant improvements over six months with training and supervision, clinicians sense of efficacy and confidence also improved
- Patients improved too, but link between competency improvement and patient improvement not reported
- No investigation of the ACT-CCRF psychometric properties, factor structure, reliability, validity.

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Trompetter et al., 2014

- 94 interdisciplinary health professionals in pain rehabilitation
- Self report adapted Dutch version
- Cronbach's alpha of .92
- Improvements over time across all domains with training and supervision

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Issues to address

- Quite long
- Could use factor analytic methods to reduce items
- Could provide data about the scale's validity and reliability (inter rater, temporal)
- Is increased competency associated with client improvement?

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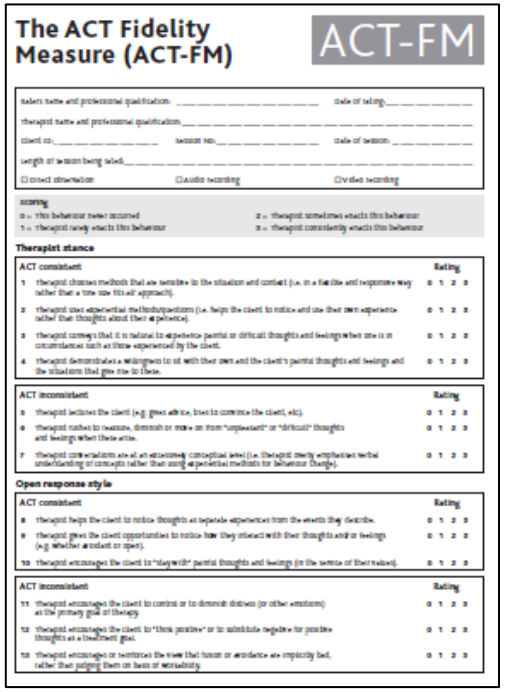
ACT Fidelity Measure (ACT-FM)

- Initial Delphi study (13 experts), 3 iterative rounds
- 24 items structured around a TriFlex structure plus a therapist stance domain
- Consistent and inconsistent items
- Focus on observed behaviour e.g.:
  - 0 = This behaviour never occurred
  - 1 = Therapist rarely enacts this behaviour
  - 2 = Therapist sometimes enacts this behaviour
  - 3 = Therapist consistently enacts this behaviour


The ACT Fidelity Measure (ACT-FM)

ACT-FM

Therapist stance

ACT consistent

Rating

ACT inconsistent

Rating

Open response style

ACT consistent

Rating

ACT inconsistent

Rating

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- Field study : 9 therapists used the ACT-FM to rate a video of a simulated therapy session
- Good to excellent inter-rater reliability: ICC = 0.73, (95% CI, 0.60–0.93)
- High usability / understandability ratings

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- **Therapist Stance:**

Consistent – "Therapist uses experiential methods/questions (i.e. helps the client to notice and use their own experience rather than thoughts about their experience)."

Inconsistent – "Therapist conversations are at an excessively conceptual level (i.e. therapist overly emphasises verbal understanding of concepts rather than using experiential methods for behaviour change)."

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- **Open Response Style**

Consistent – "Therapist gives the client opportunities to notice how they interact with their thoughts and/or feelings(e.g. whether avoidant or open)."

Inconsistent – "Therapist encourages the client to control or to diminish distress (or other emotions) as the primary goal of therapy."

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- **Aware Response Style**

Consistent – "Therapist helps the client to notice the stimuli (thoughts, feelings, situations, etc) that hook them away from the present moment."

Inconsistent - "Therapist introduces or uses mindfulness and/or self-as-context methods as means to control or diminish or distract from unwanted thoughts, emotions and bodily sensations"

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- **Engaged Response Style**

Consistent – "Therapist gives the client opportunities to notice workable and unworkable responses (e.g. whether their actions move them towards or away from their values)."

Inconsistent – "Therapist imposes their own, other's or society's values upon the client (i.e. suggests what the client should or should not value or what valuing something should look like)."

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT Fidelity Measure (ACT-FM)

- Since publication:
  - Other groups have used it in studies to show treatment fidelity in trials
  - Purely descriptive analyses rather than linking competence to outcome

O'Neill, L., Latchford, G., McCracken, L. M., & Graham, C. D. (2019). The development of the Acceptance and Commitment Therapy Fidelity Measure (ACT-FM): A delphi study and field test. Journal of Contextual Behavioral Science, 14, 111–118.

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ACT-FM - Review

Strengths

Short

Understandable

Behavioural

Clear development

Limitations

Fidelity / Competence?

Sensitivity to training?

Limited psychometric analysis

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What are the most well developed measures for assessing **knowledge** in ACT?

- ACT Knowledge Questionnaire
- 16 items, multiple choice
- Low alpha: (.54)
- Improved with training and consultation

Luoma, J. B., & Plumb Vilardaga, J. (2013). *Improving Therapist Psychological Flexibility While Training Acceptance and Commitment Therapy: A Pilot Study*. https://doi.org/10.1080/16506073.2012.701662

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What are the most well developed measures for assessing **knowledge** in ACT?

- Example item:

"A client tells a story about her life that includes drinking alcohol every day, three failed marriages, moving every 12 months, overeating, and repetitious self-injury. What process is most likely to functionally connect these issues?"

a) escape maintained behaviour
b) experiential avoidance
c) relational frames of comparison and time
d) excessive cognitive fusion

Luoma, J. B., & Plumb Vilardaga, J. (2013). *Improving Therapist Psychological Flexibility While Training Acceptance and Commitment Therapy: A Pilot Study*. https://doi.org/10.1080/16506073.2012.701662

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AKQ - Review

Strengths

Short

Sensitive to training

Limitations

Low alpha

Relatively specific to the 1999 book

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What are the most well developed measures for assessing **knowledge** in ACT?

- ACT Therapist Agreement with Sensitivity to Context (ACTTASC)
- 31 video segments from 'Learning ACT'
- Respondent identifies – if clip is ACT consistent or Inconsistent and defines which process is primarily being targeted
- Administered to 107 workshop attendees

Long & Hayes (2018).

ACT Therapist Agreement with Sensitivity to Context (ACTTASC)

- Correlates with:

ACT Knowledge Questionnaire ($r = .48$, $p<.01$)

Number of books read ($r = .26$, $p<.01$)

Number of workshops ($r = .23$, $p<.05$)

Being a member of ACBS ($r = .24$, $p<.05$)

Long & Hayes, 2018

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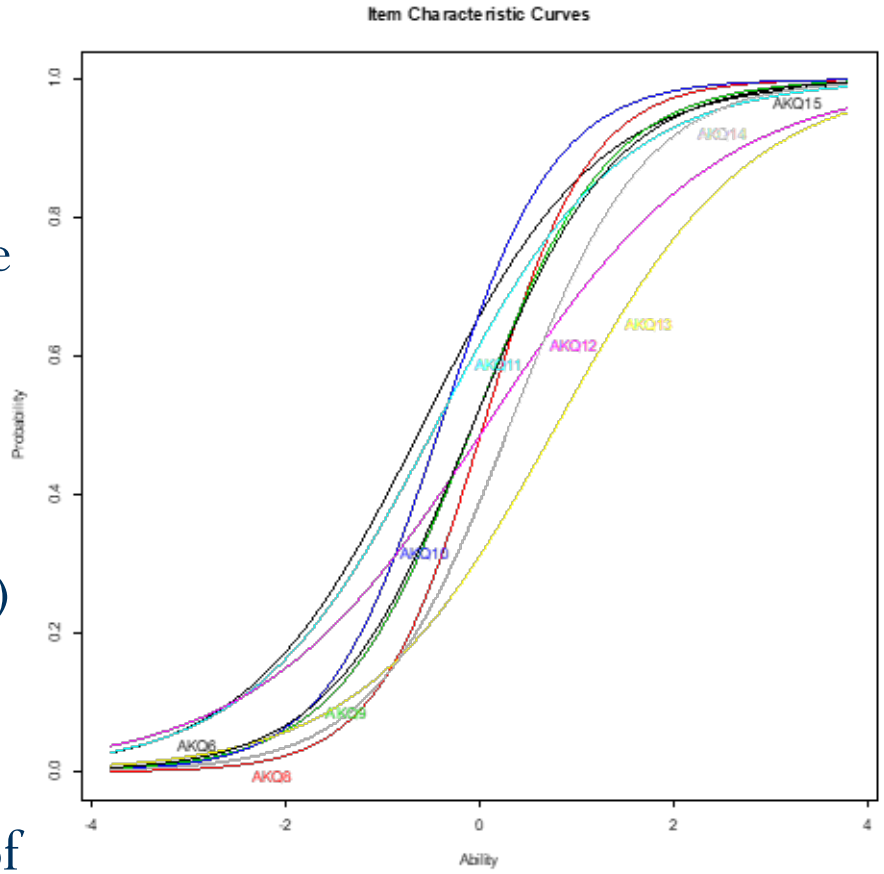
My own contributions

- ACT Knowledge Questionnaire – Revised
- Unpublished
- Combined training data from

  Luoma and Vilardaga 2013, Richards, 2011 and routine course evaluations from Mindfulness Ltd, 2009 - 2011

ACT Knowledge Questionnaire – Revised

- N = 211
- Used both Item Response Theory and Classical Test Theory to improve the scale
- Removed 7 items (chance responding, or too hard or too easy) = 9 item scale
- Operates best in the middle range of ACT knowledge



ACT Knowledge Questionnaire – Revised

- Alpha improved = .73
- Sensitivity to training good (d = .69, p<.001)
- Corelated well with self rated knowledge and estimate of number of ACT books read (r = .3 to .5, p<.001)
- Scores are higher for people who are in contact with other ACT practitioners and for people who follow the list serve compared to people who don't.

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What are the most well developed measures for assessing therapist qualities in ACT?

- General Psychological Flexibility:

CompACT
Multidimensional Psychological Flexibility Index
PsyFlex
Work Acceptance and Action Questionnaire

- Therapist Specific Psychological Flexibility

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My own contributions

- Mindful Healthcare Scale – initially 154 items
- Review by PRT Community – highest ranked 48
- 3 samples of health and social care professionals = 480, 196, 162.
- Classical test theory approach

Gillanders, Fisher, Kidney, Ferreira, Morris, Harkjaer-Thorgrimsen. (under review). The Mindful Healthcare Scale (MHS): Development and Initial Validation. *Journal of Contextual Behavioral Science*

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Mindful Healthcare Scale - examples

- **Fusion:**

  "Its harmful to have negative thoughts about a client"

- **Present:**

  "I pay close attention to what my client is saying and doing"

- **Willingness:**

  "I do the things that need to be done to help my clients, even if it is difficult for me."

- **Values:**

  "Its important for me to try and make a difference for my clients"

Gillanders, Fisher, Kidney, Ferreira, Morris, Harkjaer-Thorgrimsen. (under review). The Mindful Healthcare Scale (MHS): Development and Initial Validation. *Journal of Contextual Behavioral Science*

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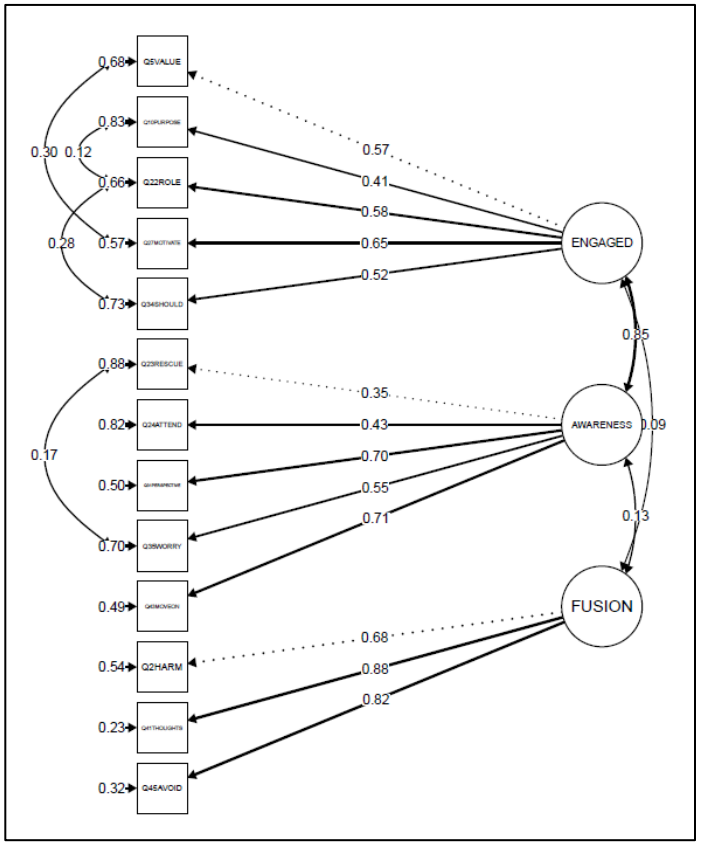
Mindful Healthcare Scale

- 3 Factors:

  Aware, Engaged, Fusion

- 13 strongest items

- EFA then CFA



Gillanders, Fisher, Kidney, Ferreira, Morris, Harkjaer-Thorgrimsen. (under review). The Mindful Healthcare Scale (MHS): Development and Initial Validation. *Journal of Contextual Behavioral Science*

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Mindful Healthcare Scale

- Model fit excellent

- Correlates well with
  - General flexibility ($r = .69$, $p<.01$)
  - Self as context ($r = .42$, $p<.01$)
  - Self compassion ($r = .53$, $p<.01$)
  - Reduced burnout ($r = -.62$, $p<.01$)
  - Wellbeing ($r = .48$, $p<.01$)

Gillanders, Fisher, Kidney, Ferreira, Morris, Harkjaer-Thorgrimsen. (under review). The Mindful Healthcare Scale (MHS): Development and Initial Validation. *Journal of Contextual Behavioral Science*

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Mindful Healthcare Scale – Incremental Validity

	Predictors	β	t	p	R^2	ΔR^2	p
	Oldenburg Burnout Inventory Total Score						
1	CompACT Total	-.610	-10.74	<.001	.373	.373	<.001
2	CompACT Total	-.355	-4.85	<.001	.448	.075	<.001
	MHS Total	-.375	-5.12	<.001			
	Short Warwick Edinburgh Mental Wellbeing Scale						
1	CompACT Total	.540	8.12	<.001	.292	.292	<.001
2	CompACT Total	.394	4.80	<.001	.328	.036	<.005
	MHS Total	.240	2.93	<.005			

Gillanders, Fisher, Kidney, Ferreira, Morris, Harkjaer-Thorgrimsen. (under review). The Mindful Healthcare Scale (MHS): Development and Initial Validation. *Journal of Contextual Behavioral Science*

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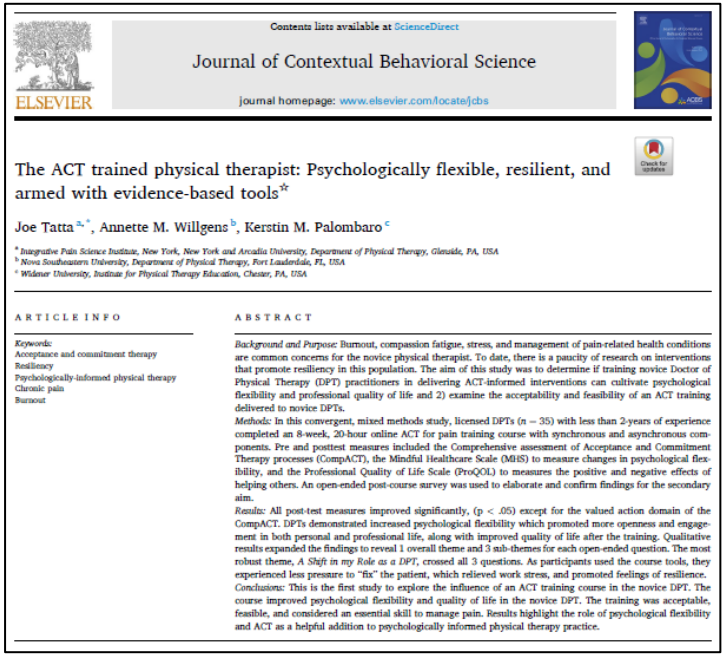
Mindful Healthcare Scale – Sensitivity to Training



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Journal of Contextual Behavioral Science

journal homepage: www.elsevier.com/locate/jcbs

The ACT trained physical therapist: Psychologically flexible, resilient, and armed with evidence-based tools*

Joe Tatta [a,*], Annette M. Willgens [b], Kerstin M. Palombaro [c]

[a] Integrative Pain Science Institute, New York, New York and Arcadia University, Department of Physical Therapy, Glenside, PA, USA
[b] Nova Southeastern University, Department of Physical Therapy, Fort Lauderdale, FL, USA
[c] Widener University, Institute for Physical Therapy Education, Chester, PA, USA

ARTICLE INFO

Keywords:
Acceptance and commitment therapy
Resiliency
Psychologically-informed physical therapy
Chronic pain
Burnout

ABSTRACT

Background and Purpose: Burnout, compassion fatigue, stress, and management of pain-related health conditions are common concerns for the novice physical therapist. To date, there is a paucity of research on interventions that promote resiliency in this population. The aim of this study was to determine if training novice Doctor of Physical Therapy (DPT) practitioners in delivering ACT-informed interventions can cultivate psychological flexibility and professional quality of life and 2) examine the acceptability and feasibility of an ACT training delivered to novice DPTs.

Methods: In this convergent, mixed methods study, licensed DPTs (n – 35) with less than 2-years of experience completed an 8-week, 20-hour online ACT for pain training course with synchronous and asynchronous components. Pre and posttest measures included the Comprehensive assessment of Acceptance and Commitment Therapy processes (CompACT), the Mindful Healthcare Scale (MHS) to measure changes in psychological flexibility, and the Professional Quality of Life Scale (ProQOL) to measures the positive and negative effects of helping others. An open-ended post-course survey was used to elaborate and confirm findings for the secondary aim.

Results: All post-test measures improved significantly, ($p < .05$) except for the valued action domain of the CompACT. DPTs demonstrated increased psychological flexibility which promoted more openness and engagement in both personal and professional life, along with improved quality of life after the training. Qualitative results expanded the findings to reveal 1 overall theme and 3 sub-themes for each open-ended question. The most robust theme, *A Shift in my Role as a DPT*, crossed all 3 questions. As participants used the course tools, they experienced less pressure to "fix" the patient, which relieved work stress, and promoted feelings of resilience.

Conclusions: This is the first study to explore the influence of an ACT training course in the novice DPT. The course improved psychological flexibility and quality of life in the novice DPT. The training was acceptable, feasible, and considered an essential skill to manage pain. Results highlight the role of psychological flexibility and ACT as a helpful addition to psychologically informed physical therapy practice.

- 35 Physiotherapists
- 8 week online ACT for pain training

Measure	Pre	Post	*d*
Total	51.8	57.9**	1.4
Aware	20.2	22.1**	.68
Engaged	22.0	24.6**	1.1
Defusion	9.6	11.2**	.75

** $p<.001$

Tatta, J., Willgens, A. M., & Palombaro, K. M. (2022). The ACT trained physical therapist: Psychologically flexible, resilient, and armed with evidence-based tools. *Journal of Contextual Behavioral Science*, **26**, 253–260

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Summary

- Some good enough measures exist
- They could be improved, shortened.
- Observation of practice versus self report?
- Developing the science of competency *could* lead to enhanced quality, better effects, greater efficiency
- How relevant is this to everyday practice compared to research trials?

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The needs of research trials versus clinical practice

- Distinctions between adherence and competence are more important for research:

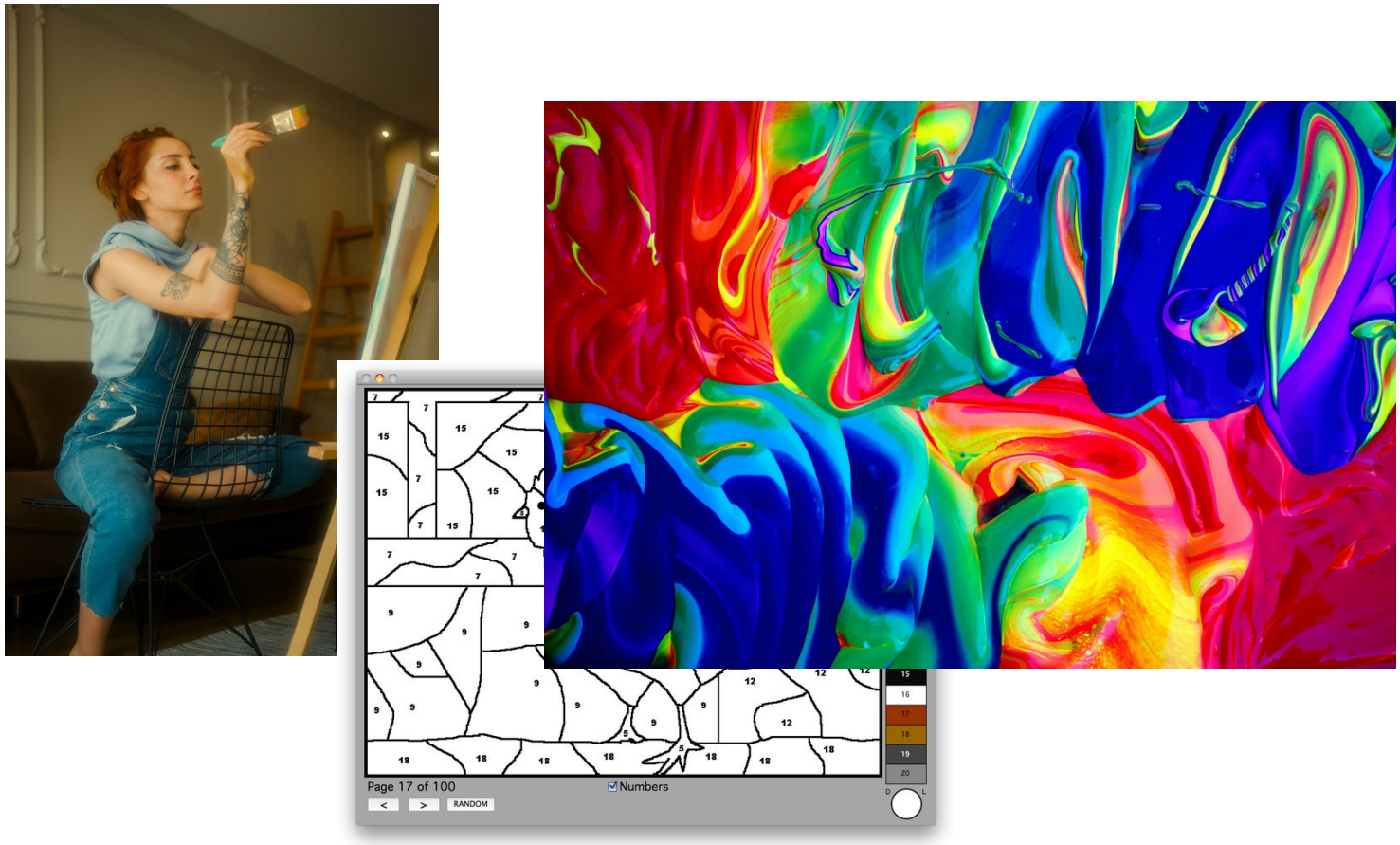
- To make valid inferences about whether treatments work we need a good degree of control of what is included in a treatment (adherence)

- In routine practice therapists are free to choose elements from a broader range of interventions (integration)

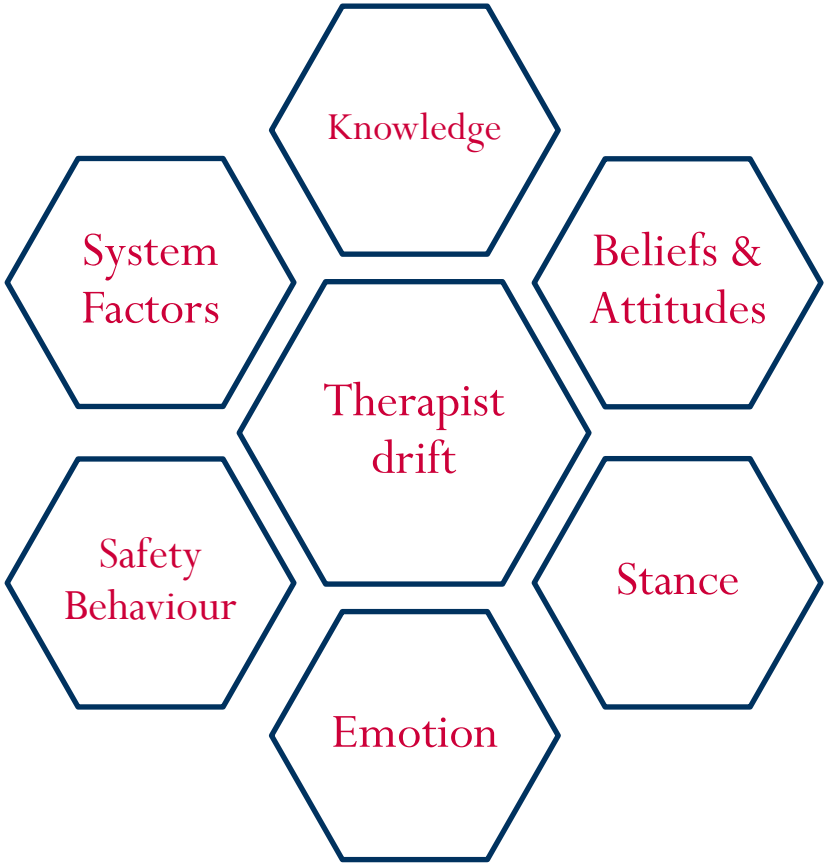
Fairburn & Cooper, 2011

Is integration a good thing?

Is integration a good thing?

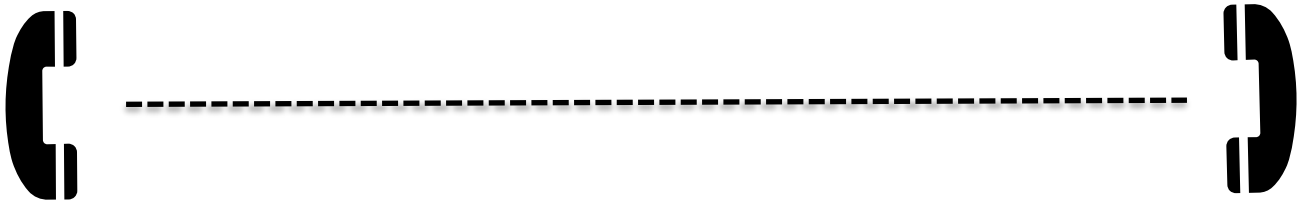


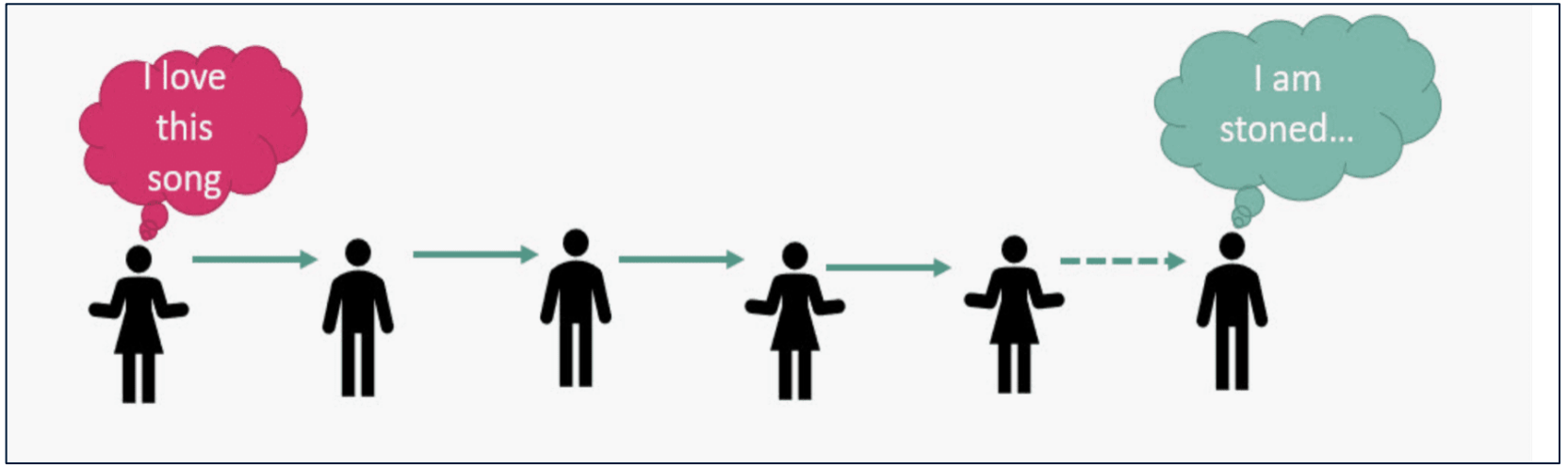
Therapist Drift



Waller, 2009,; Waller & Turner, 2016

Therapy Drift: The Telephone Game





Walser & Wharton, 2022

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Evidence based practice built into ACT

The Oxford Handbook of Acceptance and Commitment Therapy

Michael P. Twohig (ed.) et al.

https://doi.org/10.1093/oxfordhb/9780197550076.001.0001

Published: 2021 **Online ISBN:** 9780197550106 **Print ISBN:** 9780197550076

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CHAPTER

25 Effective Training and Delivery of ACT: The Dissemination and Implementation Issues

Robyn D. Walser, Emily Rachel Wharton

https://doi.org/10.1093/oxfordhb/9780197550076.013.25 Pages 537–563

Published: 20 October 2022

Abstract

The dissemination of acceptance and commitment therapy (ACT) as an evidence-based intervention is well underway. As a scientifically supported treatment approach, ACT may be considered a best practice in promoting well-being among those who suffer from psychological and emotional challenges. Optimizing mental health means not only understanding the mechanisms and processes by which individuals come to suffer and recover; it also means ensuring the successful dissemination and implementation of the practice. Sound dissemination processes for ACT include guiding researchers, policymakers, clinicians, and other stakeholders in the effective training and delivery of ACT as a best practice sustained over time. The process of widespread dissemination is subject to dilution of innovation—an adoption strategy wherein the "tools" of ACT are loosely adopted rather than the successful training of its principles and processes. Effective training concerns fidelity, adherence, and competency in ACT. There is a need for competency-based training that includes both workshops and ongoing consultation. This article proposes a model for disseminating and implementing ACT in clinics and large settings and reviews an example of ACT training in the Veterans Health Administration. Finally, it presents recommendations for future research and dissemination efforts of ACT training and supervision.

Keywords: ACT, dissemination, implementation, training, supervision

Subject: Clinical Psychology, Psychology

Series: Oxford Library of Psychology

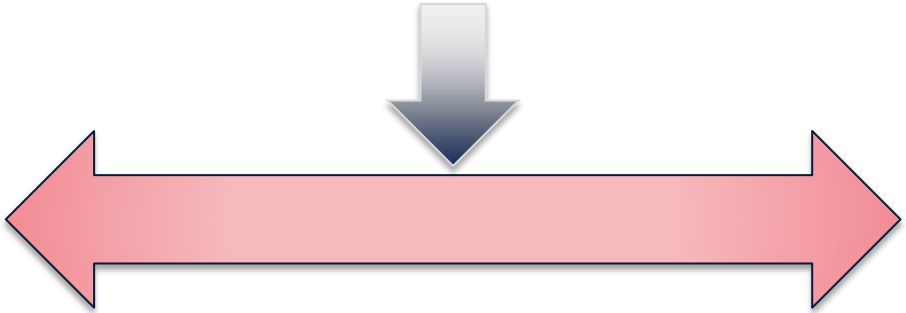
Collection: Oxford Handbooks Online

- Tailors the intervention to fit client language and experience
- Adopts an equal, vulnerable and sharing stance
- Sequences and applies interventions in response to client need and response
- Changes course flexibly according to clients needs
- Based on a functional analysis of client behavior and is therefore highly idiographic.
- Principles not protocol focused approach

Walser & Wharton, 2022

Innovation or Drift?

Functionally defined principles and processes



Specified canon of procedures

Anything goes

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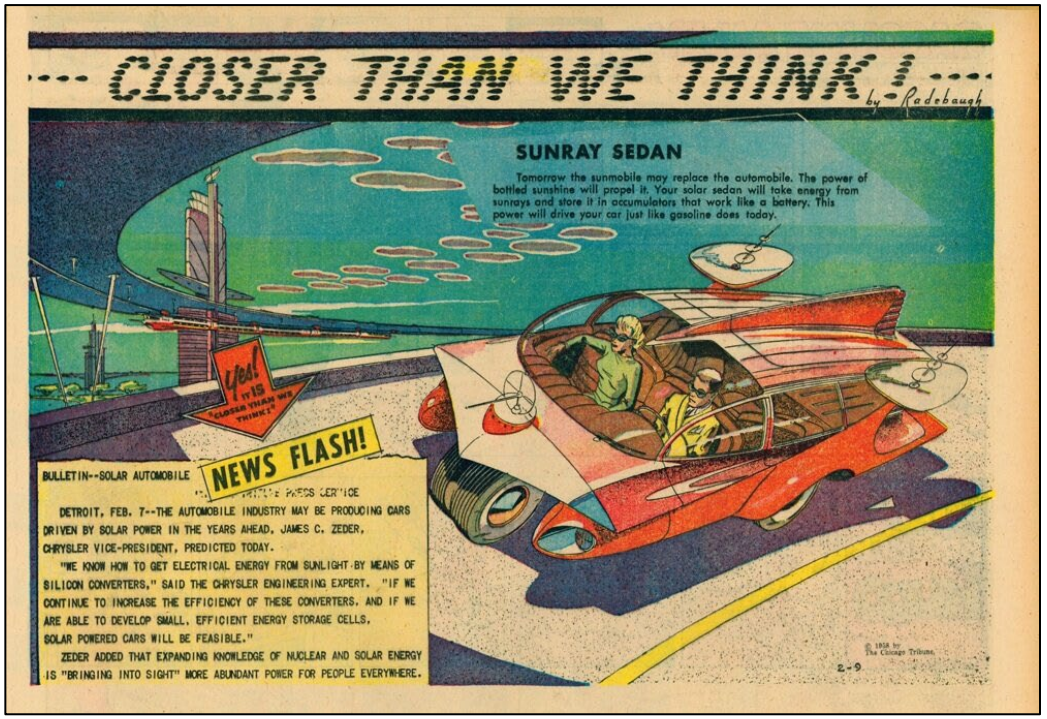
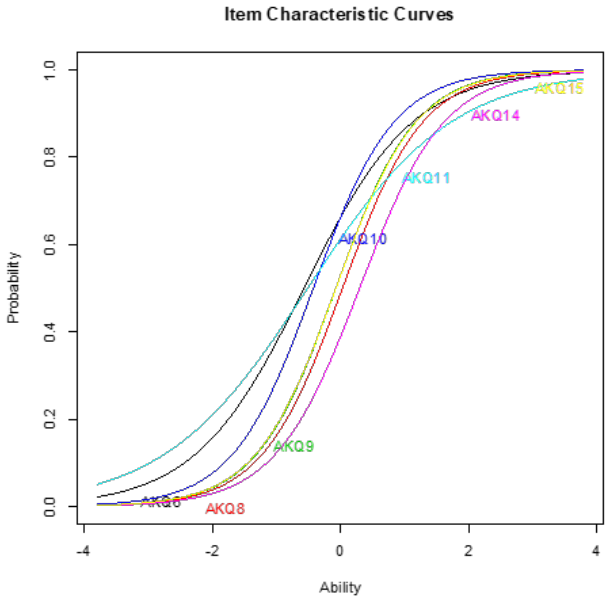
A potential future vision

- Item banking
- AI and voice capture
- Client longitudinal ESM feedback



Item Banking: Knowledge Assessment

- Tool from educational assessment
- Uses Item Response Theory
- Generating 100's of items
- Creating unique tests of knowledge of known difficulty without repeating the same items



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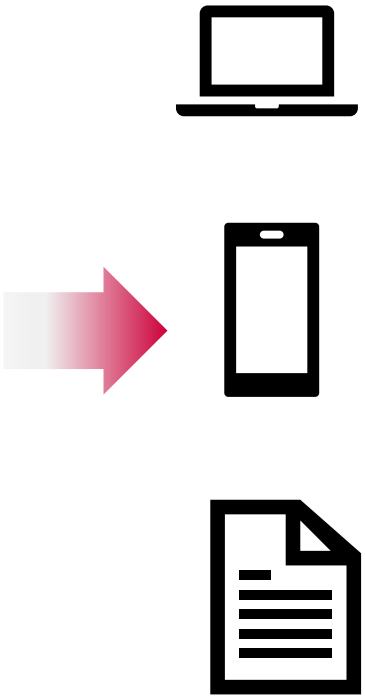
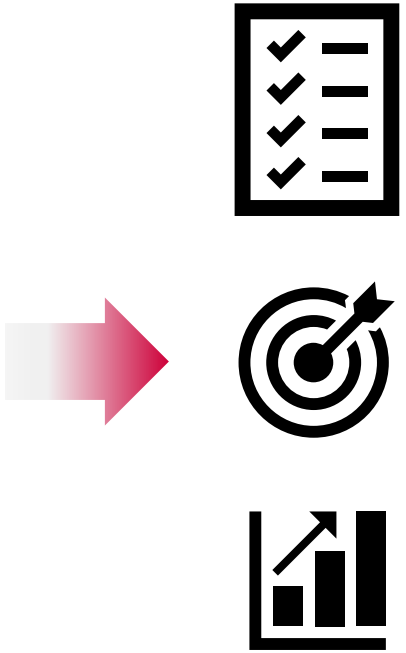
Voice Capture and Textual Analysis





Science fiction?

- Automatic Speech Recognition:
  - Average across 11 applications = 93 % accurate
  - Human performance = 94%
  - (Range of 80% to 97.1% accurate)
  - In 2021 this average figure was 83%

- However – Accuracy is affected by: accent, homophones, background noise, **ethnicity**, **emotionality**, **streaming**

- Data privacy and security concerns

(Kuhn, K., Kersken,V., Reuter, B., Egger, N., & Zimmermann, G. (2024)

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Automated text analysis:

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Journal of Contextual Behavioral Science

journal homepage: www.elsevier.com/locate/jcbs

Empirical research

Scaling-up assessment from a contextual behavi
Potential uses of technology for analysis of unst

Olga V. Berkout[a,*], Angela J. Cathey[b], Karen Kate Kellum[c]

[a] Department of Psychology, Texas A&M-Corpus Christi, 6300 Ocean Drive, Corpus Christi, TX 78412, U
[b] ENSO Group, Behavioral Science in the 21st Century, USA
[c] Department of Psychology, University of Mississippi, USA

ARTICLE INFO

Keywords:
Technology
Contextual behavioral science
Assessment
Natural language processing

ABSTRACT

With technological advancement, we h
Such information is available from ele
being used in business applications a
analysis, summarize massive amounts
research in this area remains extremel
beginners interested in such analyses,

Contents lists available at ScienceDirect

Journal of Contextual Behavioral Science

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Empirical Research

Inflexitext: A program assessing psychological inflexibility in unstructured verbal data

Olga V. Berkout[a,*], Angela J. Cathey[b], Dmytry V. Berkout[c]

[a] Department of Psychology, Texas A&M Corpus Christi, United States
[b] ENSO Group, Behavioral Science in the 21st Century, Dallas, TX, United States
[c] DevCo Consulting, Frederick, MD, United States

ARTICLE INFO

Keywords:
Psychological inflexibility
Natural language processing
Verbal behavior
Digital phenotyping

ABSTRACT

This paper describes the development and initial suppo
psychological inflexibility in unstructured verbal data. V
logical inflexibility score based on patterns of word occu
performance was examined in a sample of 809 English
Amazon's Mechanical Turk platform. Participants wrote
emotional issue and completed self-report measures of di
Participant essays were analyzed using Inflexitext and Li
text scoring program. Inflexitext scores demonstrated s
experiential avoidance, cognitive fusion, challenges in
depression, anxiety, and stress and a medium positive
Inflexitext scores evidenced small negative correlations w
positive emotion. Overall, this initial examination prov
further evaluation is needed and limitations are discussed.
unobtrusive ambient monitoring of verbal behavior and
related to psychological functioning and therapeutic outc

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Assessing psychological inflexibility in text: An examination of the inflexitext program

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ARTICLE INFO

Keywords:
Natural language processing
Psychological inflexibility
Digital phenotyping
Text data

ABSTRACT

We generate a large amount of text through interactions with technology. Identifying digital markers of psychological constructs in this data may provide novel opportunities for research, assessment, and intervention. Psychological inflexibility has been broadly related to distress and poorer well-being and represents a promising target for such efforts. The present study examined the performance of Inflexitext, a program scoring psychological inflexibility in text, within essays about an important emotional issue by 630 undergraduates. Relationships between Inflexitext and self-report measures of psychological inflexibility processes, self-compassion, distress, and state positive and negative affect, use of words from positive and negative emotion categories, and human coder ratings were examined. Inflexitext scores demonstrated small theoretically consistent relationships with measures of cognitive fusion, challenges in pursuing values, self-compassion, distress, state positive and negative affect, and use of positive and negative emotion terms. Inflexitext also evidenced a moderate relationship with human coder ratings of inflexibility and was moderately predictive of coder classification of essays as containing any inflexibility in a Receiver Operating Characteristic (ROC) analysis. However, a comparison of areas under the curve (AUCs) associated with Inflexitext and use of negative emotion terms did not demonstrate a statistically significant difference in ability to classify essays as containing inflexibility. Inflexitext scores also did not evidence expected associations with self-reported progress towards values, experiential avoidance, and state experiential avoidance while writing the essay. Limitations of current findings and implications for future research are discussed.

(Berkout, 2023; Berkout, Cathey & Berkout, 2020; Berkout, Cathey and Kellum, 2019)

Inflexitext

- Measures psychological inflexibility related language without need for human coder
- Current applications in text analysis of essay prompts
- Could be used in therapy transcripts

(Berkout, 2023; Berkout, Cathey & Berkout, 2020; Berkout, Cathey and Kellum, 2019)

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Inflexitext

- Inflexibility language associated with:
  - Increased negative emotion words
  - Decreased positive emotion words
  - Values obstruction
  - Cognitive Fusion
  - Reduced self compassion

- But not Experiential Avoidance…

- Correlations fairly weak (r = .08 to .24)

(Berkout, 2023; Berkout, Cathey & Berkout, 2020; Berkout, Cathey and Kellum, 2019)

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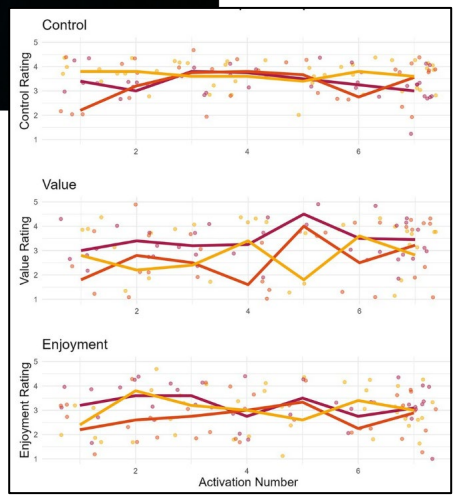
Client behavioural and process based feedback

- Experience Sampling Methods
- Process Measures
- Could link in session process analysis with out of session changes
- Feedback to therapists



Therapist progress evaluation: Knowledge and Qualities

- Therapists could take regular quizzes of learning (Item Banking)
- Therapist can rate skill use / competency
- Therapists can use ESM methods to rate their own level of flexibility

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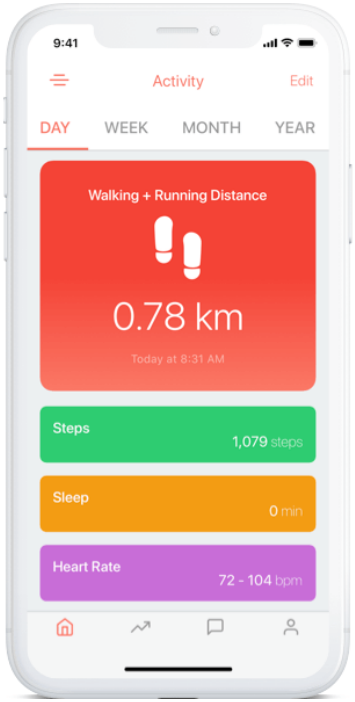
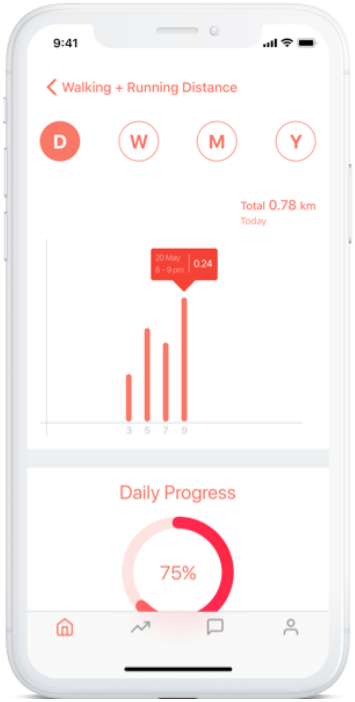
Like Strava for Therapists





- Self assessment
- Self Practice
- Client feedback
- Automated text analysis
- Aggregating data across hundreds of therapists
- An alternative vehicle for implementation science?

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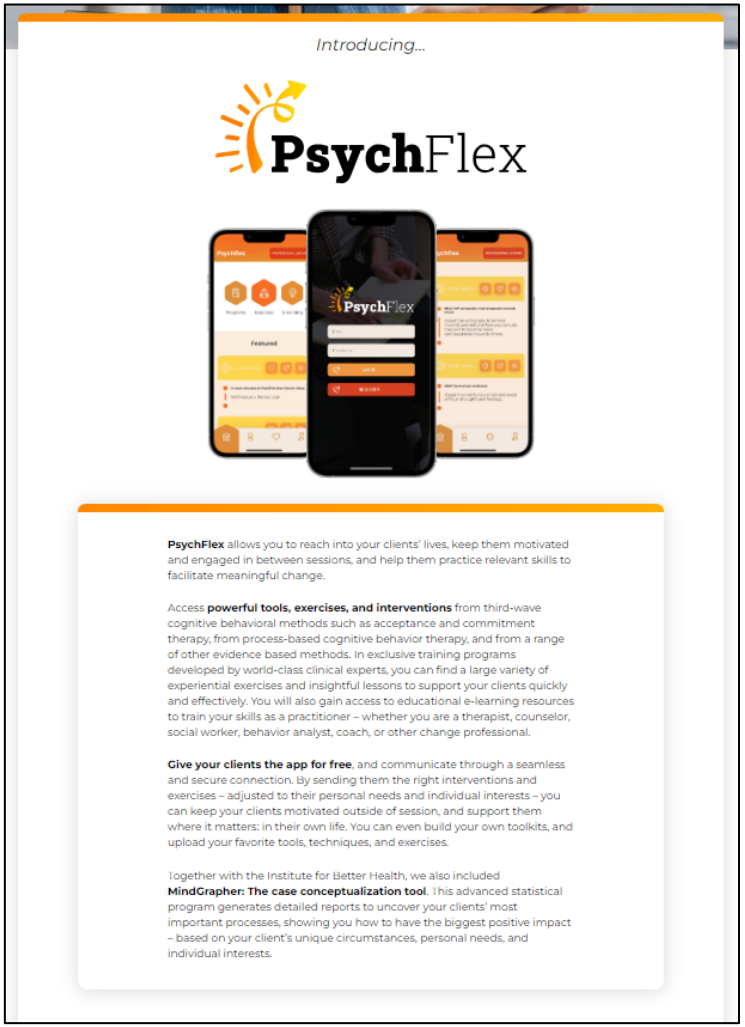
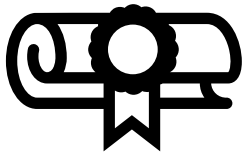
The future may already be here!

- Client and Therapist Sides
- Personalized Assessments and Exercises
- eLearning for the Therapist
- Competency?
- Research applications?

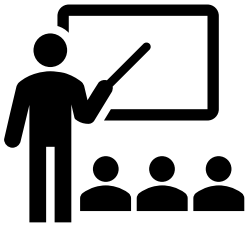


Unintended consequences

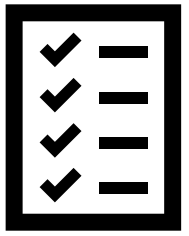
- Learning for assessment



- Training for assessment

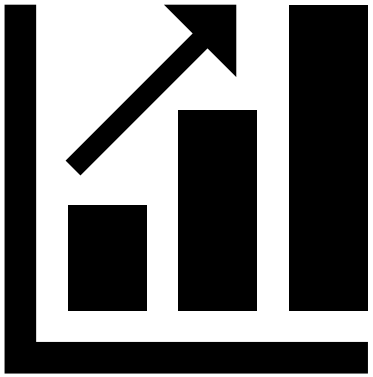


- Deep versus surface learning



Features for benefit

- Free or low cost
- Reliable and valid
- Easy to operate
- Safety and privacy concerns addressed
- Fun / curious / interesting to use



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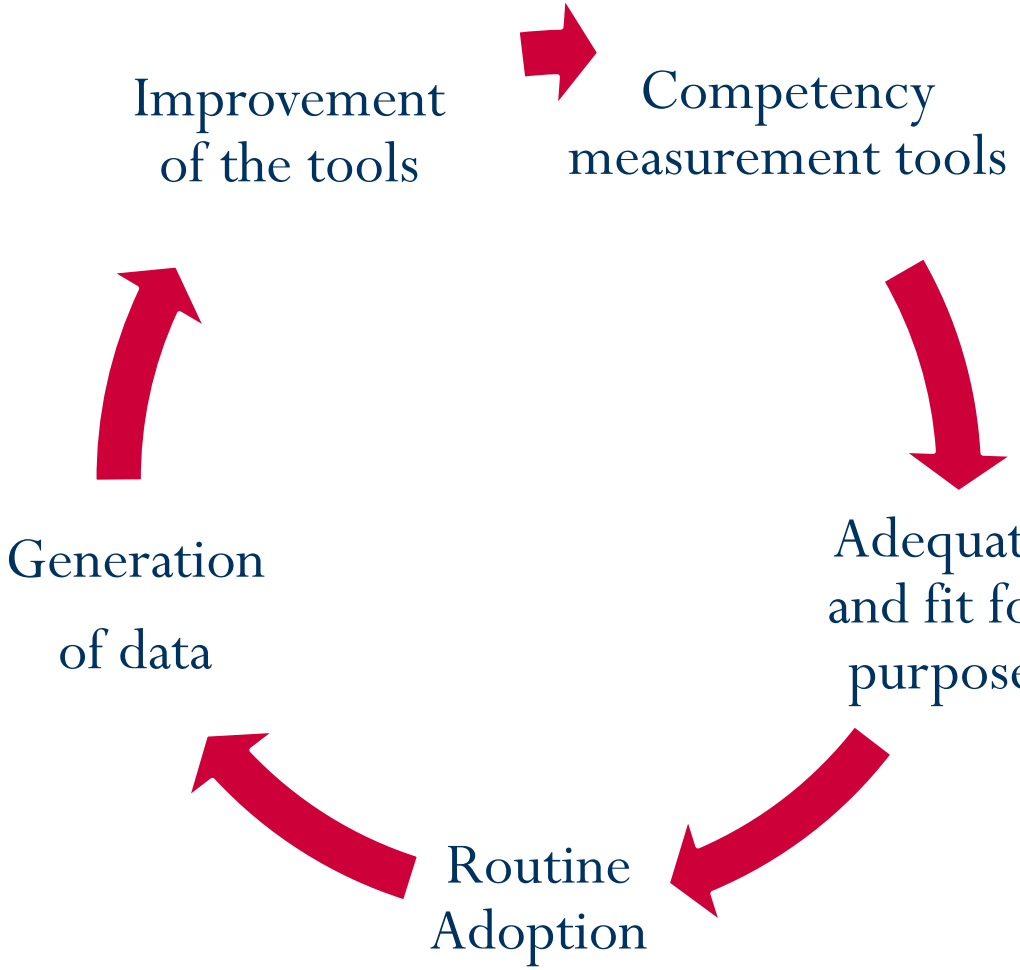
Final thoughts



- Model specific?
- Principles?
- Kernels?
- Contextual Behavioural Science?

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