Every Voice Matters: How a Modern Process-Based Approach is Helping us Expand Our Work Beyond Psychotherapy

Steven C. Hayes University of Nevada

My Intention and COIs









The Contextual Behavioral Tradition

- Monistic, idiographic focus
- Radical functionalism and contingency
 - A wing of evolutionary science
 - Experimentally tested principles with high precision, scope, depth
 - Scaled to every human issue
 - Applied to scientists themselves
- With openness to private experience but
 - "Humanism meets behaviorism"



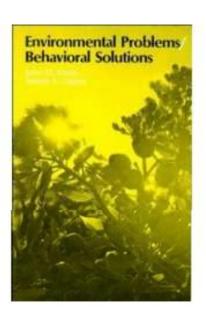




Toward a Psychology of Being

40-50 Years Ago





JOURNAL OF APPLIED BEHAVIOR ANALYSIS

1981, 14, 81-88

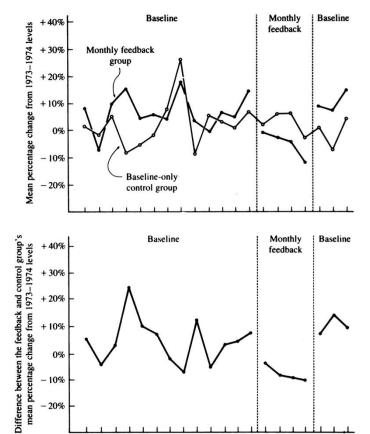
NUMBER 1 (SPRING 1981)

REDUCTION OF RESIDENTIAL CONSUMPTION OF ELECTRICITY THROUGH SIMPLE MONTHLY FEEDBACK

STEVEN C. HAYES AND JOHN D. CONE

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO AND
WEST VIRGINIA UNIVERSITY

Feedback has been widely used in efforts to control the consumption of electricity. Previous efforts, however, have used forms of feedback that seem economically impractical. The present study examined the effects of a feasible program of monthly feedback. Forty matched nonvolunteer participants were randomly divided into two groups: a no-contact control group and a monthly feedback group. In an A-B-A design,



J F M A M J J A S O N D J F M A M J J A

Monthly consumption

1976

1975

UNC-G, 1976 – 1980: Clinical Psychology Behavior Analysis

- Studied rules: what are they and how to they work?
- Became very frustrated with Skinner's approach to verbal behavior
- 1977-78: Developed a panic disorder
- 3 yrs later turned a corner after a transformational "out of body" experience linked to a different sense of self, the need for emotional openness, and values-based commitment (bit.ly/StevesFirstTED)

Bit.ly/EarliestACT – 1981 thru 1987

Chessboard **House with Furniture** Choice point in a Road Don't Think of ... Fall in love on purpose Sit still for 1 minute Eyes on I'm having the thought that What do you want to stand for Pain exposure Commitment

"Comprehensive Distancing"

1981 - Big D

1981 – Pain protocol (published in 1999)

1982 – Rob Zettle's depression dissertation

1983 – weight and shame protocol (lost to history)

1987 – Melancon protocol

Component #2

GOAL: To undermine the attachment/and identification with particular thoughts and feelings. (behavior for that matter, but people don't do that as often).

POINTS TO COVER:

You are a person, an organism, an entity, with genetic and environmental experiences that far outstrip any immediate reactions you may have. Behavior, thoughts, and feelings are things you do; they are not the same as you. Behind any action is an entity watching that action. That is the "you" you mean when you say "you".

Analogies to use in establishing the point:

- 1. You are a house, filled with furniture. The furniture is not and can never be the house. It is the content of the house. The house is the context in which furniture can be furniture. If the furniture is thought to be good or bad, that says nothing about the house.
- 2. Your thoughts, and feelings are like pieces in a game of chess. Each piece holds itself in relation to the other pieces. The object of pieces is to ally with other pieces and gang up on still other pieces. Only pieces can influence other pieces

ACT in a Ditty

Open to experience, Awareness in the now, Let meaning guide your actions,

Friends and body show you how



(But you need a basic account!)

Gut Sense



We Know What Works But Our Minds Don't!

Show me with your body, you at your worst



Show me with your body, you at your best



At Our Worst





At our best





It is Nearly Universal

Almost everyone shows the difference

bit.ly/ACTBodyStudy





Article

What the Body Reveals about Lay Knowledge of Psychological Flexibility

Neal Falletta-Cowden ^{1,*} ³, Patrick Smith ¹ ³, Steven C. Hayes ¹ ³, Sandra Georgescu ² and Seved Ali Kolahdouzan ³ ³

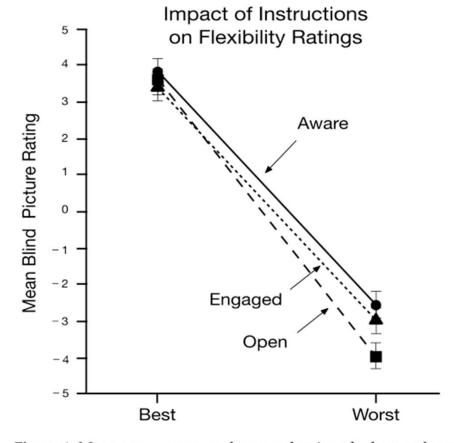
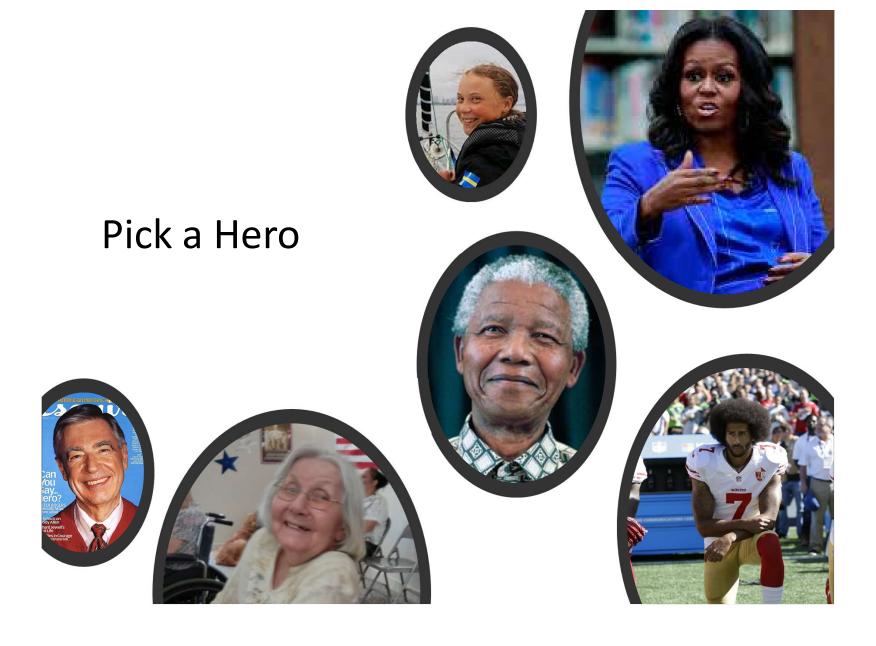


Figure 1. Mean open, aware, and engaged ratings for best and worst poses.

Friends and Heroes





RFT in a Ditty

Learn it in one,
Derive it in two,
Put it in networks,
That change what
you do



(The core of the basic account)

Rob Zettle (1984). Cognitive Therapy of Depression: A Conceptual and Empirical Analysis of Component and Process Issues	ACT Outcome	
Jeanne Devany (1985). Stimulus Equivalence and Language Development in Children	RFT	
Arlinza "Sonny" Turner (1986). The Relationship Between Two Classes of Measures Examined Idiothetically and Nomothetically	Idionomic Analysis	t "
Irwin Rosenfarb (1986). The Use of Therapist Rules, Self-Rules, and Contingency-Shaped Feedback in the Treatment of Social Skills Deficits in Adults	Rule Governance	S S S S S S S S S S S S S S S S S S S
Elga Wulfert (1987). Higher-Order Control Over Equivalence Classes and Response Sequences: An Experimental Analogue of Simple Syntactical Relations	RFT	5
David Steele (1987). Conditional Control of Equivalence and the Relations Different and Opposite: A Behavior Analytic Model of Complex Verbal Behavior	RFT	
Joe Haas (1991). The Effects of Verbal Consequences for Rule-Following on Sensitivity to Programmed Contingencies of Reinforcement	Rule Governance	
Sue Melancon McCurry (1991). Client Metaphor Use in a Contextual Form of Therapy	Processes of Change	
Durriyah Khorakiwala (1991). An Analysis of the Process of Client Change in a Contextual Approach to Therapy	Processes of Change	Z
Gina Lipkens (1992). A Behavior Analysis of Complex Human Functioning: Analogical Reasoning	RFT)
Barbara Kohlenberg (1994). Transfer of Function Through Equivalence: Modification Effects Based Upon Nodality and Contextual Control	RFT → Rule Governance	;

Worldwide From the Early Days

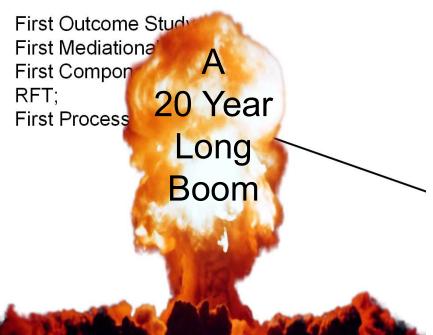
RFT Workshops

•		
•	March 1982	Western Michigan University
•	January 1986	Oregon Research Institute, Eugene, Oregon
•	February 1986	University of Florida
•	March 1986	University of Kansas
•	December 1986	Mexican Society for Behavior Analysis, Mexico City, Mexico
•	June 1987	University of Sao Carlos, Sao Carlos, Brazil
•	January 1989	IIVR3, Aguas de Lindoia, Brazil.
•	January 1989	Universidade de Para, Belem, Brazil
•	April 1989	University College of North Wales, Bangor, Gwynedd, Great Britain

ACT Workshops

•		
•	October 1982	Broughton Hospital, Morganton, NC
•	June 1983	Guilford County Community Mental Health Center, Greensboro, NC
•	October 1984	University of New Mexico
•	October 1984	West Virginia University
•	October 1985	University of Wisconsin at Milwaukee
•	January 1986	Oregon Research Institute, Eugene, Oregon
•	March 1986	University of Kansas
•	November 1986	St. Mary's University, Halifax, Nova Scotia
•	April 1987	University of Washington, Seattle
•	June 1987	University of Sao Carlos, Sao Carlos, Brazil
•	June 1988	Oregon Research Institute, Eugene, OR
•	November 1988	AABT New York
•	January 1989	Universidade de Sao Paulo, Sao Paulo, Brazil
•	April 1989	University College of North Wales, Bangor, Gwynedd, Great Britain
•	April 1989	Group Health Puget Sound, Seattle, WA
•	November 1989	AABT, Washington, D.C.
•	June 1991	Szent Gyorky Medical University, Szeged, Hungary

The Foundation Was Built by the "We," Not Me, But It Was Time for a Bigger "We"



The conclusion of the *Time* story: " ... for ACT to go mainstream, it will have to shed its icky zealotry and grandiose predictions. ("We could get Muslims and Jews together in a workshop," Hayes said in Washington. "Our survival really is at stake.") Even so, Hayes may be crazy enough to pull it all together." (John Cloud, Feb. 13, 2006)

First 1,000 ACT RCTs – Overall and in LMICs



Journal of Contextual Behavioral Science
Volume 33, July 2024, 100809



Acceptance and commitment therapy: What the history of ACT and the first 1,000 randomized controlled trials reveal





Behavior Therapy
Available online 13 June 2024
In Press, Journal Pre-proof ② What's this?



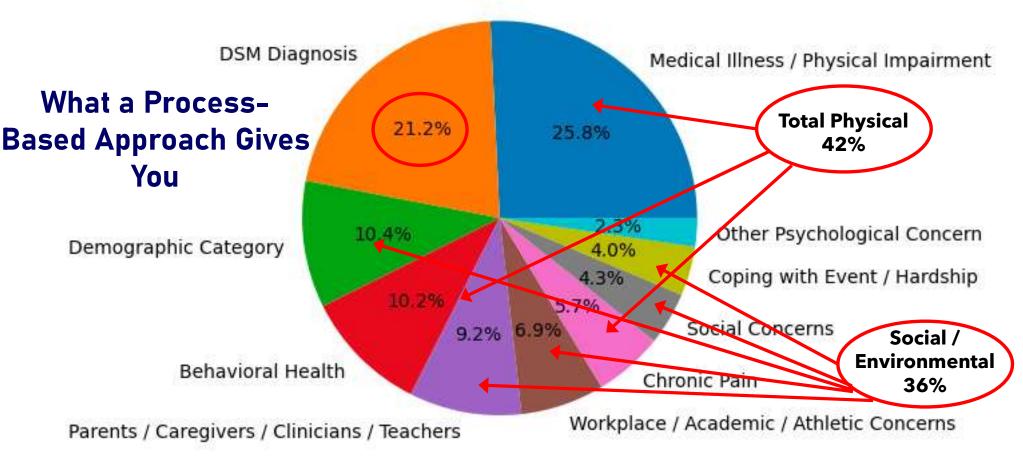
Why Research from Lower- and Middle-Income Countries Matters to Evidence-Based Intervention: A State of Science Review of ACT Research as an Example



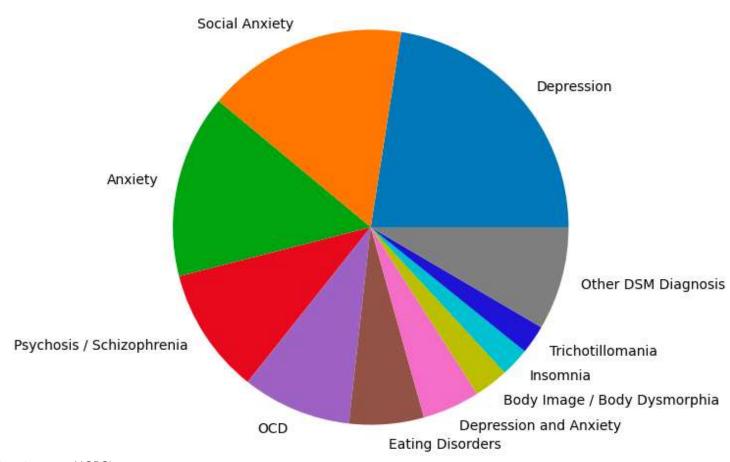
bit.ly/ACT1000RCTs

bit.ly/ACTLMICRCTs

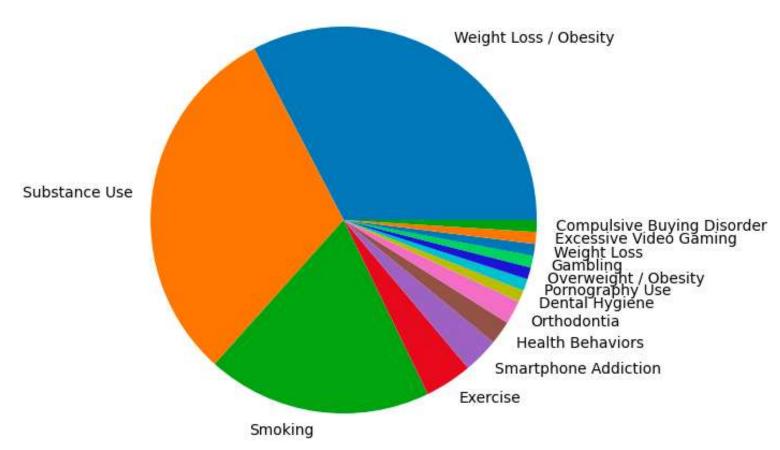
Populations Studied in First 1,000 ACT RCTs



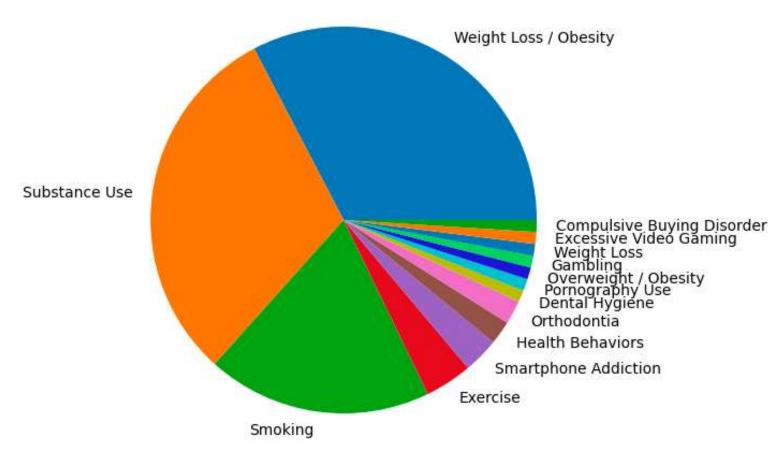
Mental Health Targets First 1,000 ACT RCTs



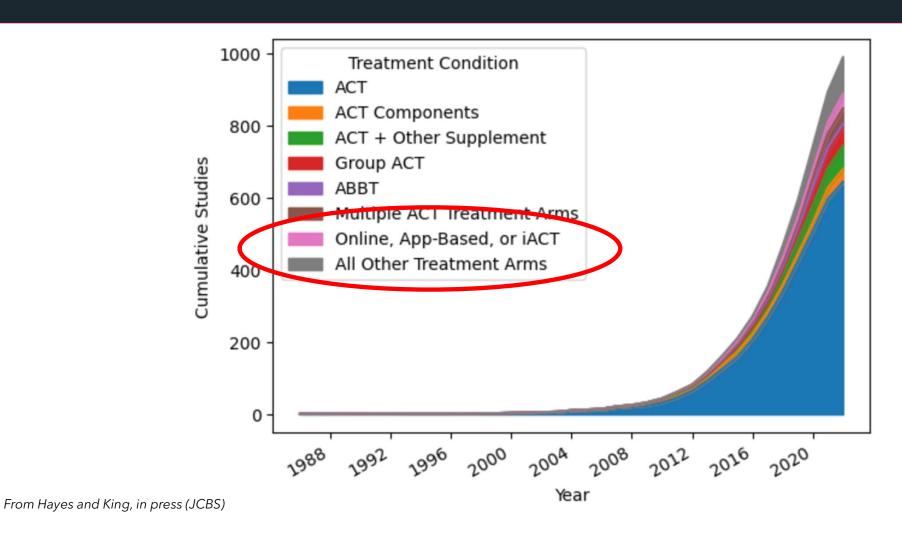
Behavioral Health Targets First 1,000 ACT RCTs



Behavioral Health Targets First 1,000 ACT RCTs

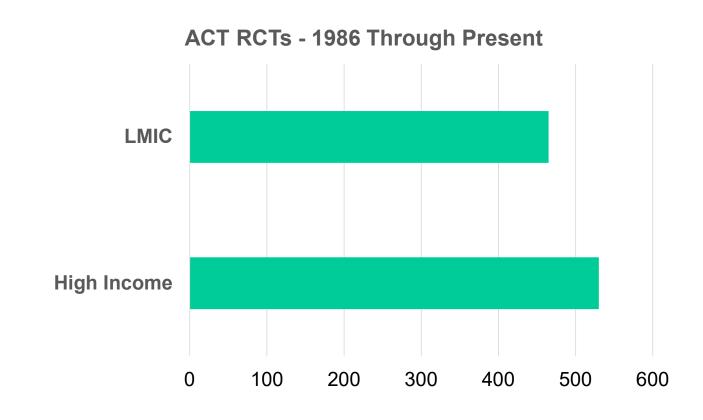


Behavioral Health Targets First 1,000 ACT RCTs

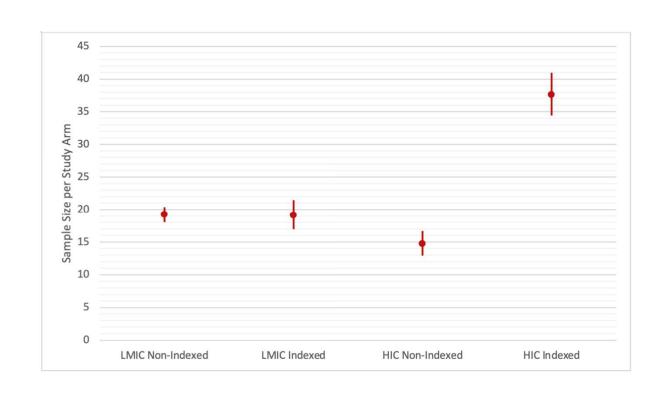


Worth **Noting:** Much of the World is Being Minimized as a Source of New Knowledge

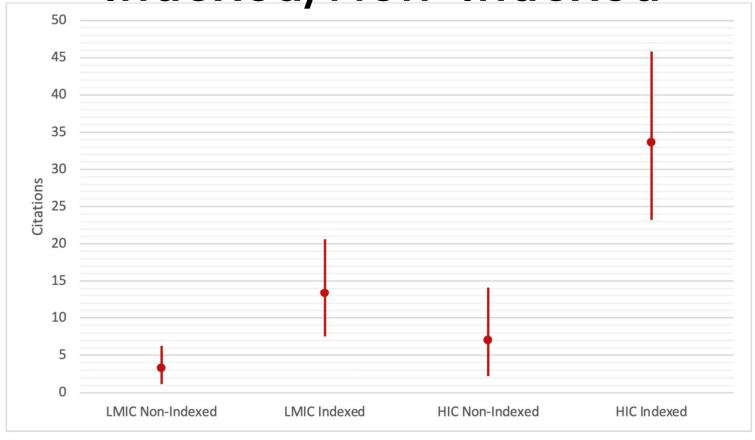
- 96% of the world's literature on mental health comes from the WEIRD 12%
- Not so with ACT



Sample Size per Arm HIC/LMIC, Indexed/Non-Indexed



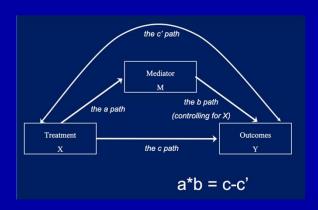
5 year Citations HIC/LMIC, Indexed/Non-Indexed



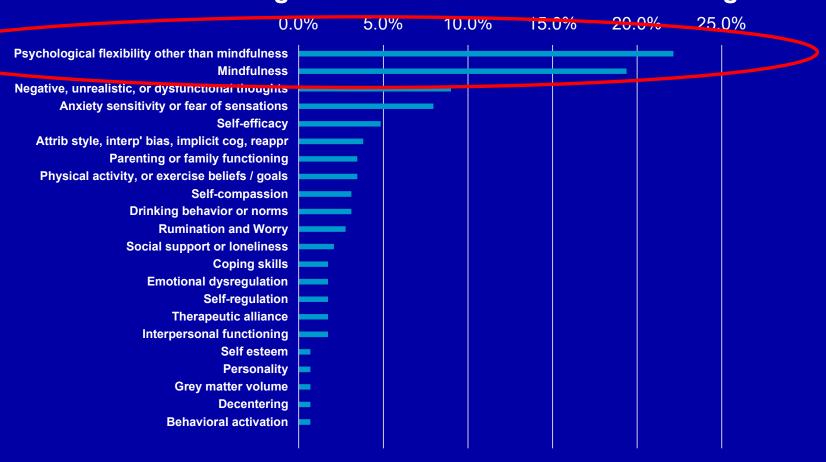
What About Psychological Flexibility & Processes of Change?

- We looked at *any* psychosocial intervention that claimed to properly identify a process of change ("mediational analysis") for mental health
- 54,633 studies each rated twice yielded 73 replicated measures, containing 1,227 items, in 281 statistically correct analyses

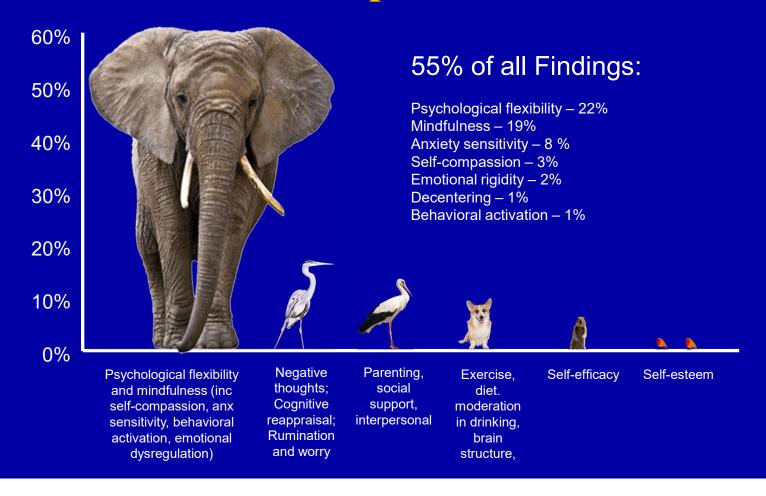




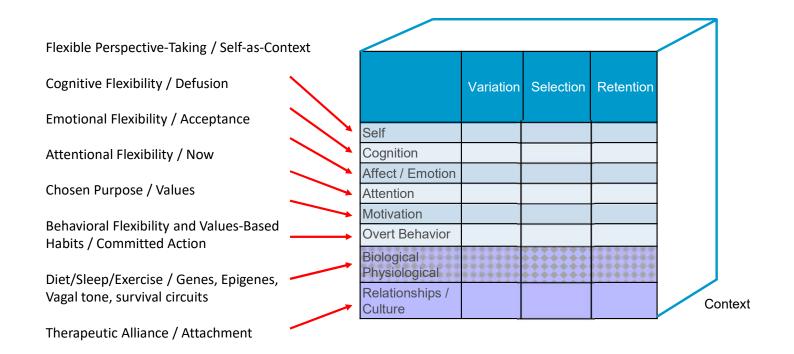
Percentage of Successful Mediational Findings



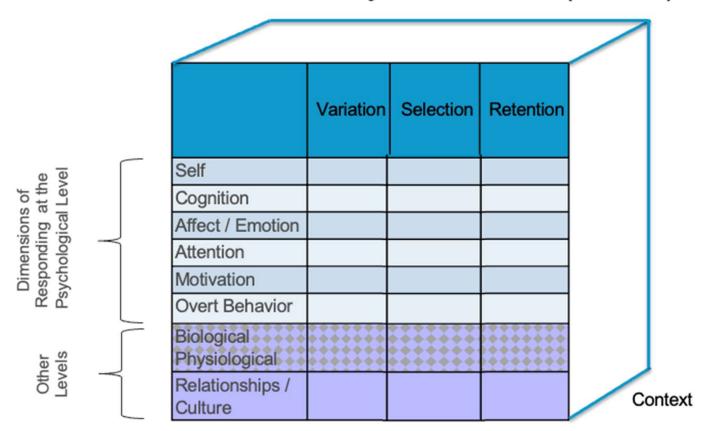
Classic Psychological Flexibility is the Process Elephant and ...



The EEMM is a Way to Extend the Flexibility Model and Allow Other Process-Oriented Evidence-Based Methods a Way of Speaking to Each Other While Maintaining Our Core



Extended Evolutionary Meta-Model (EEMM)



It's Easy to Extend the Idea of Flexibility at the Psychological Level

If It's	It Includes
Cognitive Flexibility	Reappraisal
Emotional Flexibility	Non-clinging
Sense of Self	Self-efficacy; Self-esteem
Attentional Flexibility	Rumination and Worry
Chosen Purpose	Self-efficacy

These Dimensions Can Be Readily Socially Scaled

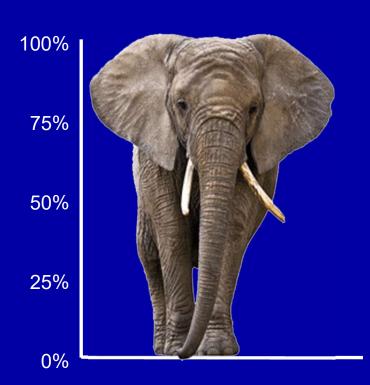
		Healthy Variation
	Cognition	Mutual understanding
Dyadic Social dimensions	Affect	Compassion
	Self	Attachment and conscious connection
	Attention	Joint attention
	Motivation	Shared values and acknowledgment
	Overt Behavior	Shared commitments

Combined with
Compatible Processes such
as Lin Ostrom's Core
Design Principles as is
done in "Prosocial"
or concepts
Such as a
"MetaContingency"



The EEMM Can Eat it All We Have a 35,000 ft Consensus

"psychological flexibility is the mechanism of change not only in CBT but also in effective psychological therapies in general" (Salkovskis, Sighvatsson, & Sigurdsson, 2024, p. 595)



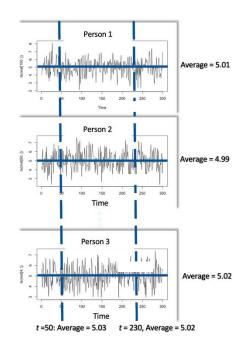
Therapists and Other Behavior Change Agents are Applied Evolutionists Helping Clients Become more "Versatile" (VRSCDL), by Encouraging

Retention of what is

Successful in Context at the right Dimension and Level

The "Therapeutic Alliance (or the "Change Alliance" more Generally) is a Purposive Cooperative Social Interaction in which Agreed Upon Goals are Recursively Pursued by Instigating, Modeling, and Reinforcing Psychological Flexibility and is Social and Bodily Extensions.

Then We Ran into Ergodicity: A Collective Surely Applies to the Course of an Individual Only ...



Gates, K.M., Chow, S-M., Molenaar, P.C.M. (2023). *Analysis of Intra-individual Variation:*Systems Approach to Human Processing.
Chapman & Hall/CRC. London.

- 1. When processes are stationary and
- 2. Every person obeys the same dynamic model.

In other words, our standard biostatistics apply to how particular human beings function over time as a "mathematical must" if you are working with frozen clones.

RFT → **Rule Governance**

Rob Zettle (1984). Cognitive Therapy of Depression: A Conceptual and Empirical Analysis of Component and Process Issues	ACT Outcome
Jeanne Deveny (1985). Stimulus Equivalence and Language Development in Children	RFT
Arlinza "Sonny" Turner (1986). The Relationship Between Two Classes of Measures Examined Idiothetically and Nomothetically	Idionomic Analysis
Irwin Rosenfarb (1986). The Use of Therapist Rules, Self-Rules, and Contingency-Shaped Feedback in the Treatment of Social Skills Deficits in Adults	Rule Governance
Elga Wulfert (1987). Higher-Order Control Over Equivalence Classes and Response Sequences: An Experimental Analogue of Simple Syntactical Relations	RFT 5
David Steele (1987). Conditional Control of Equivalence and the Relations Different and Opposite: A Behavior Analytic Model of Complex Verbal Behavior	RFT
Joe Haas (1991). The Effects of Verbal Consequences for Rule-Following on Sensitivity to Programmed Contingencies of Reinforcement	Rule Governance
Sue Melancon McCurry (1991). Client Metaphor Use in a Contextual Form of Therapy	Processes of Change
Durriyah Khorakiwala (1991). An Analysis of the Process of Client Change in a Contextual Approach to Therapy	Processes of Change
Gina Lipkens (1992). A Behavior Analysis of Complex Human Functioning: Analogical Reasoning	RFT
Barbara Kohlenberg (1994). Transfer of Function Through Equivalence: Modification Effects Based	RFT → Rule Governance

Upon Nodality and Contextual Control

One of the Earliest "Idionomic" Studies Ever Done in Clinical Psychology

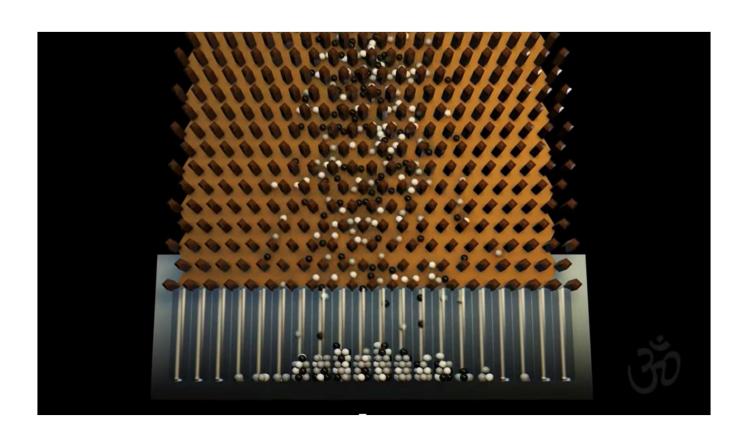
Arlinza E. "Sonny" Turner (1986). The Relationship Between Two Classes of Measures Examined Idiothetically and Nomothetically

Turner, A. E. & Hayes, S. C. (1996). Una comparacion de la covariacion de respuesta vista desde una perspectiva ideotetica y nomotetica (A comparison of response covariation viewed idiothetically and nomothetically). *Psicologia Conductual*, *4*, 231-250.



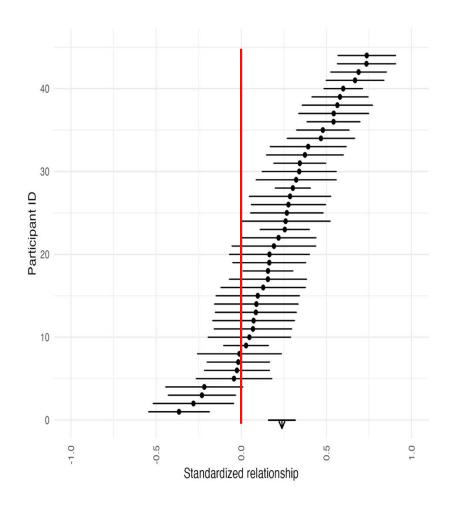
bit.ly/FirstCBSIdionomic

The Problem With Normative Statistics



So, What if We Consider Every Person as a Separate "Study" and Summaries as Meta-Analyses?

Here is Mindfulness and Emotional Well-Being



There are Standards for Dealing with Variation In Meta-Analyses

Cochrane Handbook for Systematic Reviews of Interventions

If I^2

Version 6.4, 2023

$$I^2 = \left(\frac{Q - \mathrm{df}}{Q}\right) \times 100\%.$$

In this equation, Q is the Chi² statistic and df is its degrees of freedom (Higgins and Thompson 2002, Higgins et al 2003). I^2 describes the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance).

Thresholds for the interpretation of the l^2 statistic can be misleading, since the importance of inconsistency depends on several factors. A rough guide to interpretation in the context of meta-analyses of randomized trials is as follows:

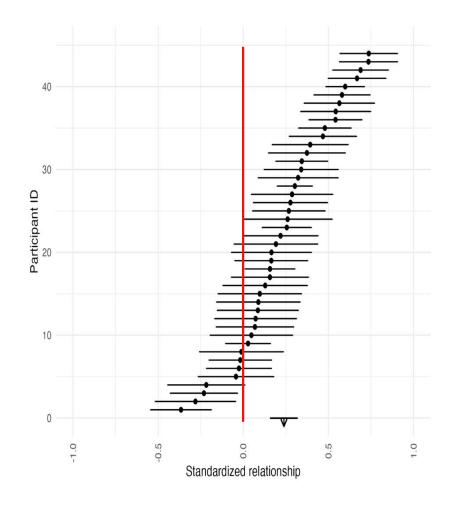
- 0% to 40%: might not be important;
- 30% to 60%: may represent moderate heterogeneity*;
- 50% to 90%: may represent substantial heterogeneity*;
- 75% to 100%: considerable heterogeneity*.

>.5 = worry & maybe don't report means

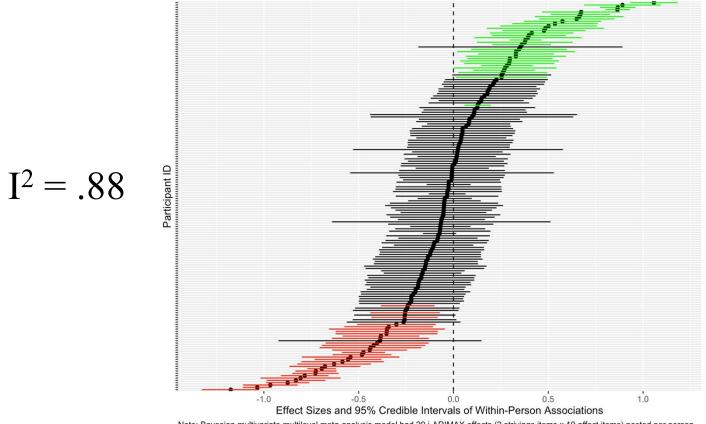
>.75 = worry a lot and probably don't report means So, What if We Consider Every Person as a Separate "Study" and Summaries as Meta-Analyses?

Here is Mindfulness and Emotional Well-Being

$$I^2 = .88$$



Why Then Care About the Mean? It Means *Nothing*. "Hanging on to Enjoyment" and Hedonic Well-Being

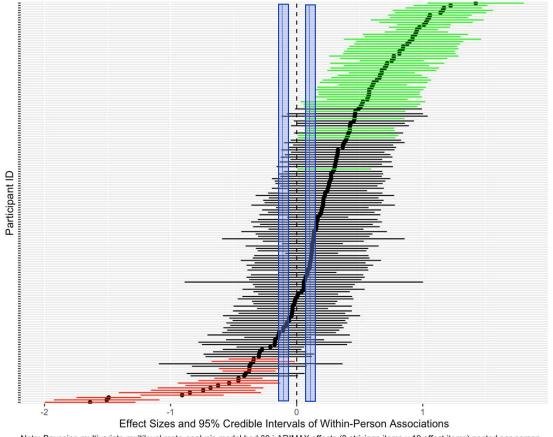


In this most recent study of 50 process

→ outcome relations the I² range was .81 to .97

Note: Bayesian multivariate multilevel meta-analysis model had 20 i-ARIMAX effects (2 strivings items x 10 affect items) nested per person. Green horizontal lines indicate 95% Crl of positive associations and red indicate negative ones.

Virtually All of Our Normative Concepts are Like This: Take "Worrying About Happiness" and Hedonic Well-Being



 $I^2 = .83$

Note: Bayesian multivariate multilevel meta-analysis model had 30 i-ARIMAX effects (3 strivings items x 10 affect items) nested per person. Green horizontal lines indicate 95% Crl of positive associations and red indicate negative ones.

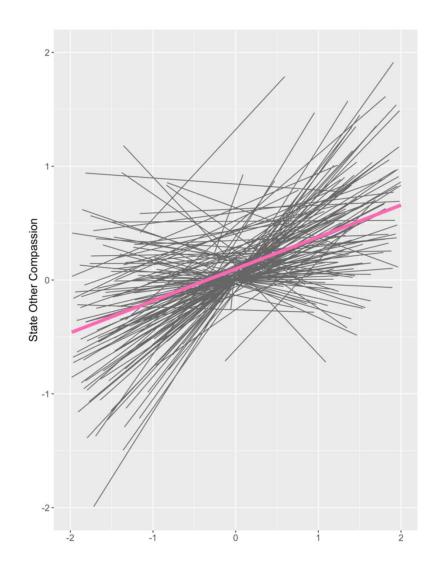
One is real; one is not

WHICH ONE IS IT?

but more importantly

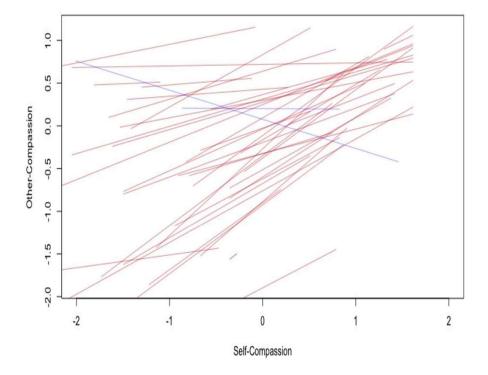
Does it matter?!

We Need
"Idionomic"
Statistics Even
to Detect the
Lies We've
Been
Spreading!



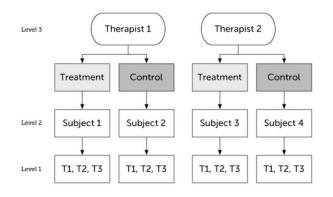
Here is
How Our
Modern
Stats
Deceive Us

Aaaagh!!!

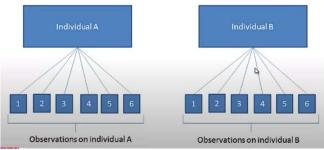


Data from Sahdra, B. K., Ciarrochi, J., Ferrari, M., Yap, K., Haller, E., Hayes, S. C., Hofmann, S. G., & Gloster, A. T. (2023). The compassion balance: Understanding the interrelation of self- and other- compassion for optimal well-being. *Mindfulness*, 14, 1997-2013. Doi: 10.1007/s12671-023-02187-4

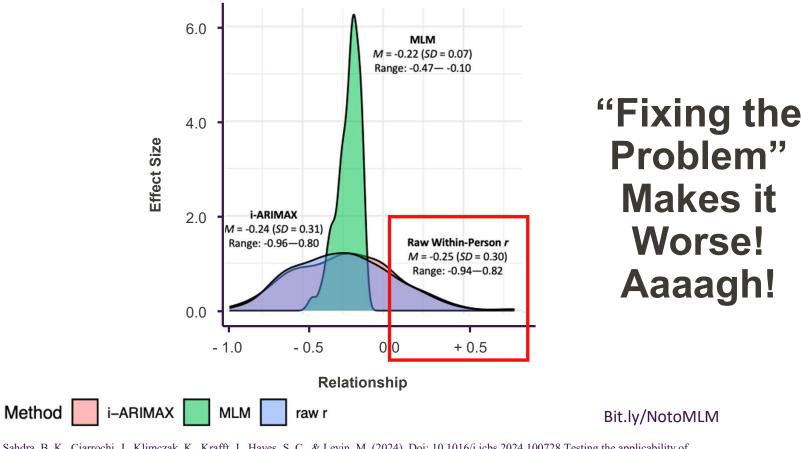
Once They Understand it, Most Biostatisticians Agree That Ergodicity is Assumed But Are Unphased Because They've Long Known the Individual is Not the Average and They Have Methods to Deal With It, Such as Multilevel Modeling



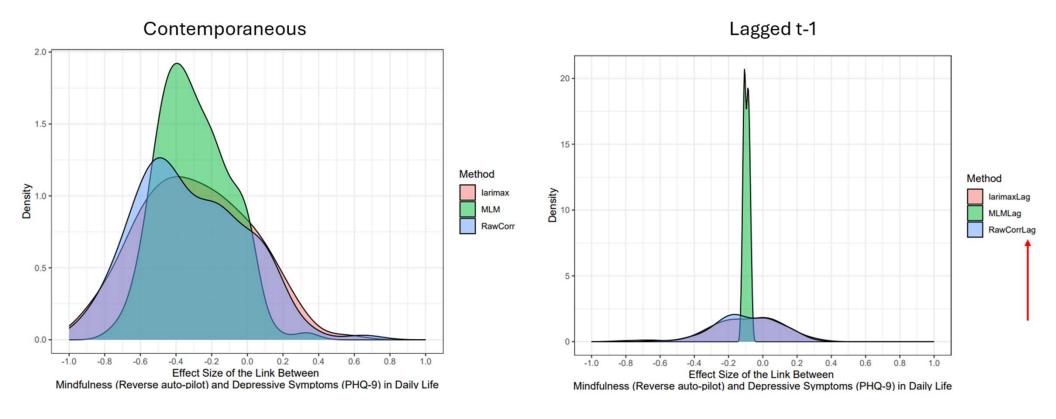
Observations on an individual (or other unit of analysis) across time



Relationship of "Doing What Matters" and Entanglement with Sadness



Sahdra, B. K., Ciarrochi, J., Klimczak, K., Krafft, J., Hayes, S. C., & Levin, M. (2024). Doi: 10.1016/j.jcbs.2024.100728 Testing the applicability of idionomic statistics in longitudinal studies: The example of 'doing what matters.' *Journal of Contextual Behavioral Science*, 32, 100728.



"cognizance of all influences that tend in however remote a degree to give more suitable races ... a better chance of prevailing speedily over the less suitable."

(Galton, 1883, p. 25)

Pearson's sub-heading of the *Annals of Eugenics*: "for the scientific study of racial problems".

Eugenics

Sir Ronald Fisher



Blue Ridge, North Carolina, 1952

Frank Yates

The Legacy We Need to Face

"only the superior stocks should be allowed entrance, not the inferior stocks in the hope—unjustified by any statistical inquiry—that they will rise to the average native level by living in a new atmosphere."

Karl Pearson, arguing against allowing Jewish immigrants fleeing from persecution to emigrate to the UK



Karl Pearson, 1925 in Vol 1 of the Annals of Eugenics (today the Annals of Human Genetics)

Our Diagnostic Concepts Were Entangle ith Eugenics From the Beginning



Emil Kraepelin, known for classifying mental disorders

"The number of idiots, epileptics, psychopaths, criminals, prostitutes, and tramps who descend from alcoholic and syphilitic parents, and who transfer their inferiority to their offspring, is incalculable"

Eugen Bleuler, originator of the term "schizophrenia" in his 1924 *Textbook of Psychiatry*

"The more severely burdened should not propagate themselves... If we do nothing but make mental and physical cripples capable of propagating themselves, and the healthy stocks have to limit the number of their children because so much has to be done for the maintenance of others, if natural selection is generally suppressed, then unless we will get new measures our race must rapidly deteriorate."

And Now We Need to Evolve Culturally and Psychologically - and Fast



















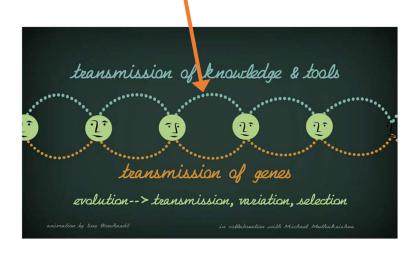








Psychology is Needed for Dual Inheritance
Theory to Be Fully
Useful



We Need to Create an Applied
Multi-Dimensional Multi-Level
Evolutionary Science
Guided This Time by Those Who
Suffer. On the Ground.
Worldwide.

Where Every Voice Matters

If You Are Not Measuring and Modeling You Are Not Listening

If You Are Not Personalizing You Are Not Changing

Assess

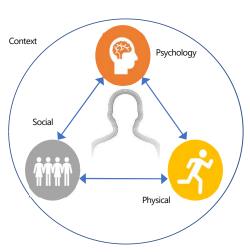
The environmental factors, and physical, psychological, and social characteristics that define an individual's experience

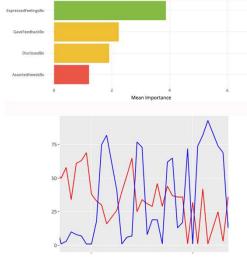
Process

with Al/analytics to pinpoint factors influencing change and personal growth for each individual and to recommend intervention kernels

Personalize

Link to personalized intervention plans that foster well-being by aligning strategies with the individual's unique profile and needs



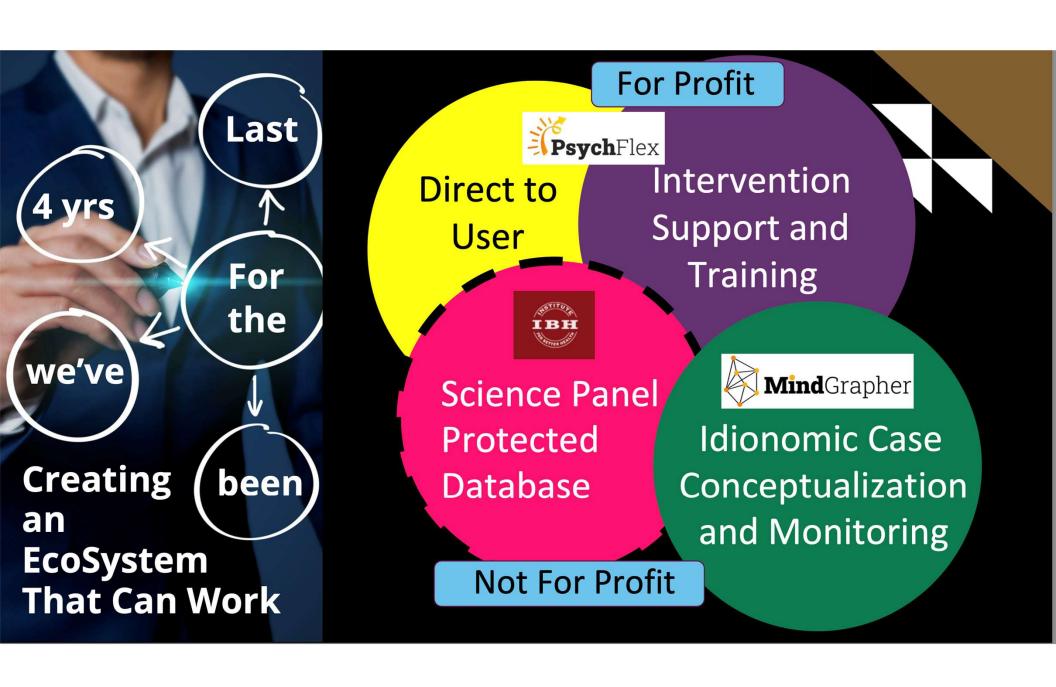




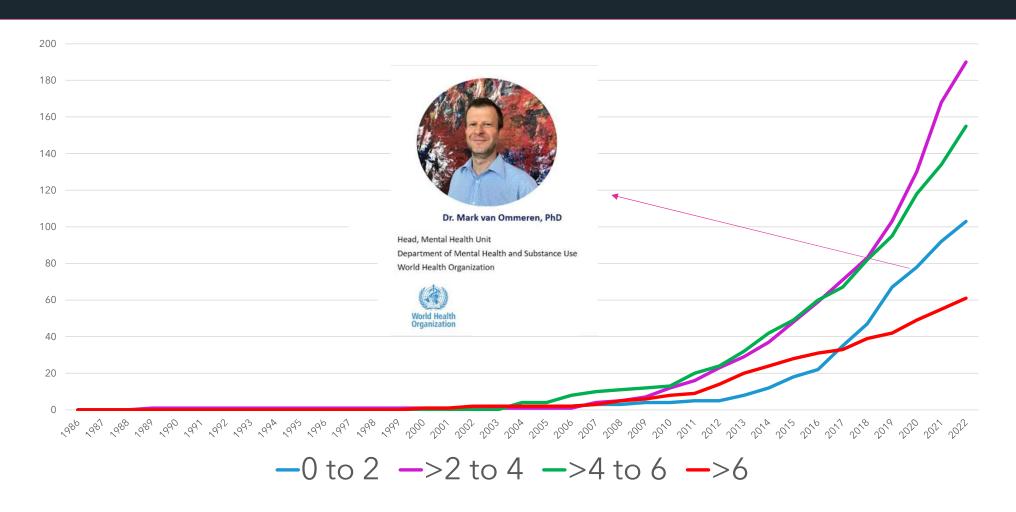








Growth of ACT RCTs by Impact Factor





What a Process-Based Approach Gives You



Health Topics >

Countries ~

Newsroom >

Emergencies ~

Data ~

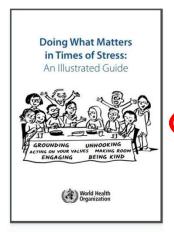
Home / Publications / Overview / Doing What Matters in Times of Stress

Doing What Matters in Times of Stress

An Illustrated Guide

29 April 2020 | Publication

"the first successful prevention program conducted among refugees experiencing psychological distress but without a mental disorder" Acarturk et al. 2022



Download (2.7 MB)

Overview

Doing What Matters in Times of Stress: An Illustrated Guide is a stress management guide for coping with adversity. The guide aims to equip people with practical skills to help cope with stress. A few minutes each day are enough to practice the self-holp techniques. The guide can be used alone or with the accompanying audio correiges.

Informed by evidence and extensive field testing, the guide is for anyone who experiences stress, wherever they live and whatever their circumstances.

Arabic Chinese Dari Farsi French

Go to Bit.ly/WHO_ACT

https://www.who.int/publications-detail/9789240003927

Impact of SH+

Gold standard RCT (N = 642) for Syrian refugees in Turkey who had not yet developed a mental health problem

RESEARCH REPORT

World Psychiatry, 21, 88–95.

Effectiveness of a WHO self-help psychological intervention for preventing mental disorders among Syrian refugees in Turkey: a randomized controlled trial

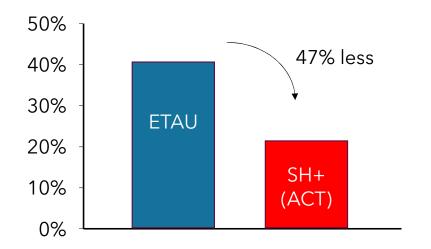
Ceren Acarturk', Ersin Uygun', Zeynep Iliklursun', Kenneth Carswell', Federico Tedeschi', Mine Batu', Sevde Eskici', Gulsah Kurt¹, Minna Antila', Teresa Au', Josef Baumgartner', Rachel Churchill', Pim Culipers', Thomas Becker', Markus Koesters', Tella Lantza', Michela Nosé', Giovanni Ostuzzii, Mariana Popai', Marianna Purgato'ii, Marit Silprandij', Gulia Turrini', Maritta Välimäle', Lauren Walker', Johannes Wancata', Elias Zanini', Ross G.White'', Mark van Ommeren', Corrado Barbui'

Department of Psychology, College of Social Sciences and Humanities, Koc University, Istanbul, Turkey; "Department of Trauma and Disasters Mental Health, Bilgi University Istanbul, Turkey; "Department of Mental Health and Substance Use, World Health Organization, Geneva, Switzerland; "WHO Collaborating Centre for Research and Training in

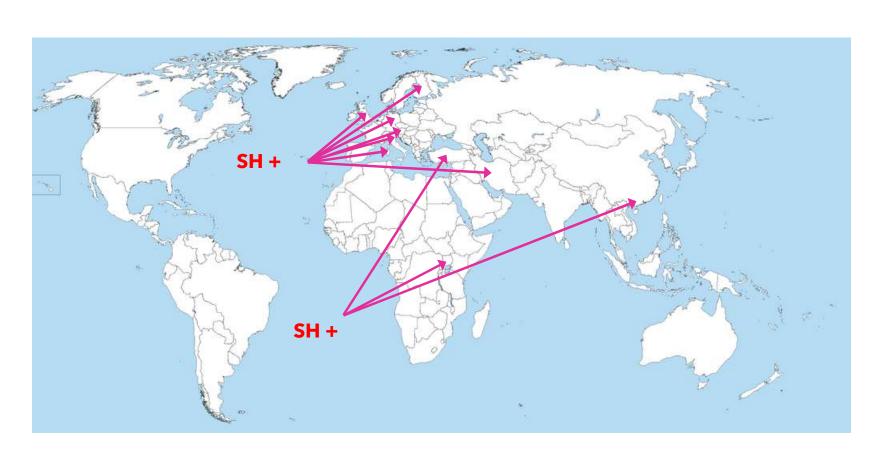
"the first successful prevention program conducted among refugees experiencing psychological distress but without a mental disorder" Acarturk et al, 2022

Impact Factor: 80

% w/ a DSM Diagnosis at 6 months F-Up



Deployment of WHO's ACT Program for Prevention and Treatment





Wow - Where We Are Today



Health Topics >

Countries ~

Newsroom >

Emergencies ~

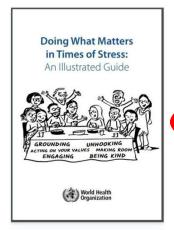
Data ~

Home / Publications / Overview / Doing What Matters in Times of Stress

Doing What Matters in Times of Stress

An Illustrated Guide

29 April 2020 | Publication



Download (2.7 MB)

Overview

Doing What Matters in Times of Stress: An Illustrated Guide is a stress management guide for coping with adversity. The guide aims to equip people with practical skills to help cope with stress. A few minutes each day are enough to practice the self-hole techniques. The guide can be used alone or with the accompanying audio correiges.

Informed by evidence and extensive field testing, the guide is for anyone who experiences stress, wherever they live and whatever their circumstances.

Arabic Chinese Dari Farsi French

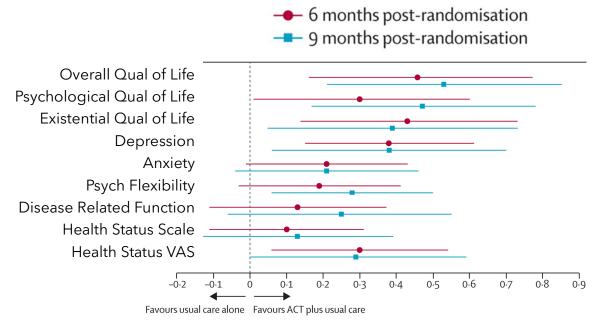
Go to Bit.ly/WHO_ACT

https://www.who.int/publications-detail/9789240003927

Gold standard RCT (N = 191) with Motor Neuron Disease



"In the absence of a therapy that significantly prolongs survival, interventions aimed at maintaining or improving quality of life in these patients are vital given the progressive nature of the condition — this trial provides definitive evidence for one such intervention." (Gould et al., 2024, p. 12)



An ACT App

THE LANCET

This journal Journals Publish Clinical G

R Michael Gendreau, Lance M McCracken, David A Williams, Juan V Luciano, Yifei Dai, Nicolette Vega, Zunera Ghalib, Kristen Guthrie, Allison C Kraus, Michael J Rosenbluth, Ben Vaughn, Jennifer M Zomnir, Dana Reddy, Andrea L Chadwick, Daniel J Clauw, Lesley M Arnold

> Fibromyalgia 2-5% of the world's population has it On average their health care costs or ~50% higher

Patient Impression of Change

ACT: 71% Reported Improvement

Active Symptom Monitoring: 22%

