

Recovery-Oriented Cognitive Therapy (CT-R) Approaches in Treating People with Serious Mental Illness Including Discussion of the 2018 TTI Initiative

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August 29, 2019



SAMHSA
Substance Abuse and Mental Health
Services Administration

Disclosure Statement

- Ellen Inverso, Psy.D. has no financial conflicts of interest to disclose.
- Paul Grant, Ph.D. receives royalties from Guilford Press.

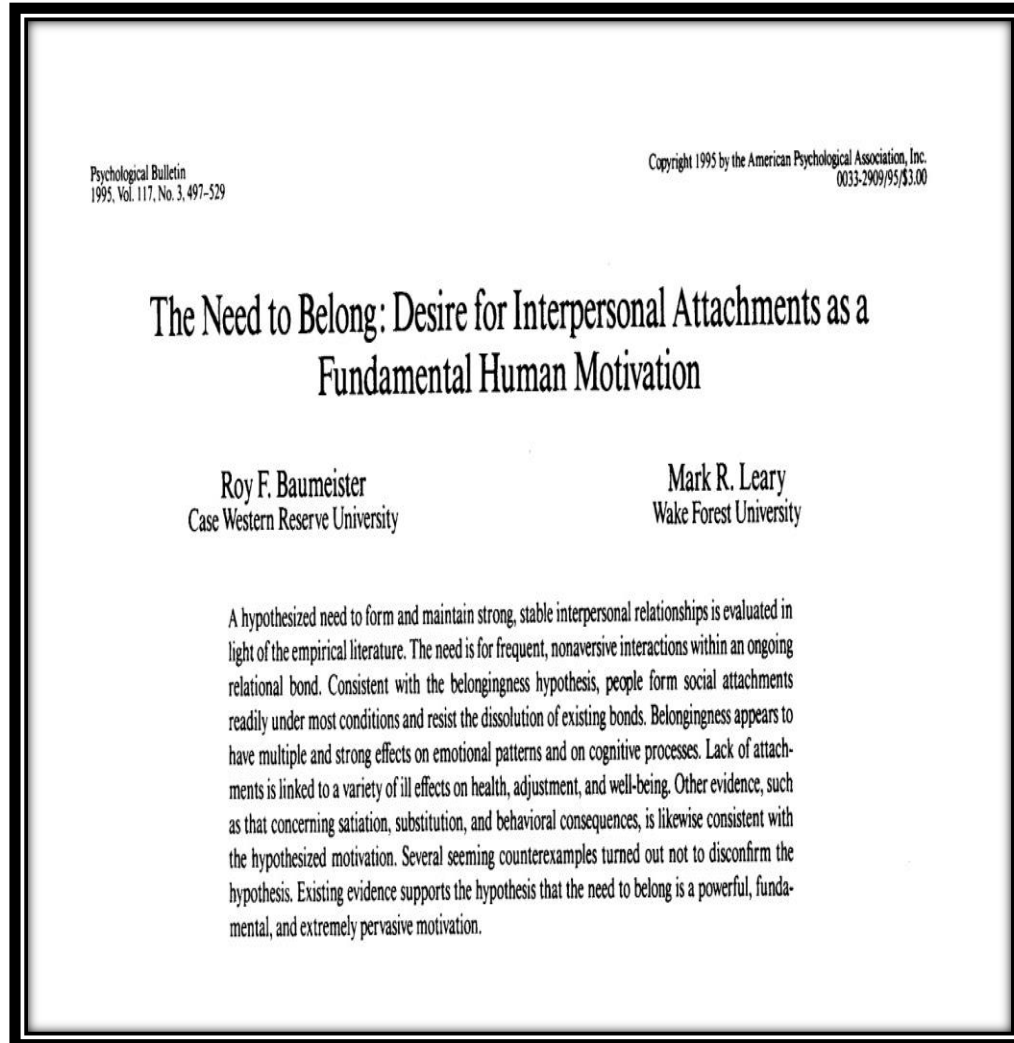
Disclaimer

This webinar was developed [in part] under contract number HHSS283201200021I/HHS28342003T from the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.

Objectives

- Introduce the theory and research underlying Recovery-Oriented Cognitive Therapy (CT-R)
- Describe the basic CT-R approach
- Describe how CT-R has been implemented across several state systems

CT-R Theory & Research



- Connection is a basic human need
- Individuals with serious mental health conditions have considerably fewer connections
- Connection is at the core of CT-R

BMJ Open Negative symptoms in schizophrenia: a study in a large clinical sample of patients using a novel automated method

Rashmi Patel,¹ Nishamali Jayatilleke,² Matthew Broadbent,³ Chin-Kuo Chang,² Nadia Foskett,⁴ Genevieve Gorrell,⁵ Richard D Hayes,² Richard Jackson,² Caroline Johnston,⁶ Hitesh Shetty,³ Angus Roberts,⁵ Philip McGuire,¹ Robert Stewart²

To cite: Patel R, Jayatilleke N, Broadbent M, et al. Negative symptoms in schizophrenia: a study in a large clinical sample of patients using a novel automated method. *BMJ Open* 2015;5:e007619. doi:10.1136/bmjopen-2015-007619

► Prepublication history and additional material is available. To view please visit the journal (<http://dx.doi.org/10.1136/bmjopen-2015-007619>).

RP, NJ, PM and RS contributed equally.

Received 8 January 2015
Revised 10 June 2015
Accepted 14 July 2015

ABSTRACT

Objectives: To identify negative symptoms in the clinical records of a large sample of patients with schizophrenia using natural language processing and assess their relationship with clinical outcomes.

Design: Observational study using an anonymised electronic health record case register.

Setting: South London and Maudsley NHS Trust (SLaM), a large provider of inpatient and community mental healthcare in the UK.

Participants: 7678 patients with schizophrenia receiving care during 2011.

Main outcome measures: Hospital admission, readmission and duration of admission.

Results: 10 different negative symptoms were ascertained with precision statistics above 0.80. 41% of patients had 2 or more negative symptoms. Negative symptoms were associated with younger age, male gender and single marital status, and with increased likelihood of hospital admission (OR 1.24, 95% CI 1.10 to 1.39), longer duration of admission (β -coefficient 20.5 days, 7.6–33.5), and increased likelihood of readmission following discharge (OR 1.58, 1.28 to 1.95).

Conclusions: Negative symptoms were common and associated with adverse clinical outcomes, consistent with evidence that these symptoms account for much of the disability associated with schizophrenia. Natural language processing provides a means of conducting research in large representative samples of patients, using data recorded during routine clinical practice.

Strengths and limitations of this study

- This is the largest known study (over 7000 participants) to investigate the relationship of negative symptoms with clinical outcomes in people with schizophrenia. Our findings demonstrate that negative symptoms are present in a substantial number of people with schizophrenia and are associated with increased hospital admission, readmission and duration of inpatient stay.
- To our knowledge, this is the first published study to use an automated information extraction method to acquire data on negative symptoms from electronic health records. This approach permits rapid acquisition of negative symptom data which is representative of everyday clinical practice in secondary mental healthcare.
- Our findings are based on data recorded by clinicians delivering routine mental healthcare who were not specifically ascertaining negative symptoms. It is therefore possible that negative symptoms were not comprehensively documented in the electronic health records from which they were identified leading to an inaccurate estimate of their prevalence in the analysed sample.

psychosocial functioning³ and a reduced likelihood of remission.^{4–6} The aetiology and pathophysiology of negative symptoms are unknown, and there are no effective

- Negative symptoms are a major contributor to disconnection
- Negative symptoms predict hospitalization and increased length-of-stay

Thinking and Depression

I. Idiosyncratic Content and Cognitive Distortions

AARON T. BECK, MD
PHILADELPHIA

The clinical and theoretical papers dealing with the psychological correlates of depression have predominantly utilized a motivational-affective model for categorizing and interpreting the verbal behavior of the patients. The cognitive processes as such have received little attention except insofar as they were related to variables such as hostility, orality, or guilt.¹

The relative lack of emphasis on the thought processes in depression may be a reflection of—or possibly a contributing factor to—the widely held view that depression is an affective disorder, pure and simple, and that any impairment of thinking is the result of the affective disturbance.² This opinion has been buttressed by the failure to demonstrate any consistent evidence of abnormalities in the formal thought processes in the responses to the standard battery of psychological tests.³ Furthermore, the few experimental studies of thinking in depression have revealed no consistent deviations other than a retardation in the responses to “speed tests”⁴ and a lowered responsiveness to a Gestalt Completion Test.⁵

In his book on depression, Kraines⁶ on the basis of clinical observations indicated several characteristics of a thought disorder in depression. The objective of the present study has been to determine the prevalence of a thought disorder among depressed patients in psychotherapy and to delineate its characteristics. An important corollary of this objective has been the specification of the differences from and the similarities to the thinking of nondepressed psychiatric patients. This paper will focus particularly on the following areas: (1) the idiosyncratic thought content indicative of distorted or unrealistic conceptualizations; (2) the processes involved in the deviations from logical or realistic thinking; (3) the formal characteristics of the ideation showing such

—Submitted for publication May 6, 1963.

From the Department of Psychiatry, University of Pennsylvania School of Medicine.

This investigation was supported in part by Research Grant M3358 from the National Institute of Mental Health.

- Dr. Beck’s revolutionary 1963 paper
- Introduction to the cognitive model and cognitive therapy

A 60-Year Evolution of Cognitive Theory and Therapy

Aaron T. Beck

Department of Psychiatry, Perelman School of Medicine, University of Pennsylvania

As I look back over the past 65 years, my professional life has been filled with what I can best describe as a continual series of adventures. For the most part, the challenges that I've confronted were of my own making: Like Theseus in the labyrinth, whenever I seemed to find a solution to a problem, I was confronted with another problem. My initial difficult confrontation occurred when I was a fellow at the Austin Riggs Center in Stockbridge, Massachusetts. I was assigned to work with a young man with a pervasive delusion of being followed by government agents. To my surprise, even though the therapy was for the most part supportive, the delusion disappeared. In 1952, I subsequently published this case history as the first reported successful psychotherapy of an individual with schizophrenia (Beck, 1952). This case report is of particular interest since 50 years elapsed before I returned to the psychotherapy of schizophrenia: a form of mental illness that is considered, then and now, to be relatively impervious to psychotherapy.

In 1956, fresh from having passed my boards in

who were not depressed. To our surprise, the patients with depression showed less hostility in their dreams than did the nondepressed individuals. This negative finding posed a dilemma for us: It would seem that the absence of manifest hostility in dreams, which had been characterized by Freud as the "royal road to the unconscious," invalidated the theory of inverted hostility. However, after examining the content of dreams for a second time, we found that the dreams of the patients with depression consistently portrayed the dreamer or the action in the dream in a negative way. Conversely, this consistent finding was not evident in the dreams of the nondepressed patients. We then reasoned that the hostility was unable to penetrate through the dreams, but it still existed at an unconscious level and assumed the form of a need to suffer. Because of this theme, we labeled these dreams as "masochistic" and found that using this negative portrayal of the dreamer as a symbol of the need for personal suffering clearly differentiated the patients with depression from those without (Beck & Hurvich, 1959).

Perspectives on Psychological Science
2019, Vol. 14(1) 16–20
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DOI: 10.1177/1745691618804187
www.psychologicalscience.org/PPS



- Dr. Beck's account of the evolution of cognitive therapy over the last 60 years

Transdiagnostic

- Panic
- Personality disorders
- Anger
- Loneliness
- Marital conflict
- PTSD
- Sleep disorders
- Depression
- Anxiety
- Substance abuse
- Criminality
- Eating disorders
- Schizophrenia
- Chronic pain
- Terminal illnesses

Cognitive Model

For Challenges-

- **Self:** weak, vulnerable, ineffective, and worthless
- **Other:** controlling, dangerous and rejecting
- **Future:** uncertain, forbidding

For Resilience and Empowerment-

- **Self:** I am a good person; I have purpose; I am successful
- **Other:** People appreciate me; I belong; things go better with other people
- **Future:** I can contribute and make a difference

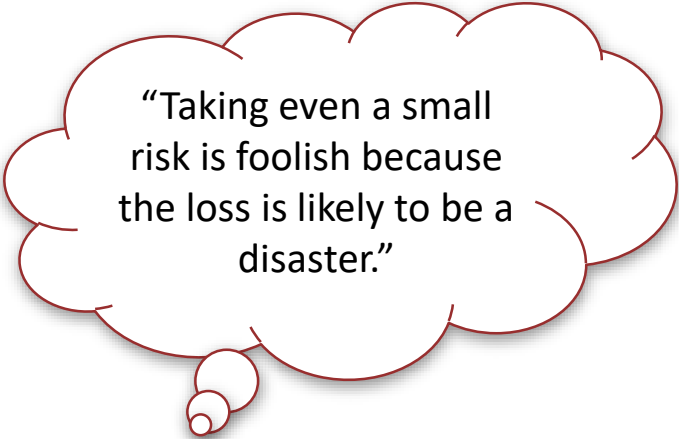
Beck, A. T. (1963). Thinking and depression: I. Idiosyncratic content and cognitive distortions. *Archives of general psychiatry*, 9(4), 324-333.

Beck, A. T. (2019). A 60-year evolution of cognitive theory and therapy. *Perspectives on Psychological Science*, 14(1), 16-20.], as well as a volume detailing the research support in depression

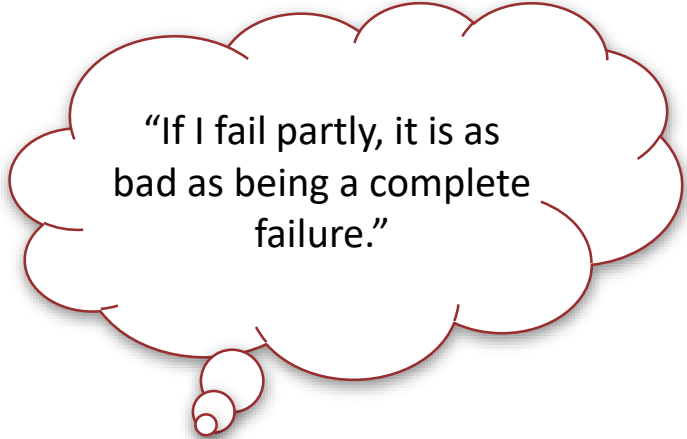
Beck, A. T., Himmelstein, R., & Grant, P. M. (2019). In and out of schizophrenia: Activation and deactivation of the negative and positive schemas. *Schizophrenia Research*, 203, 55-61. doi:10.1016/j.schres.2017.10.046

Basic Science

Defeatist Beliefs



“Taking even a small risk is foolish because the loss is likely to be a disaster.”



“If I fail partly, it is as bad as being a complete failure.”

Impact

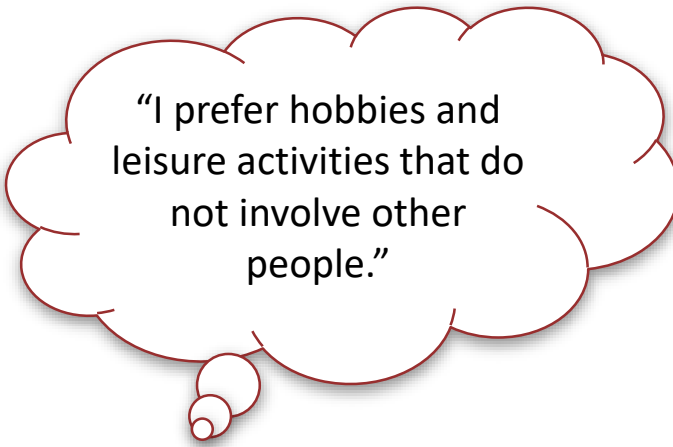
- Performance on tests of attention, memory, executive function
- Negative symptoms
- Leaving the house
- Community participation
- Work outcomes
- Effort
- Belonging

Grant, P. M., & Beck, A. T. (2009). Defeatist beliefs as a mediator of cognitive impairment, negative symptoms, and functioning in schizophrenia. *Schizophrenia Bulletin*, 35(4), 798-806. doi:10.1093/schbul/sbn008

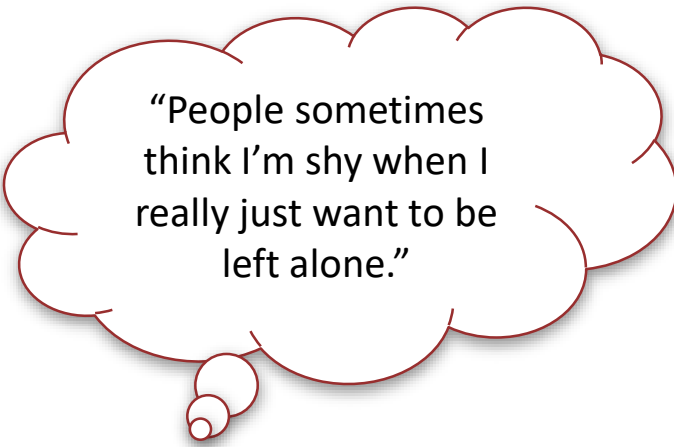
Thomas, E. C., Murakami-Brundage, J., Bertolami, N., Beck, A. T., & Grant, P. M. (2018). Beck Self-Esteem Scale-Short Form: Development and psychometric evaluation of a scale for the assessment of self-concept in schizophrenia. *Psychiatry Research*, 263, 173-180.

Reddy, F., Horan, W., Barch, D., Buchanan, R. & Gold, J.... (2017). Understanding the Association Between Negative Symptoms and Performance on Effort-Based Decision-Making Tasks: The importance of Defeatist Performance Beliefs The Cognitive Costs of Social Exclusion in Schizophrenia. *Schizophrenia Bulletin*, sbx156

Asocial Beliefs

A red-outlined thought bubble containing text.

“I prefer hobbies and leisure activities that do not involve other people.”

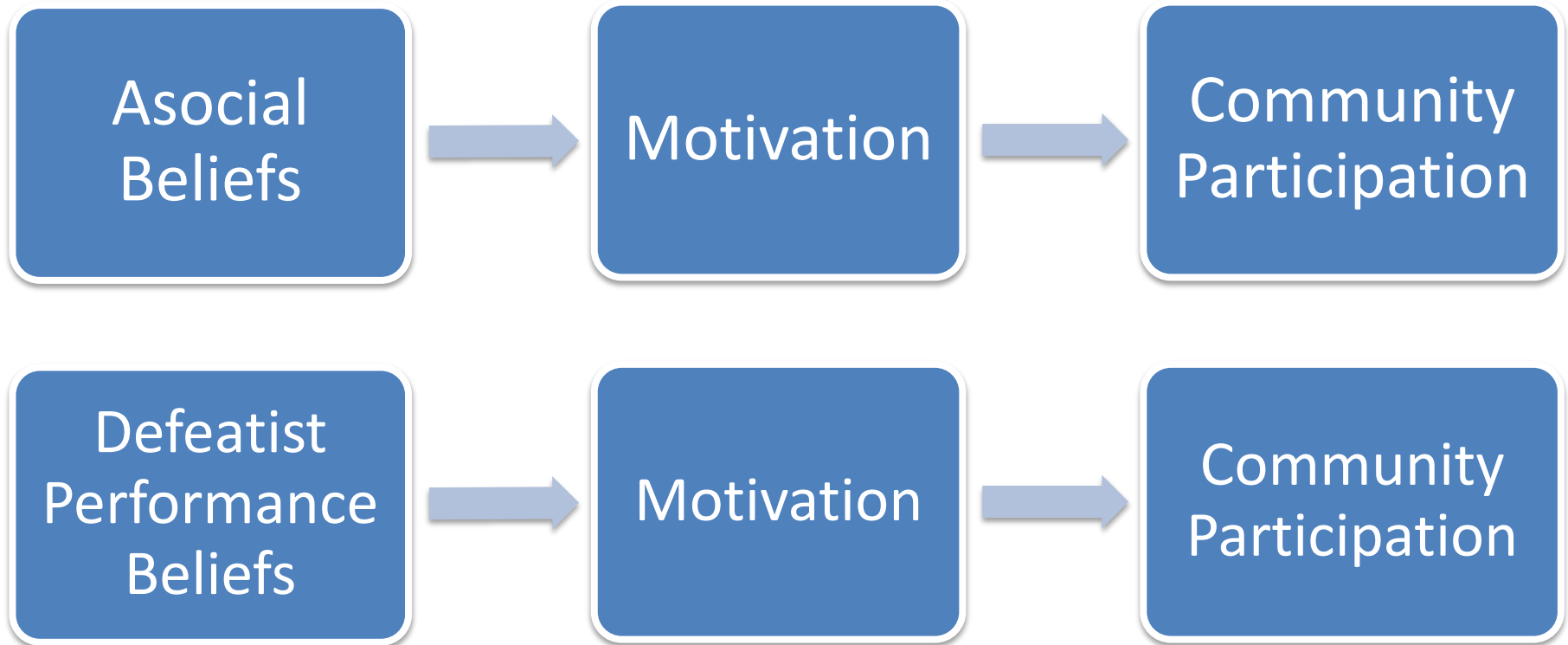
A red-outlined thought bubble containing text.

“People sometimes think I’m shy when I really just want to be left alone.”

Impact

- Access to motivation
- Community participation

Pathway Paper



Thomas, E. C., Luther, L., Zullo, L., Beck, A. T., & Grant, P. M. (2017). From neurocognition to community participation in serious mental illness: the intermediary role of dysfunctional attitudes and motivation. *Psychological Medicine*, 47(5), 822-836. doi10.1017/S0033291716003019

Sources of Neurocognitive Performance



Validation

ORIGINAL ARTICLE

ONLINE FIRST

Randomized Trial to Evaluate the Efficacy of Cognitive Therapy for Low-Functioning Patients With Schizophrenia

Paul M. Grant, PhD; Gloria A. Huh, MEd; Dimitri Perivoliotis, PhD; Neal M. Stolar, MD; Aaron T. Beck, MD

ARCH GEN PSYCHIATRY

PUBLISHED ONLINE OCTOBER 3, 2011

WWW.ARCHGENPSYCHIATRY.COM

E1

Compared to the Standard Treatment (ST) patients, CT+ ST patients had:

- Better functioning ($d = 0.56$)
- Reduced avolition-apathy ($d = -0.66$)
- Reduced positive symptoms ($d = -0.46$)

Clinical Trial Follow-Up

Six-Month Follow-Up of Recovery-Oriented Cognitive Therapy for Low-Functioning Individuals With Schizophrenia

Paul M. Grant, Ph.D., Keith Bredemeier, Ph.D., Aaron T. Beck, M.D.

Objective: The study examined six-month follow-up results and the impact of length of illness on treatment outcomes of recovery-oriented cognitive therapy (CT-R).

Methods: Sixty outpatients (mean age 38.4 years, 33% female, 65% African American) with schizophrenia or schizoaffective disorder and elevated negative symptoms were randomly assigned to CT-R or standard treatment. Assessments were conducted at baseline, midtreatment (six and 12 months), end of treatment (18 months), and follow-up (24 months, N=46 after attrition) by assessors blind to treatment condition. Global functioning, measured with the Global Assessment Scale, was the primary outcome. Secondary outcomes were negative symptoms (avolition-apathy score on the Scale for the Assessment of Negative Symptoms) and positive symptoms (total score on the Scale for the Assessment of Positive Symptoms). Length of illness indexed chronicity (less chronic, one to 12 years; more chronic, 13 to 40 years).

Results: Intent-to-treat analyses (hierarchical linear modeling) at follow-up indicated significant benefits for individuals assigned to CT-R compared with standard treatment: higher global functioning scores (between-group Cohen's $d=.53$), lower scores for negative symptoms ($d=-.66$), and lower scores for positive symptoms ($d=-1.36$). Length of illness moderated treatment effects on global functioning, such that those with a less chronic illness began to show improvements earlier (at the trend level by six months and reaching significance by the end of treatment), whereas the group with a more chronic illness did not show significant improvements until later (at follow-up).

Conclusions: CT-R produced durable effects that were present even among individuals with the most chronic illness.

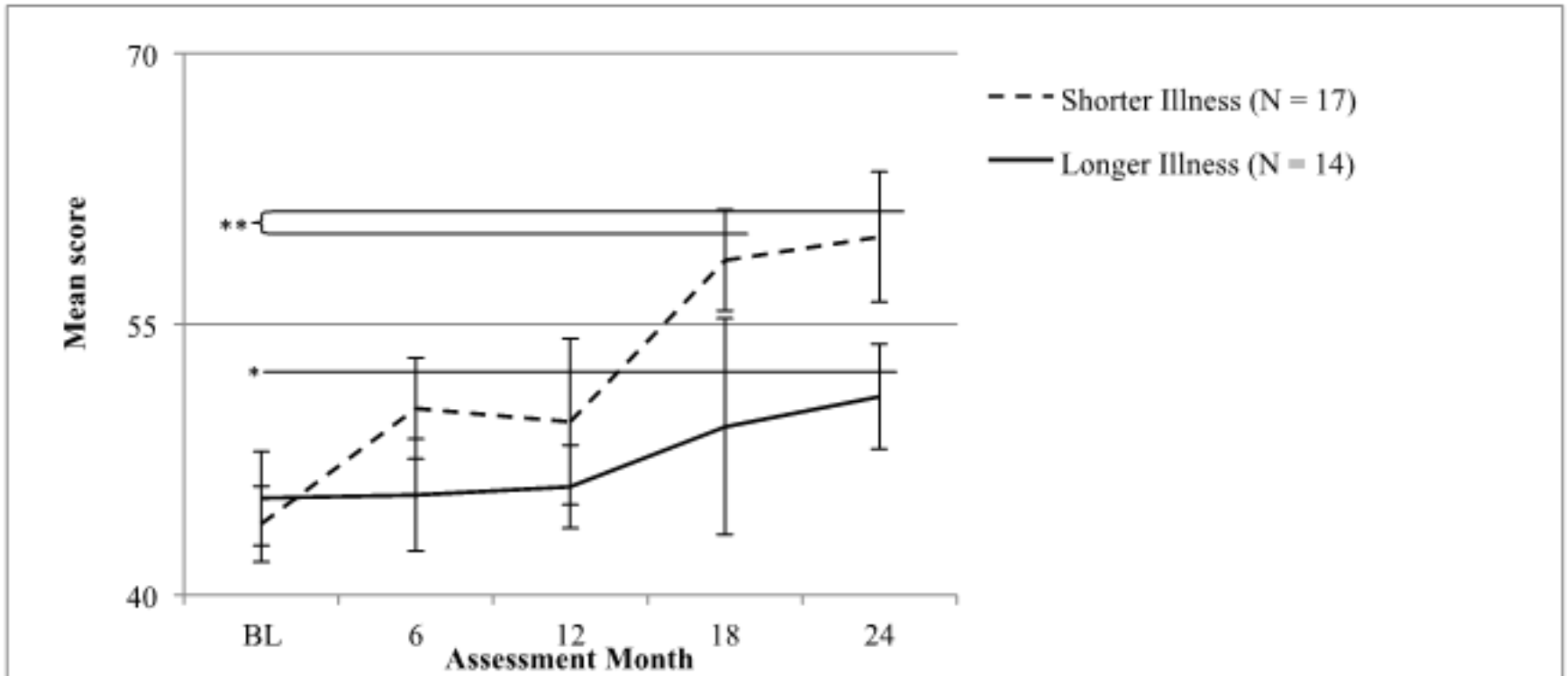
Psychiatric Services 2017; 00:1-6; doi: 10.1176/appi.ps.201600413

Gains maintained over the course of 6-month follow-up in which no therapy was delivered:

- Better Functioning ($d = 0.53$)
- Reduced Negative Symptoms ($d = -0.60$)
- Reduced Positive Symptoms ($d = -1.36$)

Clinical Trial Follow-Up

Figure 2

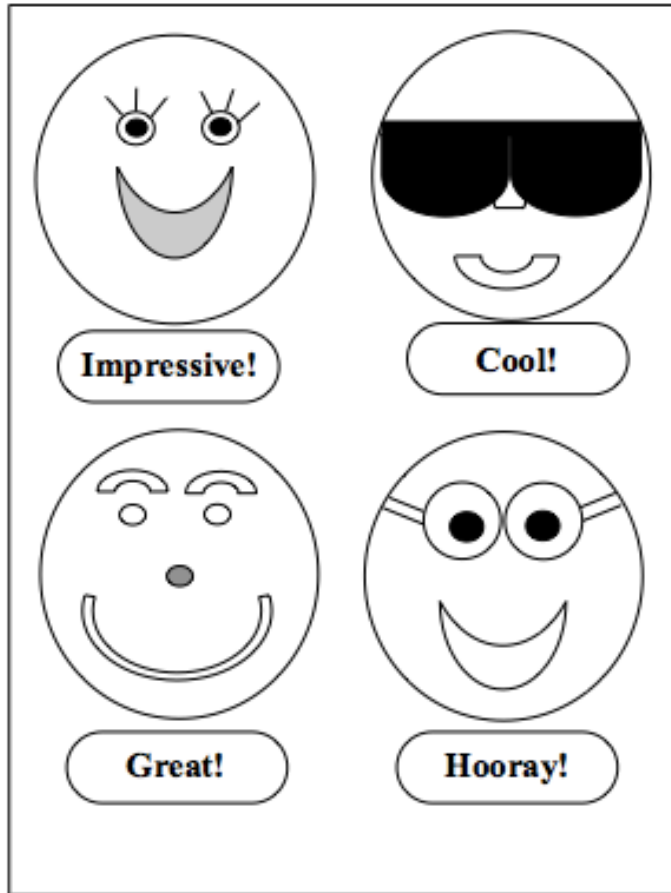


NOTE: †p < .10, * p .05, ** p < .01

Grant, P. M., Bredemeier, K., & Beck, A. T. (2017). Six-Month Follow-Up of Recovery-Oriented Cognitive Therapy for Low-Functioning Individuals With Schizophrenia. *Psychiatric Services*, 68(10), 997-1002. doi:10.1176/appi.ps.201600413

Importance of Positive Beliefs

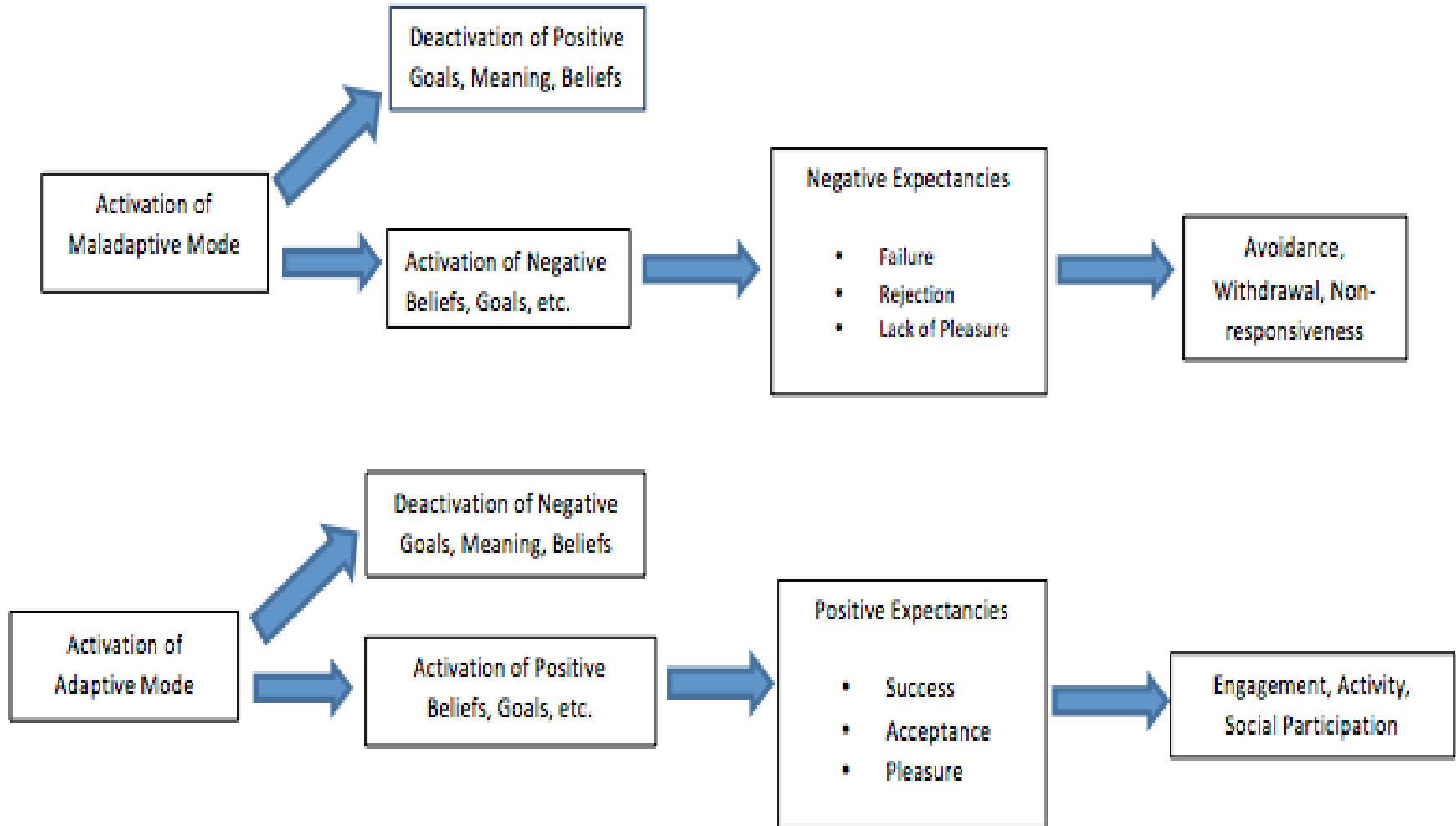
Tools Used to Promote Success



- 35 individuals with low neurocognitive scores and elevated negative symptoms
- Guided Success vs Control
- Changes in positive beliefs and mood most impact improvement in card sorting performance

Translating Science to Practice

Modes



CT-R Applications

- Individual therapy
- Group therapy
- Milieu approach
- Community-based team approach

Individual & Group Therapy Structure

Opening: Energizer



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graph TD; A[Opening: Energizer] --> B[Bridge: Shared Mission]; B --> C[Aspirations: Elicited and Developed]; C --> D[Challenges: Problem Solving in Context of Aspirations]; D --> E[Action Plan]
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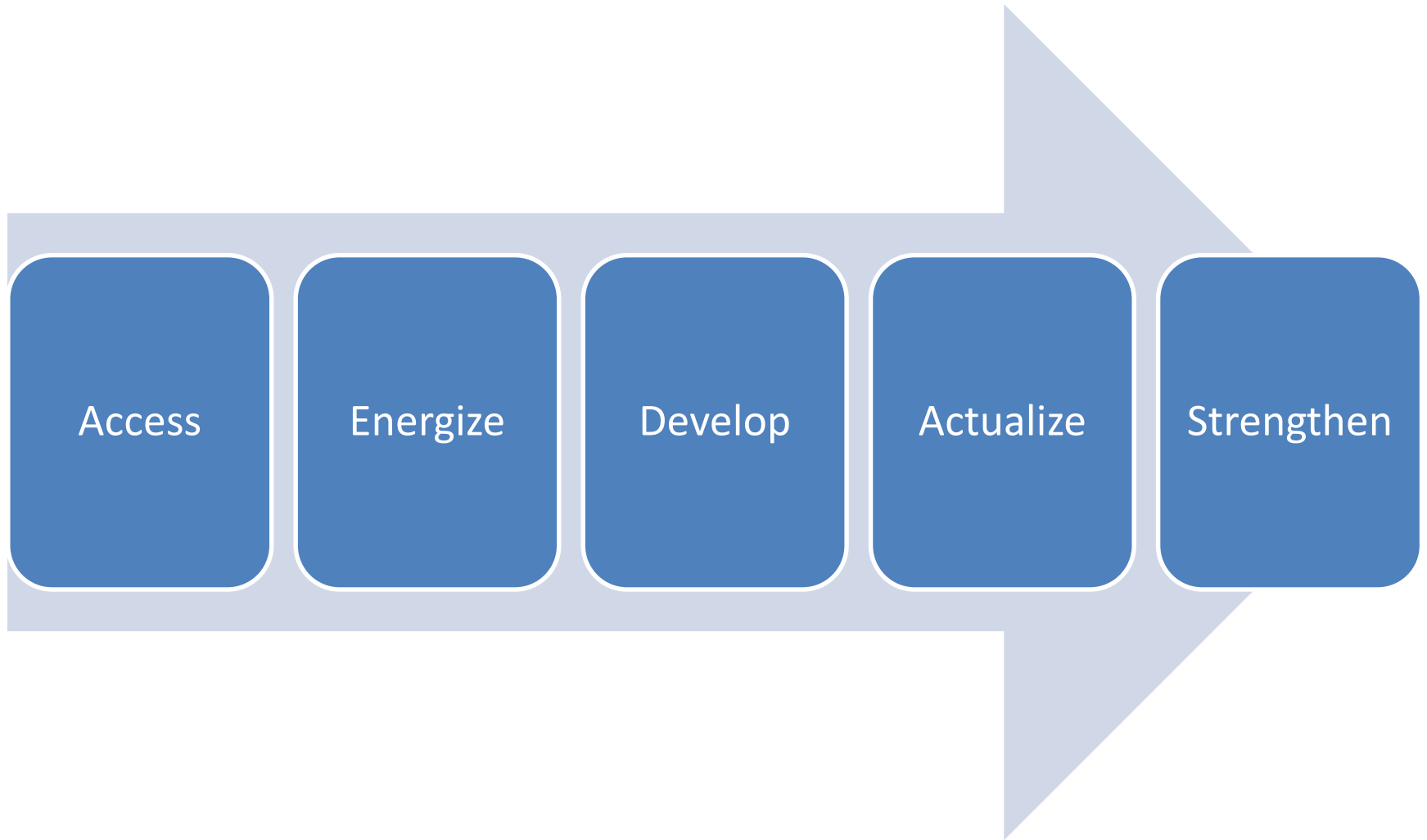
Bridge: Shared Mission

Aspirations: Elicited and Developed

Challenges: Problem Solving in Context of Aspirations

Action Plan

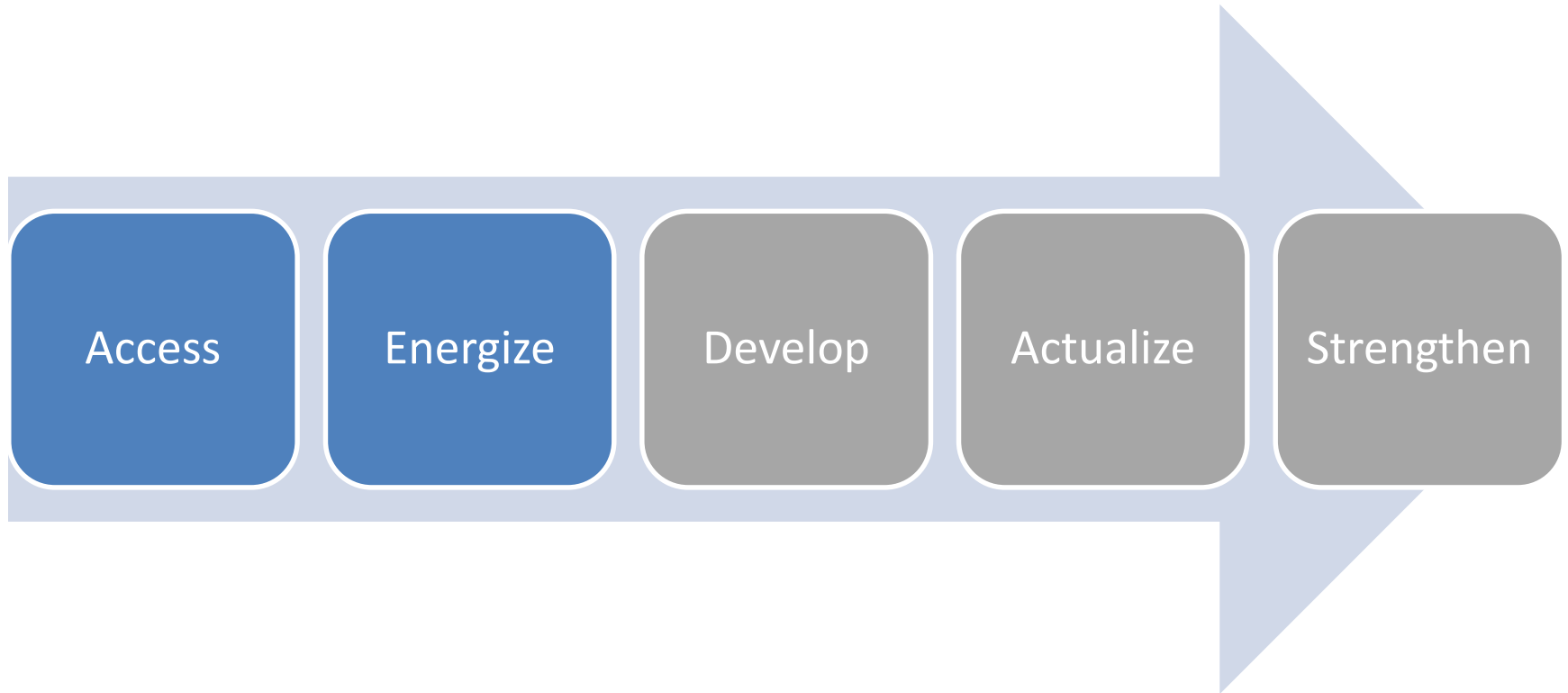
Adaptive Mode



CT-R Recovery Map

Recovery Map	
ACTIVATING THE ADAPTIVE MODE	
Interests/Ways to Engage:	Beliefs Activated while in Adaptive Mode:
ASPIRATIONS	
Goals:	Meaning of Accomplishing Identified Goal:
CHALLENGES	
Current Behaviors/Challenges:	Beliefs Underlying Challenges:
POSITIVE ACTION & EMPOWERMENT	
Current Strategies and Interventions:	Belief/Aspiration/Meaning/Challenge Targeted:

Adaptive Mode: Connection



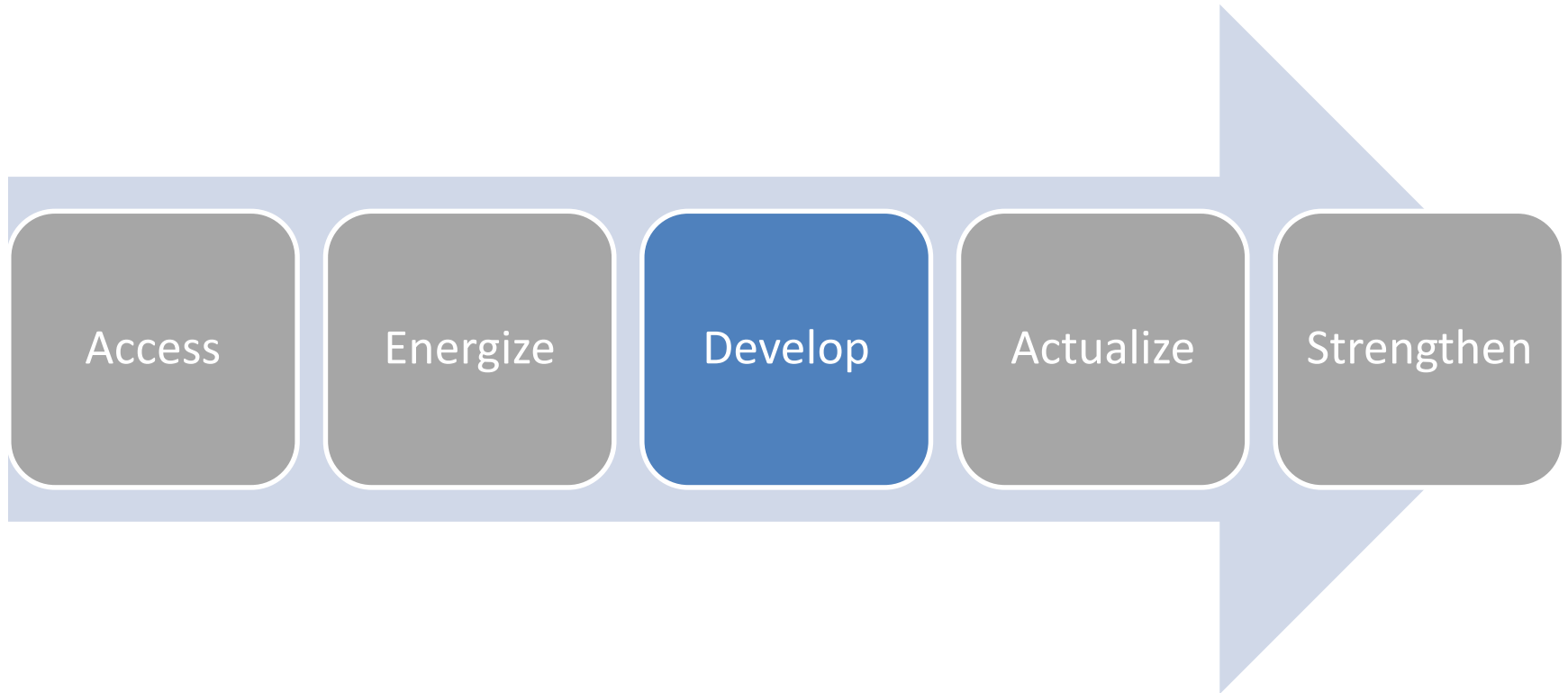
When are people at their best?



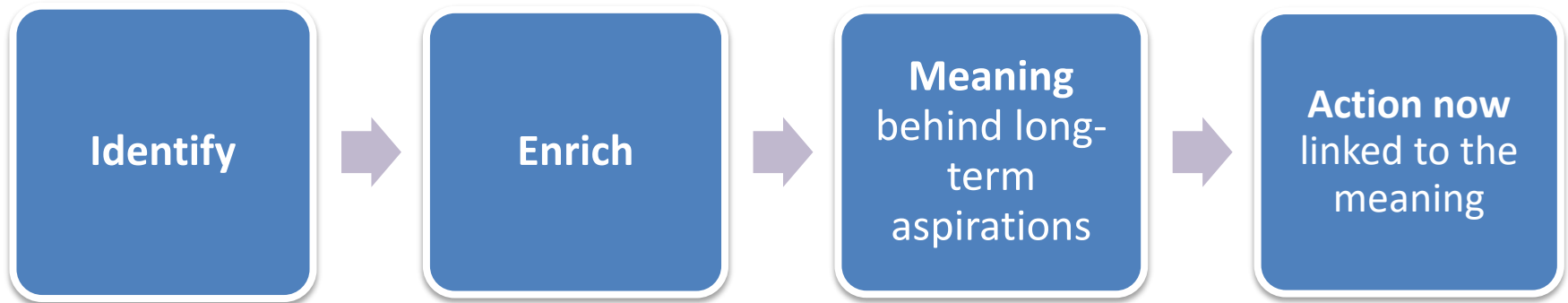
Energizing the Adaptive Mode

- Establish connection through repeated engagement in meaningful pleasurable activities
 - Reveal strengths and capabilities
 - Energize non-patient-related identity
 - Experience belonging and meaningful role
 - Develop trust
 - Begin to think about the future
- Access to motivation + energy

Adaptive Mode: Hope



Developing the Adaptive Mode



Developing the Adaptive Mode

- Steps vs. Aspirations
- Challenges vs. Aspirations
- Unlikely/Distant Aspirations
- Dangerous Aspirations

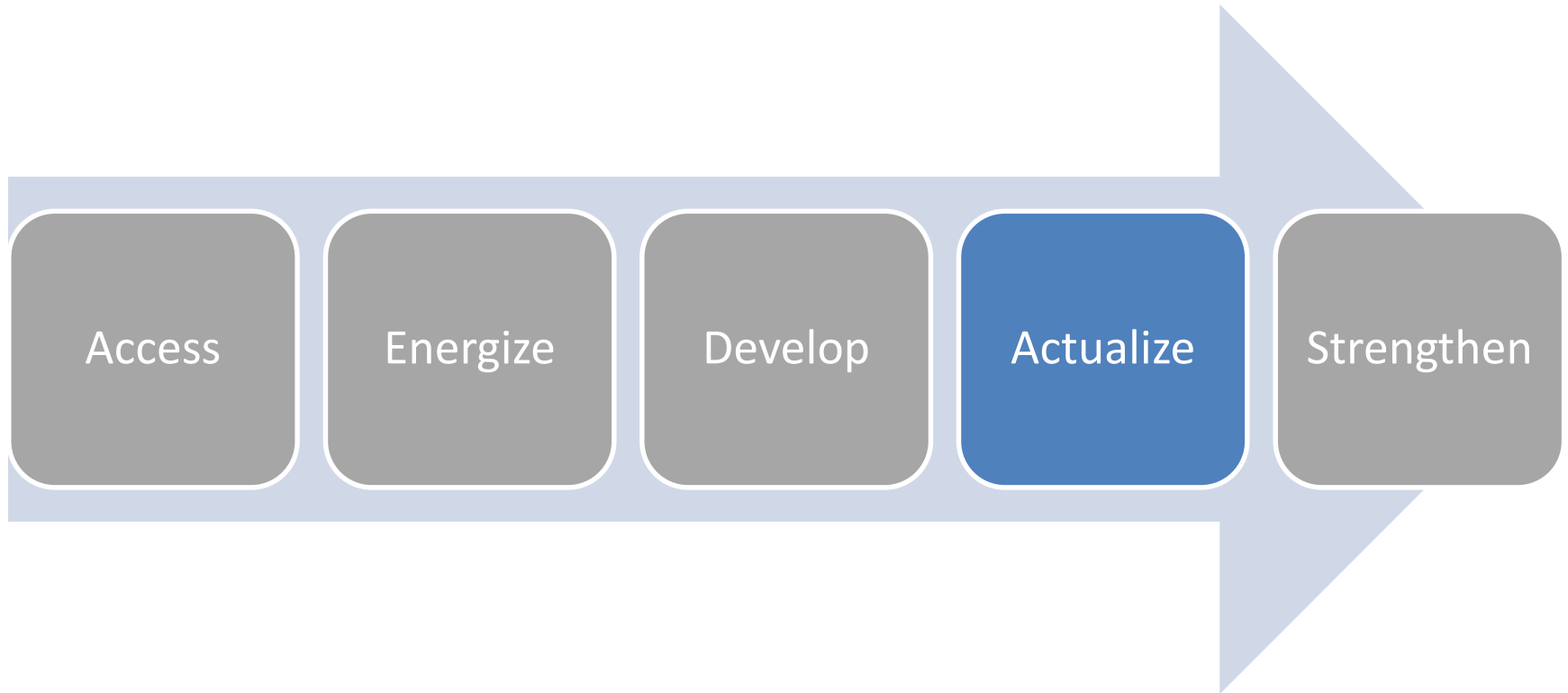


Developing the Adaptive Mode

Finding the meaning

- What would be good about that?
- What would be the best part?
- What would it mean about you to accomplish that?
- How would other people see you?
- What would it feel like?

Adaptive Mode: Purpose



Actualizing the Adaptive Mode

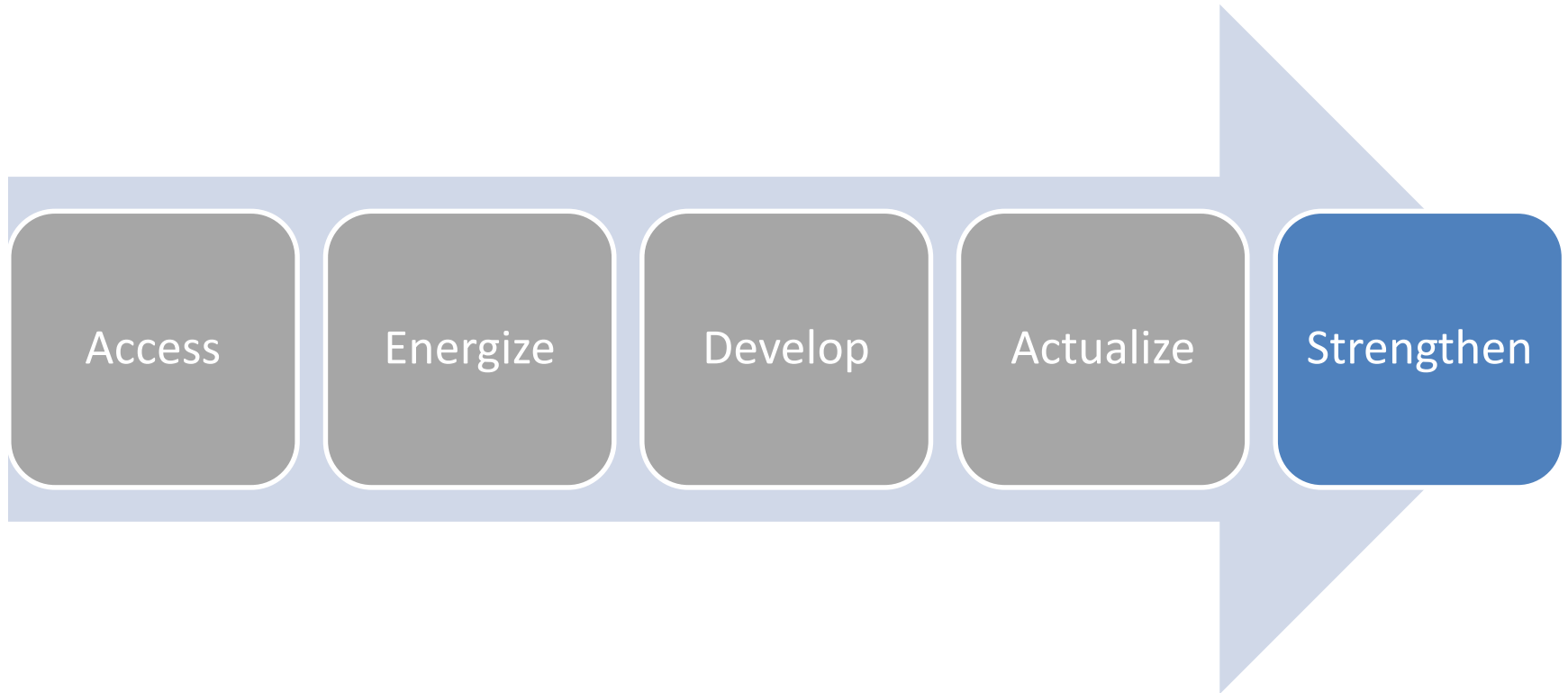
Positive Action

- Breaking down aspirations into small/achievable steps
- Addressing challenges as it impacts steps towards aspirations
- “Learning through Doing”

Actualizing the Adaptive Mode

- Community participation (going to church with family and friends, cooking family dinners, performing at an open mic)
- Meaningful role
- Growing social network
- Achieve Aspirations

Adaptive Mode: Resilience



Strengthening the Adaptive Mode

- Conclusions
 - Draw attention to positive experiences
 - Strengthening beliefs through targeted questions
 - Connection
 - Control
 - Capability
 - Energy
- Developing resiliency in the face of stress and challenges
- Adaptive mode becomes dominant mode

Drawing New Conclusions: Guided Discovery

When were there times when you felt better/worse?

In what ways did you have more/less control?

How did this go better or worse than expected?

How did this get you closer to or further from what you want?

How would it be helpful to do more or less of this?

What does it mean about you that you accomplished all this?

Resilience

Building Resiliency

Troubleshooting difficult experiences

- Perceived/real rejection
- Perceived/real failure
- Disappointment
- Feeling overwhelmed

Implementation

Outcomes during six months of supervised recovery-oriented cognitive therapy for a sample of 376 individuals with low-functioning schizophrenia*

*100 (27%) treated in state hospitals, 130 (34%) treated by ACT teams, and 146 (39%) treated in outpatient settings.

**Recovery dimensions derived from <http://www.samhsa.gov/recovery>. Data based on therapist reports of patient outcomes.

***All 376 had significant functional impairment: prominent negative symptoms = 214 (57%); delusions = 184 (49%); hallucinations = 163 (43%); thought disorder = 26 (7%); behavioral obstacles such as substance use, aggressive behavior, hypervigilance = 304 (81%); environmental obstacles = 192 (51%); and physical health problems = 28 (7%).

Recovery Dimension **	n (%)
Purpose <ul style="list-style-type: none"> Engaged in positive activity outside sessions: 189 (39%) Moved toward valued aspirations: 147 (39%) Began participating in a hobby Obtained employment: 34 (17%) Took on a new/unique role: 24 (6%) Started participating in school/college: 9 (2%) 	220 (59%)
Community <ul style="list-style-type: none"> Spent time with others outside the treatment team Joined an organization Started dating Made a new friend 	107 (28%)
Health <ul style="list-style-type: none"> Engaged in physical activity outside sessions Experienced improvement in obstacles *** to recovery 	186 (49%)
Home <ul style="list-style-type: none"> Experienced an improvement in environmental obstacles (legal, housing, economic, support system) 	36 (10%)
PROGRESS WITHIN AT LEAST ONE RECOVERY DIMENSION	260 (69%)

Philadelphia Outcomes

Sample = 116 individuals

Incarceration

- **Resulted in a 83.9% decrease in jail stay**

Hospitalization

- **Resulted in 50.5% decrease in hospital level of care**

New York

- Staten Island
 - South Beach
 - State Hospital
 - Transitional Living Residences
 - Mobile Crisis Team
- Rockland
- Manhattan
- Columbia University



New York State Outcomes

- 50% of previously non-responsive group moved to less restrictive care
- Reduced loneliness
- Decreased hopelessness
- Increase in flourishing
- Increase in functional skills

Montana

- Montana State Hospital
- AWARE
 - 2 Programmatic Residences
- Center for Mental Health
 - Outpatient
 - Day Treatment
 - Residential
 - Vocational
- Train-the-Trainer
 - State hospital champions
 - Outpatient champions
 - State Administrators



Vermont

- Vermont Psychiatric Hospital (State Hospital)
- Pathways
 - Housing First
 - Soteria Program
- Washington County Mental Health Services
- Clara Martin Center
- Middlesex Therapeutic Residence



Georgia

- Phase 1:
 - State Hospital
 - Community Treatment Team
 - Community Service Board
 - Continuity of Care
- Phase 2:
 - Center of Excellence (COE)
 - Retraining the state
 - First Episode
- Phase 3:
 - Peers
 - Supervisor
 - Adolescent



- 4 Behavior Health Homes
 - Oaks Integrated Care
 - All Access Mental Health
 - Catholic Charities Dioceses of Trenton
 - Hackensack-Meridian Health



Massachusetts

- Tewksbury State Hospital
- Carney Hospital (Acute setting)
- Department of Mental Health Brockton PACT
- Behavioral Health Network's Forensic PACT
- Service Net's Prevention and Recovery in Early Psychosis (PREP West)
- Eliot Community Services' PATH team (Project for Assistance in Transition from Homelessness)



Specialists

- Case managers
- Direct-care staff
- Social workers
- Psychologists
- Psychiatrists
- Art and rec therapists
- Nurses
- Occupational therapists
- Peers
- Drug & Alcohol

Sustainability

Training CT-R champions

CT-R informed documentation

Ongoing internal CT-R consultation among staff

Learning collaborative

Quality & Fidelity Scale

Benchmarks

- Helps everyone involved know
 - what we're going for
 - how well they're doing
- Oriented toward specific outcomes and different sustainability models

SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities.

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