

Cognitive Enhancement Therapy:
learning to acquire social wisdom & repair cognitive performance

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agenda {

- intro to CET
- brain games
- social groups
- clinician training

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learning objectives {

- define components of Cognitive Learning Enhancement
- identify appropriate populations for this intervention
- describe the purpose of computer exercises
- explain the characteristics of a coach for CET
- identify resources for further training

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part I: intro to CET

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CET facilitates the process of acquiring social wisdom and enhancing neurocognition

Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.

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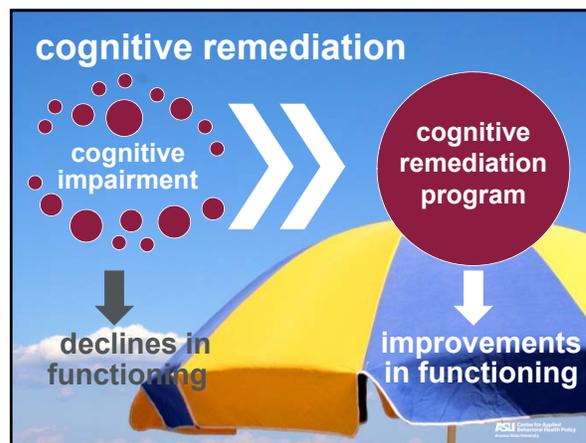
“...improvement in the cognitive performance of people with schizophrenia may generalize both to neuropsychological test performance and to daily activities that require those cognitive skills” (Medalia & Choi, 2009, p.354)

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70-80%
of people with schizophrenia show cognitive impairments relative to the general population

nearly 100%
have cognitive deficits relative to their own ability level prior to their condition

Medalia & Choi, 2009



cognitive remediation

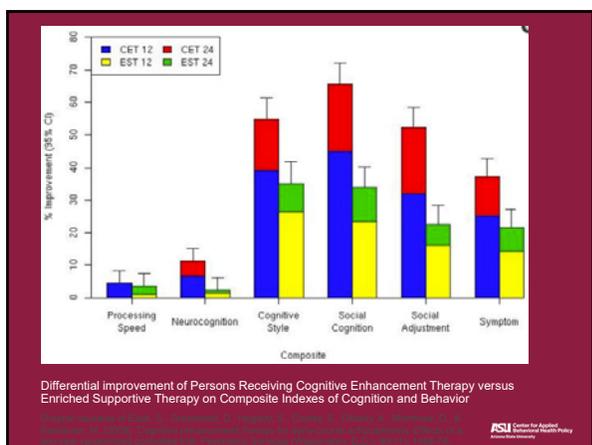
- drill & practice executive training*
- therapy sessions**
- instructional techniques***

*Executive training exercises may be paper and pencil or computer exercises.
 **Therapy sessions to supplement training tasks in order to translate the executive skills into completing everyday tasks. (Medalia & Choi, 2009)
 ***Techniques vary to include peer support, coach or therapist.

cognitive enhancement therapy (CET)

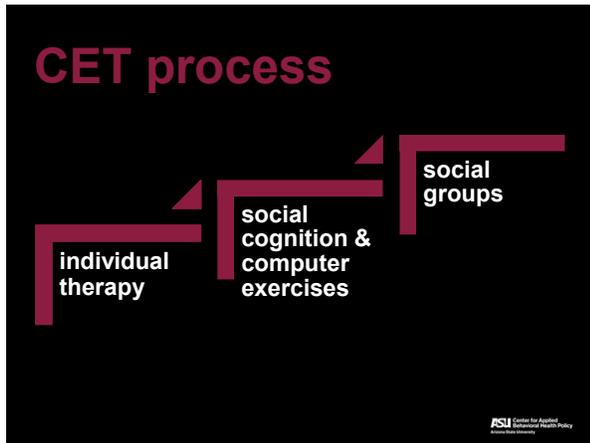
- SAMHSA recognized Evidence-Based Practice
- helps individuals recovering from schizophrenia and other major mental health conditions
- improve their processing speed, cognition (attention, memory, and problem-solving)
- implications for increasing social wisdom and vocationally effective

Substance Abuse and Mental Health Services Administration National Registry of Evidence-Based Programs and Practices. (January 2012). Cognitive Enhancement Therapy. Retrieved from <http://legacy.nreppadmin.net/ViewIntervention.aspx?id=273>



cognitive enhancement therapy (CET)

- 18 month course
- 60 hours of computer-based neurocognitive training
- 45 social-cognitive group therapy sessions
- “Comprehensive, developmental approach to the remediation of social- and nonsocial-cognitive deficits” (Eack, Schooler & Ganguli, 2007)
- involves the process of gaining “gistful” social cognition related to context appraisal and perspective taking



evidence for CET

- CET has an extensive research base with individuals with multiple psychiatric conditions
- designed as a one-time treatment that results in improved functioning continuing after graduation
- has been tested in First Episode Programs and with children and adults
- data suggests that CET is most effective when given in the broader context of psychosocial rehabilitation

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rationale for CET

- there are effective medications to control the positive symptoms of mental illness
- however, many individuals still suffer from cognitive impairments that limits their functional, social, and vocational skills
- cognitive domains most impacted in schizophrenia include memory, attention, reasoning, problem-solving, and social cognition

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cognitive impairment is a core feature of schizophrenia – strongly related to functioning in areas such as work, social relationships, and independent living

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CET engages the participant in a learning activity to enhance the neurocognitive skills relevant to overall recovery goals.

cognitive drills enhance cognitive functioning

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how do you interpret the drawing?

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Cognitive functioning is a robust predictor of response to psychiatric rehabilitation including outcomes such as work, social skills, and self-care.

McGurk, S.R., Twamley, E.W., Sitzer, D.J., McHugo, G.J., & Mueser, K.T. (2007). A meta-analysis of cognitive remediation in schizophrenia. *American Journal of Psychiatry*, 164 (12), 1791-1802.



neuroplasticity & CET

- alterations in neuroplasticity are hypothesized to underpin cognitive deficits
- neuroplasticity may offer an avenue towards cognitive remediation
- principles to consider in designing remediation interventions:
 - ensuring sufficient intensity and duration of remediation programs
 - "bottom-up" training that proceeds from simple to complex cognitive processes
 - individual tailoring of remediation regimens



what does it do?

CET is designed to improve neurocognitive abilities such as...

- attention
- working memory
- cognitive flexibility
- planning
- executive functioning

...all of which lead to improved social and vocational functioning



CET participant selection

- symptomatically stable without positive psychotic symptoms
- medication compliance
- IQ of >80
- not currently experiencing alcohol and drug abuse (recommended to have 3 months abstinence)
- not diagnosed with severe antisocial personality disorders

Hogarty, G.E. & Greenwald, D.P. (2006). *Cognitive Enhancement Therapy: The Training Manual*. University of Pittsburgh.



participant assessment

Baseline assessment is essential for the individual to understand how s/he is functionally challenged.

Recommendations from Hogarty in the *Cognitive Enhancement Therapy: The Training Manual*

- Structured Interview
- Cognitive Style Characteristics
- Social Cognition Characteristics



part IV: brain games



cognitive enhancement training

planned exercises push demands of a patient's cognitive skills

- improves upon existing skills
- helps to acquire new skill sets



Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



how do computer exercises fit?

does training improve social skills?

coaching and completing computer exercises

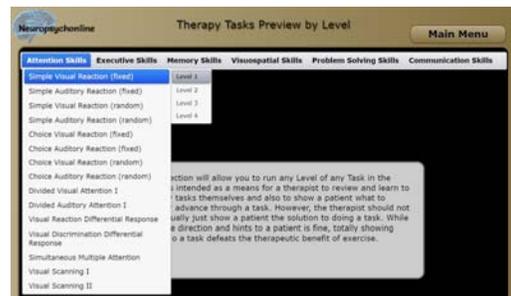


an opportunity to forge and practice social skills

Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



Neuropsychonline Psychological Software Services



attention skills

- simple, focused attention to complex, multiple simultaneous attention with stimulus discrimination & differential response requirements
- speed, accuracy, & consistency are measured

Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



executive skills

range from simple concept formation to complex sequencing, organizing, and multiple simultaneous mental operations



memory skills

- series of memory skills training exercises that address different avenues and modalities of information intake, storage, and recall
- learn and practice different techniques of compensation as well as the direct improvement of memory skills through better attention and executive skills

Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



visuospatial skills

visual intake and processing skills ranging from simple perception of luminosity to line, angle, shape and motion detection and analysis

Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



problem solving



- focus on information intake, information analysis, inductive and deductive reasoning, and solution development
- learn and practice different techniques of data analysis and problem solving

Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



communication skills

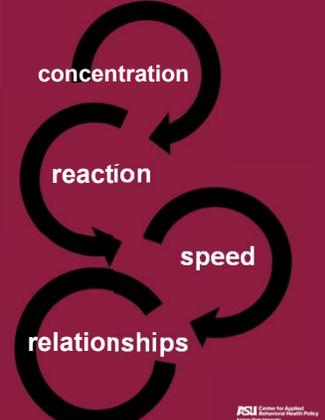
learn and practice skills involved in communication and speech/language functioning ranging from auditory attention, perception, processing, comprehension, and expression



Bracy, O. (2017). Neuropsychonline [The Neuropsychonline System]. Indianapolis.
 Hogarty, G.E. & Greenwald, D.P. (2006). Cognitive Enhancement Therapy: The Training Manual. University of Pittsburgh.



result of building skills



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“One must keep in mind that cognitive rehabilitation is not a process that can occur overnight, even when one is using high tech software and computers.”

Neuropsychonline, 2017



practice with exercises

can I have a volunteer?



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discussion

- designed to complete tasks in order
- clinician vs. peer coach
- adequate space and access to computer

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part V: social groups

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People with schizophrenia or other severe mental illnesses tend to avoid social contacts (Hogarty, 2006).

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social skills groups

- after neurocognitive training
- groups are 1.5 hours each and are held weekly
- 45 social-cognitive group sessions in the program
- groups of six to eight participants

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purpose of social groups

- practice perspective-taking
- improve social-cognitive abilities
- enhance social comfort
- understand the "gist" in social interactions
- work towards individual recovery goal
- manage emotions



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group objectives

- participants feel more comfortable in social settings
- become more aware of others
- increase appropriate behavior
- increase motivation in social and vocational goals

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components of social groups

- Experiential learning and real-life cognitive exercises
- Present homework and lead homework reviews
- Provide feedback to peers
- Receive psychoeducation on mental illness

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group design

- CET Manual from Gerald E. Hogarty, MSW and Deborah P. Greenwald, Ph.D. as reference
- participants begin to feel more comfortable in social settings
- become more aware of others
- increase appropriate behavior
- increase motivation in social and vocational goals

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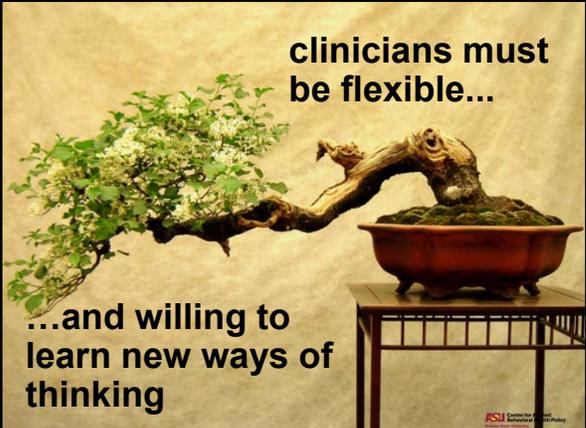
part VI: clinician training

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role of clinician

- provide active, supportive coaching
- keep participants on task
- foster flexibility in thinking and communication
- encourage greater understanding of social cognition
- guide greater elaboration and organization in thinking

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clinicians must be flexible...

...and willing to learn new ways of thinking

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consideration for communication style

a motivational interviewing approach {

- engaging the person in CET
- supporting on-going motivation to participate

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MI definition

*“Motivational Interviewing is a **collaborative** conversation style for strengthening a person’s own **motivation** and **commitment** to change.”*

(Miller & Rollnick, 2013)



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What is one of the strongest predictors of success in a helping relationship?

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YOU

(the “working alliance”)

(the “working relationship”)

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core components of MI

- **O**-open-ended questions
- **A**-affirmations
- **R**-reflections
- **S**-summaries



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basic considerations for clinicians

- clear level of interest
- knowledge of the population
- an open mind
- an ability to resist a traditional directing helping style
- being curious
- perseverance

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clinician characteristics

- tolerance for ambiguity
- cognitive flexibility
- able to adapt to new ways of thinking and acting
- ability and the disposition to think abstractly
- master a theoretical understanding of the disorders they are treating

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clinician characteristics... cont'd

- desire for and a love of learning
- open to intellectual growth
- similar role as teacher - an educator and a mentor
- desire to work as part of a team
- a sense of playfulness
- optimistic
- creative

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clinician/coach training: developing strategies to coach clients

- allow clinicians-in-training to struggle
- coach staff to develop their own strategies
- strategies are validated and expanded

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methods to train clinicians

- screenshots of exercises with strategies and tips
- video recording with instructions voice-over
- assigned reading
- model coaching while staff completes exercises

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closing discussion

Where do you see a need for CET in the community?

How might you take the next steps to implement CET?

What considerations might you need to make prior to implementation?

thank you!

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Cognitive Enhancement Therapy Resource Guide

CET ARTICLES

ALCOHOL USE DISORDERS	
Title:	A role for cognitive rehabilitation in increasing the effectiveness of treatment for alcohol use disorders
Citation:	Bates, M., Buckman, E., & Nguyen, J. (2013). A Role for Cognitive Rehabilitation in Increasing the Effectiveness of Treatment for Alcohol Use Disorders. <i>Neuropsychology Review</i> , 23(1), 27-47.
AUTISM SPECTRUM DISORDERS	
Title:	Cognitive enhancement therapy for adults with autism spectrum disorder: Results of an 18-month feasibility study
Citation:	Eack, S., Greenwald, M., Hogarty, D., Bahorik, P., Litschge, S., Mazefsky, S., & Minshew, A. (2013). Cognitive Enhancement Therapy for Adults with Autism Spectrum Disorder: Results of an 18-month Feasibility Study. <i>Journal of Autism and Developmental Disorders</i> , 43(12), 2866-2877.
Title:	Working memory of impairments in ASD
Citation:	Hogarty, G.E. & Greenwald, D.P. (2006). <i>Cognitive Enhancement Therapy: The Training Manual</i> . University of Pittsburgh.
Quote:	<ul style="list-style-type: none"> • Autism Spectrum Disorders are characterized by executive function • Working memory (WM) is a core component of executive function
SCHIZOPHRENIA	
Title:	Treatment of negative symptoms
Citation:	Aleman, Lincoln, Bruggeman, Melle, Arends, Arango, & Knegtering. (2017). Treatment of negative symptoms: Where do we stand, and where do we go? <i>Schizophrenia Research</i> , 186, 55-62.
Quote:	<ul style="list-style-type: none"> • Negative symptoms, e.g. social withdrawal, reduced initiative, anhedonia and affective flattening, are notoriously difficult to treat. • Some positive findings have been reported, with the most robust improvements observed for social skills training. Although cognitive behavior therapy shows significant effects for negative symptoms as a secondary outcome measure, there is a lack of data to allow for definite conclusions of its effectiveness for patients with predominant negative symptoms.
Title:	Cognitive remediation: A new generation of psychosocial interventions for people with schizophrenia
Citation:	Eack, Shaun M. (2012). Cognitive Remediation: A New Generation of Psychosocial Interventions for People with Schizophrenia. <i>Social Work</i> , 57(3), 235-246.

Title:	Negative symptom improvement during cognitive rehabilitation: Results from a 2-year trial of Cognitive Enhancement Therapy
Citation:	Eack, Mesholam-Gately, Greenwald, Hogarty, & Keshavan. (2013). Negative symptom improvement during cognitive rehabilitation: Results from a 2-year trial of Cognitive Enhancement Therapy. <i>Psychiatry Research</i> , 209(1), 21-26.
Title:	Gerard E. Hogarty (1935--2006): combining science and humanism to improve the care of persons with schizophrenia
Citation:	Eack, S., Schooler, N., & Ganguli, R. (2007). Gerard E. Hogarty (1935–2006): Combining science and humanism to improve the care of persons with schizophrenia. <i>Schizophrenia Bulletin</i> , 33(5), 1056-1062.
Title:	Cognitive enhancement therapy for early-course schizophrenia: effects of a two-year randomized controlled trial
Citation	Eack, S., Greenwald, D., Hogarty, S., Cooley, S., Dibarry, A., Montrose, D., & Keshavan, M. (2009). Cognitive enhancement therapy for early-course schizophrenia: Effects of a two-year randomized controlled trial. <i>Psychiatric Services (Washington, D.C.)</i> , 60(11), 1468-76.
Title:	An Overview of Cognitive Remediation Therapy for People with Severe Mental Illness
Citation	Galletly, C. & Rigby, A. (2013). An overview of cognitive remediation therapy for people with severe mental illness. <i>ISRN Rehabilitation</i> , 2013, 1-6.
Title:	Neurocognitive deficit in schizophrenia: A quantitative review of the evidence
Citation:	Heinrichs, R., Zakzanis, K., & Cermak, Laird S. (1998). Neurocognitive Deficit in Schizophrenia: A Quantitative Review of the Evidence. <i>Neuropsychology</i> , 12(3), 426-445.
Title:	Practice principles of cognitive enhancement therapy for schizophrenia
Citation:	Hogarty, G., & Flesher, S. (1999). Practice Principles of Cognitive Enhancement Therapy for Schizophrenia. <i>Schizophrenia Bulletin</i> , 25(4), 693-708.
Title:	Social skills training and computer-assisted cognitive remediation in schizophrenia
Citation:	Kurtz, Mueser, Thime, Corbera, & Wexler. (2015). Social skills training and computer-assisted cognitive remediation in schizophrenia. <i>Schizophrenia Research</i> , 162(1-3), 35-41.
Title:	Assessing metacognition in schizophrenia with the Metacognition Assessment Scale: Associations with the Social Cognition and Object Relations Scale

Citation:	Lysaker, P., Dimaggio, G., Daroyanni, P., Buck, K., Larocco, V., Carcione, A., & Nicolò, G. (2010). Assessing metacognition in schizophrenia with the Metacognition Assessment Scale: Associations with the Social Cognition and Object Relations Scale. <i>Psychology and Psychotherapy</i> , 83(Pt 3), 303-15.
Title:	A meta-analysis of cognitive remediation in schizophrenia
Citation:	Mcgurk, S., Twamley, E., Sitzer, D., Mchugo, G., & Mueser, K. (2007). A meta-analysis of cognitive remediation in schizophrenia. <i>American Journal Of Psychiatry</i> , 164(12), 1791-1802.
Title:	The role of cognition in vocational functioning in schizophrenia
Citation:	Mcgurk, & Meltzer. (2000). The role of cognition in vocational functioning in schizophrenia. <i>Schizophrenia Research</i> , 45(3), 175-184.
Title:	Cognitive functioning, symptoms, and work in supported employment: A review and heuristic model
Citation:	Mcgurk, & Mueser. (2004). Cognitive functioning, symptoms, and work in supported employment: A review and heuristic model. <i>Schizophrenia Research</i> , 70(2), 147-173.
Title:	The feasibility of implementing cognitive remediation for work in community based psychiatric rehabilitation programs
Citation:	McGurk, S., Mueser, K., Watkins, M., Dalton, C., Deutsch, H., & Cook, Judith A. (2017). The Feasibility of Implementing Cognitive Remediation for Work in Community Based Psychiatric Rehabilitation Programs. <i>Psychiatric Rehabilitation Journal</i> , 40(1), 79-86.
Title:	Mental health system funding of cognitive enhancement interventions for schizophrenia: Summary and update of the New York Office of Mental Health expert panel and stakeholder meeting
Citation:	McGurk, S., Mueser, K., Covell, N., Cicerone, K., Drake, R., Silverstein, S., . . . Cook, Judith A. (2013). Mental Health System Funding of Cognitive Enhancement Interventions for Schizophrenia: Summary and Update of the New York Office of Mental Health Expert Panel and Stakeholder Meeting. <i>Psychiatric Rehabilitation Journal</i> , 36(3), 133-145.
Title:	Cognitive remediation in schizophrenia
Citation:	Medalia, A., & Choi, J. (2009). Cognitive Remediation in Schizophrenia. <i>Neuropsychology Review</i> , 19(3), 353-364.
Title:	Call it a monster for lack of anything else: Narrative insight in psychosis
Citation:	Roe, D. T., Hasson-Ohayon, I. H., Kravetz, S., Yanos, P., & Lysaker, P. (2008). Call It a Monster for Lack of Anything Else: Narrative Insight in Psychosis. <i>The Journal of Nervous and Mental Disease</i> , 196(12), 859-865.

Title:	Adapting cognitive remediation to a group home: A brief report
Citation:	Schutt, Seidman, Eack, Deck, & Keshavan. (2017). Adapting cognitive remediation to a group home: A brief report. <i>Asian Journal of Psychiatry</i> , 25, 184-187.
Title:	More haste less speed: A meta-analysis of thinking latencies during planning in people with psychosis
Citation:	Watson, Joyce, Fugard, Leeson, Barnes, & Huddy. (2017). More haste less speed: A meta-analysis of thinking latencies during planning in people with psychosis. <i>Psychiatry Research</i> , 258, 576-582.
Quote:	Results show that people with psychosis have significantly faster initial thinking times than non-clinical participants, but significantly slower subsequent thinking times during problem execution. These findings indicate that differences in processing speed are not limited to slower responses in peoples with psychosis but may reflect a preference for step-by-step processing rather than planning before task execution. WE suggest this style of responding is adopted to compensate for working memory impairment.
Title:	Thinking about the future cognitive remediation therapy-what works and could we do better?
Citation:	Wykes, T., & Spaulding, W. (2011). Thinking About the Future Cognitive Remediation Therapy—What Works and Could We Do Better? <i>Schizophrenia Bulletin</i> , 37(Suppl2), S80-S90.
Title:	EPICOG-SCH: A brief battery to screen cognitive impact of schizophrenia in stable outpatients
Citation:	Zaragoza Domingo, Bobes, García-Portilla, & Morralla. (2017). EPICOG-SCH: A brief battery to screen cognitive impact of schizophrenia in stable outpatients. <i>Schizophrenia Research: Cognition</i> , 8, 7-20.
SOCIAL GROUPS	
Title:	Cognitive enhancement therapy: The training manual
Citation:	Hogarty, G.E. & Greenwald, D.P. (2006). <i>Cognitive Enhancement Therapy: The Training Manual</i> . University of Pittsburgh.
Quote:	Basic Considerations for clinicians: <ul style="list-style-type: none"> • Clear level of interest • Knowledge of the population • An open mind • An ability to resist a traditional psychotherapy stance • Being curious • Perseverance
Title:	The social context of reasoning: Conversational inference and rational judgment

Citation:	Hilton, D., & Steinberg, Robert J. (1995). The Social Context of Reasoning: Conversational Inference and Rational Judgment. <i>Psychological Bulletin</i> , 118(2), 248-271.
TRAUMATIC BRAIN INJURY	
Title:	Cognitive impairment and rehabilitation strategies after traumatic brain injury
Citation:	Barman, A., Chatterjee, A., & Bhide, R. (2016). Cognitive Impairment and Rehabilitation Strategies After Traumatic Brain Injury. <i>Indian Journal of Psychological Medicine</i> , 38(3), 172-81.
Quote:	Cognitive impairments following TBI are common and vary widely. Different cognitive rehabilitation techniques and combinations in addition to pharmacotherapy are helpful in addressing various cognitive deficits.
Title:	Social skills treatment for people with severe, chronic acquired brain injuries: A multicenter trial
Citation:	Mcdonald, Tate, Togher, Bornhofen, Long, Gertler, & Bowen. (2008). Social Skills Treatment for People with Severe, Chronic Acquired Brain Injuries: A Multicenter Trial. <i>Archives of Physical Medicine and Rehabilitation</i> , 89(9), 1648-1659.
Title:	Cognitive rehabilitation in traumatic brain injury
Citation:	Cernich, A. N., Kurtz, S. M., Mordecai, K. L., & Ryan, P. B. (2010). Cognitive rehabilitation in traumatic brain injury. <i>Current Treatment Options in Neurology</i> . doi:10.1007/s11940-010-0085-6

ASSESSMENT TOOLS

Title:	Cognitive Criteria Eligibility Interview – Appendix A
Web Address:	Assessment is available with purchase of the CET Manual located at http://www.cognitiveenhancementtherapy.com/manual/
Title:	Cognitive Style and Social Cognition Eligibility Criteria (Short Form) – Appendix B
Web Address:	Assessment is available with purchase of the CET Manual located at http://www.cognitiveenhancementtherapy.com/manual/
Title:	Cognitive Style Inventory (Micro Measures) – Appendix C
Web Address:	Assessment is available with purchase of the CET Manual located at http://www.cognitiveenhancementtherapy.com/manual/
Title:	Social Cognition Profile (Micro Measures) – Appendix D
Web Address:	Assessment is available with purchase of the CET Manual located at http://www.cognitiveenhancementtherapy.com/manual/

Title:	Brief Assessment of Cognitions in Affective Disorders (BAC-A)/Brief Assessment of Cognitions in Schizophrenia (BAC-S)
Information	<ul style="list-style-type: none"> • Approximately 30-minutes to administer via paper and pen. • Comprised of seven core tasks that measure: <ul style="list-style-type: none"> • Verbal and learning memory • Working memory • Motor function • Verbal fluency • Speed of processing • Executive function
Title:	Indiana Psychiatric Illness Interview
Information:	<ul style="list-style-type: none"> • Semi-structured interview developed to elicit illness narratives • Narrative theory of self – stresses the meaning of a key life event • A story with a past and present, which points to a future toward which the individual is evolving • Interview lasts 30-60 minutes • Divided into 4 parts: build rapport, ask individual about mental illness and how they understand it, how and whether the condition affects the individual's life, and what the individual expects to remain the same or what would be different with respect to interpersonal and psychological functioning
Title	Metacognition Assessment Scale (MAS)
Information:	<p>Metacognition Assessment Scale (MAS; Semerari et al., 2003). The MAS offers scales which assess different facets of metacognition: awareness of one's own thoughts, understanding of others' thoughts, awareness of others' independent relationships with one another, and the use of metacognitive knowledge to respond to psychological challenges.</p> <ul style="list-style-type: none"> • Rating scale that assesses metacognitive abilities as manifest in an individuals' verbalizations • Contains four scales <ul style="list-style-type: none"> ○ Understanding of one's own mind ○ Understanding of others' minds ○ Decentration ○ Mastery

Title:	Schizophrenia Cognition Rating Scale (SCoRS)
Web Address:	http://www.neurocogtrials.com/resources-and-tools/scors/
Information:	<ul style="list-style-type: none"> • 20-item, interview-based clinical assessment • Measures <ul style="list-style-type: none"> • Attention • Memory • Working memory • Language production • Reasoning

	<ul style="list-style-type: none"> • Problem solving • Motor skills • Social cognition
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Title:	Social Functioning Questionnaire
Information:	<p>Five sections each containing eight items.</p> <ul style="list-style-type: none"> • Self-care skills • Domestic skills • Community skills • Social skills • Responsibility
Title:	World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0)
Web Address:	http://www.who.int/classifications/icf/form_whodas_downloads/en/
Information:	<ul style="list-style-type: none"> • 36-item, self-administered • Approximately 20 minutes to complete • Likert scale measuring from “None” to “Extreme or cannot do.” • Scoring <ul style="list-style-type: none"> • <i>Simple</i>: sum of each question for overall score up to 180. • <i>Complex</i>: three step process based on item-response-theory and accounts for levels of difficulty per item. Score is measured between 0 (no disability) to 100 (full disability). • Psychometric properties <ul style="list-style-type: none"> • Cognitive: .94 • Mobility: .95 • Self-care: .93 • Getting along: .99 • Life Activities: .98 • Participation: .97 • Available in 12 languages

WEBSITES

Title:	Cognitive Enhancement Therapy
Web Address:	http://www.cognitiveenhancementtherapy.com/
Resources:	<ul style="list-style-type: none"> • Training • CET manual • Evidence
Title:	Center of Excellence for Autism Research (CeFAR) - University of Pittsburgh

Web Address:	http://www.wpic.pitt.edu/research/CeFAR/research/Perspectives.htm
Title:	Center for Cognition and Recovery
Web Address:	http://cetcleveland.org/what-is-cet-2/
Resources:	<ul style="list-style-type: none"> • CET information • CET articles • CET research • Events and presentations
Title:	Nueropsychonline
Web Address:	https://www.neuropsychonline.com/index.html
Information:	<ul style="list-style-type: none"> • Online cognitive exercises that measure six critical skills: <ul style="list-style-type: none"> • Attention • Executive • Memory • Visuospatial • Problem solving • Communication • 84 total exercises • Each track consists of up to 15 questions with 3-4 levels of mastery
Title:	SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP)
Web Address:	http://legacy.nreppadmin.net/ViewIntervention.aspx?id=273
Information:	<ul style="list-style-type: none"> • CET descriptive information • Quality of research • Readiness for dissemination • Costs • Replications • Contact information

SOCIAL SKILLS CURRICULA

CET	Cognitive Enhancement Therapy: The Training Manual
	http://www.cognitiveenhancementtherapy.com/
TRAUMATIC BRAIN INJURY	
Title:	Social Communication and Traumatic Brain Injury (TBI): A Guide for Professionals
Available at:	http://www.tbicomunity.org/resources/publications/professional_education_social_comm.pdf