

CET | COGNITIVE ENHANCEMENT THERAPY

An overview of the evidence-based practice



*For people with
schizophrenia and
related mental illnesses*

CET Improves

- Processing speed
- Cognition/thinking (attention, memory, problem solving)
- Social Cognition (the awareness to interact wisely with others)
- Meaningful roles (e.g., employment)
- Self-management of mental health & physical health
- Adjustment to and acceptance of disability

(see page 3 for a detailed list of positive outcomes)

A foundation for recovery success.

INTRODUCTION



CET is not behavioral therapy. Nor does it focus on teaching “skills”. CET helps individuals develop and enhance the mental capacities that produce the awareness for self-directed social interactions that are wise, appropriate, and effective.

BRAIN, MIND & SOCIAL CONTEXT

Cognitive Enhancement Therapy (CET) is an evidence-based practice that helps people with schizophrenia and related mental illnesses improve their processing speed, cognition (attention, memory, and problem solving), and social cognition (the awareness to interact wisely with others). Research strongly suggests that impairments in these mental capacities contribute to functional disability in people with schizophrenia. CET rehabilitates these capacities and, thus, maximizes success in *all* activities of recovery. As a result, CET participants increase their potential to engage in meaningful social roles and to live independent, self-determined, and satisfying lives in the community.

Evidence-based practice

CET has been proven effective in a study funded by the National Institute on Mental Health (NIMH). The results were published in *The Archives of General Psychiatry* in 2004, a peer-reviewed academic journal. Additional results from an analysis of three years of data from this study were published in 2006 (see “Sources” on page 8). Below are a few facts about the original study:

- Two-year study
- Ages 18 to 55
- N=121 people with schizophrenia and schizoaffective disorder who met criteria for cognitive disability
- Randomized participation in the experimental CET group (n=67) and a control group—Enriched Supportive Therapy (EST) (n=54)
- Outcomes evaluated at 12 and 24 months

A neurodevelopmental disorder

CET views schizophrenia as a *neurodevelopmental* disorder. This means that some parts of the brain have not yet completely developed. For instance, research conducted with functional magnetic-resonance imaging (fMRI) has identified *reduced* activity in the prefrontal cortex of people with schizophrenia and related disorders. The prefrontal cortex is the center for attention, working memory, judgment, and decision making. It helps each of us transform emotions into thoughts and wise, appropriate actions. It also helps us regulate and edit emotions and thoughts. Impairments in cognition and social cognition among people with schizophrenia appear to be strongly correlated with delays in neurodevelopment.

A neurodevelopmental intervention

Research shows that the human brain develops in infancy, childhood, and adolescence in the context of interpersonal (social) relationships with family members, friends, caregivers, and teachers, among others. In addition, brain development and personality development continue in adulthood and throughout life in the context of relationships with other adults.

Research also shows that the brain has a natural capacity to repair developmental delays and trauma. This is called *neuroplasticity*. This healing activity is more

likely to occur when interventions induce people to use their brains. CET is designed to do this.

Structured activities that exercise the brain & mind

CET provides holistic, structured activities to help people with schizophrenia and related mental illnesses jump-start neurodevelopment, cognitive development, and social cognition. Therapists in CET are called coaches, because they are trained to help people function better. Coaches are trained to respectfully challenge and support participants to notice and reflect upon the feelings and thoughts of the self and others and to execute speech and actions that are appropriate, wise, and effective. These interventions occur in every CET session and include the following:

- Computer-based exercises/interactive software
- Group-based interactions
- Individual (one-on-one) coaching sessions with each CET participant

(For more detailed information, see “Components of CET” on page 5.)

A holistic intervention

Cognition/thinking and social cognition (the awareness to interact wisely with others) are so closely related that it seems inaccurate to separate the two. However, we separate them for conceptual reasons—to help you make the distinction between the internal process of perceiving, feeling, and thinking and the external process of using feelings, thoughts, and perceptions to interact wisely with other people. Cognition and social cognition are so closely related that they influence and support each other. For example, CET challenges participants to pay attention (a cognitive capacity) so they can understand people better (a social-cognitive capacity). This is important because when participants understand other people better, it is easier for them to pay attention. This is why CET addresses both cognition and social cognition simultaneously.

NOT BEHAVIORAL THERAPY

CET is different from other psychotherapeutic techniques such as Cognitive Behavioral Therapy (CBT) that focus on helping people change the *content* of their thoughts and behaviors (e.g., to change negative ideas about the self into positive ones; to change asocial behavior into friendly interactions).

Instead, as CET focuses on the internal mental *process*, it naturally addresses the social content (speech and actions) that arises spontaneously among participants in the moment, in the room where the computer-based, group-based, and one-on-one therapeutic work of CET is taking place. In this way, CET participants do not become more competent in formulating specific kinds of thoughts and actions; rather, they become more competent in dealing wisely and effectively with a wide range of possibilities in the ever-changing spontaneous world of social interactions at home, work, school, and in the community.

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TRANSFORMING TREATMENT

Current treatments for schizophrenia include a combination of medication, psychological counseling, and group-based interventions such as social-skills training, illness-management, and family psychoeducation, among others. Some treatment plans also include employment. Many interventions teach individuals daily living skills to enhance their performance of daily living tasks. Yet, these treatments often fall short, because they do not address the *underlying* neurodevelopmental and cognitive impairments that inhibit recovery.

In contrast, CET helps individuals enhance the mental capacities that produce awareness and wise social interactions that support them in *all aspects of* their treatment plans and their recovery journeys, which are lifelong and constantly changing. CET is not designed to replace other treatments that focus on symptom control, relapse prevention, and practical living skills. Rather, CET is designed to complement them.

Adjustment to disability

Perhaps the most unique aspect of CET is the special attention it gives to helping participants adjust to and accept their disabilities. In the first few weeks of CET, participants learn a great deal about their impairments from psychoeducational presentations and discussions

and from their experiences with the computer-based cognitive exercises. This understanding facilitates a personal process of adjusting to disability, the stages of which include following:

- Shock
- Denial
- Bargaining
- Anger
- Grief
- Acceptance

Through this process, participants learn that they *are not* a “schizophrenic” or “mentally ill”—that the disorder does not define their entire person or self. Rather, participants learn that they *have* an illness—that they not only have limitations but also strengths, talents, skills, interests, and much more. Going through this process of self-discovery and self-acceptance helps participants cope with stigma and to become realistically hopeful about their recovery.



A MULTIDISCIPLINARY APPROACH

The creators of CET have intentionally used theory and research from multiple professional disciplines to arrive at the neurodevelopmental approach to rehabilitation. They developed CET because they were witnessing the limitations of other biopsychosocial treatments in their clinical practices and were reading about the limitations in published research. They wanted to know what was

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POSITIVE OUTCOMES OF CET

Research shows that after 12 months, individuals in CET attain significant improvement in the mental capacities listed below. Participants also maintain these improvements at 36 months and continue to develop them over time.

I. Processing speed

Processing speed is a cognitive capacity that is a prerequisite for all learning. People with schizophrenia and related mental illnesses frequently experience impaired (or slow) processing speed.

II. Cognition/thinking,

including the following:

- Motivation, initiative, and energy
- Attention/concentration
- Working memory
- Verbal memory
- Problem solving
- Cognitive flexibility
- Mental stamina

III. Social Cognition (the awareness to interact wisely with others)

- Perspective-taking (of self and others)
- Gistful thinking (i.e., understanding the themes and meanings of verbal and non-verbal messages and avoiding digressions about unimportant details)
- Motivational account (i.e., giving a clear account of one’s own actions and the actions of others)
- “Thinking on your feet”/Problem solving

- Role flexibility
- Fun/sense of humor
- Recognition and appreciation of spontaneity, especially in social situations
- Recognition and appreciation of the joy of achieving personal goals of the self and others

IV. Meaningful roles

CET is designed to help participants eventually become socialized into meaningful adult roles that they identify as goals in their recovery plans. These roles often include the following:

- Friend
- Spouse
- Parent
- College student
- Employee (volunteer experiences and part-time or full-time employment)

VI. Self-management of mental health and physical health

This includes learning to know and to respond effectively to one’s own subjective cues of distress. Early on in CET, the psychoeducational talks focus on helping individuals recognize the signs of stress that could lead to an exacerbation of the illness or to poor performance.

VII. Adjustment to and acceptance of disability

See “Transforming Treatment” section above.

INTRODUCTION *continued*

behind or beneath the symptoms (what was producing the limitations) so they could help people move beyond them. CET is built upon theory, research, and practice from the following:

- Cognitive psychology
- Developmental psychology
- Neuropsychology
- Neuropsychology
- Psychiatry
- Psychology of disability
- Social psychology
- Social work
- Sociology
- Vocational rehabilitation

Traumatic brain-injury research

CET is also inspired by rehabilitation programs for patients with traumatic brain injury. These programs are designed to utilize the brain's neuroplasticity to stimulate healing and to encourage participants to *compensate for* impairments. Research shows that these

programs rehabilitate sectors of the brain that support cognition and social cognition. Among the programs utilized by CET are those developed by the following:

- Yehuda Ben-Yishay, Ph.D., and colleagues at New York University: cognitive training and psychosocial cognitive remediation
- Odie Bracy, Ph.D., of Psychological Software Services, Indianapolis: computer software developed for use in the rehabilitation of traumatic brain injury
- H.D. Brenner, Ph.D., of Switzerland: Integrated Psychological Therapy (IPT)—cognitive rehabilitation methods that integrate exercises for basic cognition with social interactions for social problem-solving
- William Spaulding, Ph.D., of the University of Nebraska: IPT



SOCIALIZATION & SOCIAL ROLES

There is a belief among many providers of mental health services that people with schizophrenia and related mental illnesses experience impairments in social cognition and social interaction after the onset of their first psychiatric episode. Some also believe there is a *regression* to an earlier stage of psychological development. However, research suggests that “high-risk children who eventually develop schizophrenia” simply fail to develop their ability to interact wisely with others at the same rate and with the same amount of success as their peers who are not at-risk (see Hogarty & Flesher 1999 in “Sources” on page 8). As a result, people with mental illness are often socialized into limited roles in life, such as the role of an under-employed or unemployed patient.

CET intentionally challenges service providers and CET participants to use an interpersonal process called *secondary socialization* to help participants enhance their social cognition and, thus, expand their opportunities for achieving social roles that they have identified as part of their recovery plans.

SOCIALIZATION

Social cognition is the awareness to interact wisely with others. *Socialization* is the process of learning from other people (e.g., parents, other caregivers, relatives, peers, etc.) the informal rules of interacting wisely and effectively. It is also the process by which individuals learn to negotiate the various roles they play throughout life, such as child, sibling, student, group member, adult, spouse, parent, and employee, among others. Socialization takes place across the lifespan. There are basically two kinds of socialization, which are briefly described below.

Primary socialization

In childhood, individuals learn the concrete rules of the physical world and interpersonal relationships with instruction and punishment of parents and other adults who must set limits for them (i.e., “do” and “don’t”, “right” and “wrong”). This is called *primary socialization*. Primary socialization is very directive and is particularly well-suited for the minds of children, who possess the following mental capacities, among others:

- Concrete thinking (e.g., attention to many specific details)
- Verbatim memory (e.g., memory of many specific details)

Secondary socialization

In adolescence and young adulthood, the socialization process begins to change. Individuals learn how to detect, evaluate, test, and utilize the unwritten and often unspoken rules of social interactions with peers and adults. This knowledge is gained through trial, error, and success. In other words, individuals learn what is right (acceptable) and wrong (unacceptable or inappropriate) actions in many different social settings with feedback from many different people. This is called *secondary socialization*. It is the process that adults use to socialize each other throughout life. Secondary socialization requires individuals to utilize social-cognitive capacities successfully (for a list, see “Positive Outcomes” section on page 3).

Not “getting it”

With secondary socialization, people expect each other to get *the gist* (i.e., themes, main ideas) of their interactions and not get stuck on or distracted by details. In other words, people expect each other “to get it”, and to get it quickly. Individuals who do not appear “to get it” are often excluded from social networks rather quickly and are not socialized into adult roles. In addition, individuals who rely upon verbatim memory and

concrete thinking for learning are at-risk of missing the gist of social situations and, therefore, are at-risk of not being socialized into adult roles. This appears to be the case with many people who are vulnerable to schizophrenia and related mental illnesses.

Transition from primary to secondary socialization

The first debilitating episode of mental illness typically comes during a time when a young person is attempting to negotiate the move from primary socialization (e.g., the predictable structure of family and school) to secondary socialization (i.e., the more spontaneous, unstructured interactions of autonomous adult relationships). The triggers that lead to a first episode might include the following:

- The first time away from home at college or in the military
- The challenge of getting and maintaining employment
- Starting a career
- Negotiating numerous friendships, romantic relationships, and work environments

SOCIAL ROLES & SCHIZOPHRENIA

There is an understandable temptation for health and human service providers and family members to utilize primary socialization with people who have impaired cognition and social cognition. Unfortunately, caregivers who rely upon primary socialization tend to be directive and to “do for” the people they are trying to help (see Floersch in “Source” on page 8). This approach denies them the benefits of secondary socialization and self-directed, wise actions. As a result, people with mental illness often get socialized into the role of a patient and do not develop the capacities to participate in many life-roles, including the following: friend, spouse, parent, student, employee.

CET helps service providers, family members, and people with mental illness engage in a process of secondary socialization, which expands opportunities for more meaningful adult roles among people with mental illness.

COMPONENTS OF CET

“THE GIST” OF CET

CET uses the process of secondary socialization to help people with schizophrenia and related mental illnesses *recover* the ability to continue neurodevelopment and the development of cognition and social cognition. CET places emphasis upon “unrehearsed but clinically guided” real-life interpersonal experiences. This enables participants to attain age-appropriate social-cognitive capacities and achievements (see Hogarty & Flesher 1999 in “Sources” on page 8).

By exposing CET participants to the more challenging demands of secondary socialization, CET coaches/therapists help participants exercise their brains and enhance their capacities for the adult roles to which they aspire. CET coaches refrain from responding to participants with the directive approach of primary socialization. Instead, they respond to participants as adults.

WHO IS ELIGIBLE FOR CET

CET is an evidence-based practice. This means it is effective for people who resemble those who participated in the published research study (see page 2).

Therefore, service organizations offer CET to people who meet specific criteria. While CET was designed and tested for people with schizophrenia and schizoaffective disorder, people with other diagnoses who express an interest in CET and meet the criteria for cognitive disability may participate. There is interest in testing CET’s effectiveness with people who have other diagnoses. Below are criteria for participants in CET:

- Individuals with schizophrenia and schizoaffective

disorder (and other related mental disorders) who meet criteria for cognitive disability

- 18 years of age or older
- Male and female
- In recovery phase of treatment (not in acute phase)
- Stable symptoms
- Medication compliant
- Do not have a substance use disorder (SUD), or are abstinent if there is an SUD
- IQ ≥ 80
- Fluent in English and able to read at a fourth-grade level

CORE COMPONENTS OF CET

1. TIME-LIMITED

- 1 day per week
- 55 weeks
- 3-1/2 hours per day/session
 - Computer-based cognitive exercises (1 hour)
 - Psychoeducational group (1-1/2 hours)
 - Individual coaching session with each participant (1 hour)


2. SMALL GROUPS & PERSONALIZED ATTENTION

Enrollment in each CET group is no less than 8 and no more than 12 participants. This enables the two CET coaches/therapists to provide personalized attention to each participant. The small group size enables participants to develop supportive peer-relationships and networks.

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COMPONENTS OF CET *continued*

3. CET COACH/THERAPIST



CET coaches are licensed social workers, mental health therapists, or vocational counselors who are trained to help participants enhance cognition, social cognition, and other mental capacities, such as processing speed. Coaches are individuals who are ready, willing, and able to refrain from using the process of primary socialization (see page 4) to “do for” clients by giving them answers to challenges they face. Instead, coaches engage with participants in a process of secondary socialization to help them reflect upon, become aware of, and utilize their feelings, thoughts, and perceptions to plan and execute wise actions that get effective results. In other words, CET coaches help bring out the best in each person.

There are two coaches in each CET group. They provide group coaching as well as individualized one-on-one coaching to each participant in separate non-group sessions. Coaches guide participants through the process of utilizing computer-based exercises, group-based exercises, and one-on-one interactions to stimulate cognition and social cognition. Coaches respectfully challenge incomplete, hard-to-understand, and inappropriate speech and actions as a way to help participants become more aware of how they are coming across to (being perceived by) others. Coaches also support participants through the difficult feelings that arise as they learn new ways of thinking and interacting. Difficult feelings often include frustration, shame, fatigue, apathy, confusion, and disappointment, among others. Coaches also support participants through pleasant experiences of joy and pride that come with accomplishments. They also encourage everyone to enjoy the humor that arises spontaneously during group activities.

Like CET participants, coaches learn to tolerate the ambiguity of spontaneous social interactions in CET groups and learn that there are no right or wrong answers, just effective and ineffective speech and actions.

4. INDIVIDUALIZED ASSESSMENT

Before the onset of CET, coaches meet individually with each participant to assess him or her for the following:

- Neuropsychological impairments
- Cognitive impairment
- Social-cognitive impairment
- Cognitive style (e.g., unmotivated, disorganized, or rigid thinking)

5. INDIVIDUALIZED TREATMENT PLANNING

CET coaches collaborate with each participant to help him or her identify goals that pertain to his or her cognitive development. Together, they develop a treatment plan. The plan is posted in the room where the CET group meets (with the participant’s permission) to serve as a constant reminder of each person’s individual goals.

6. WORKING WITH A PARTNER

Each CET participant works with another participant as a partner during the computer exercises and the psychoeducational group. The partnerships provide participants with a sense of familiarity, safety, trust, and belonging. The partnerships also challenge individuals to exercise attentiveness and listening, to offer support, to collaborate, and to engage in negotiation and conflict resolution. When CET participants interact one-on-one with a partner, they are able to experience and process a limited number of social cues, which minimizes anxiety and stress. When they work in groups, they are challenged to process multiple social cues simultaneously.

7. COMPUTER-BASED COGNITIVE EXERCISES

Before the formal group work of CET begins, CET participants work with a peer-partner on computer-based exercises. This helps participants acclimate to the CET environment. CET uses a variety of software that challenges participants to exercise and rehabilitate specific capacities, such as attention, memory, processing speed, sorting, categorizing, and predicting, among others. The software has been obtained from the rehabilitation research, theory, and practice of multiple disciplines.

(For related information, see “A Multidisciplinary Approach” on page 4.)

8. SPECIFIC GROUP STRUCTURE

Many people with schizophrenia and related mental illnesses tend to feel overwhelmed and threatened by spontaneous, unpredictable interactions. Therefore, the structure of each group session is intentionally similar each week. This provides a framework of predictability, which provides another level of safety and trust. The group structure is also designed to provide an environment that encourages and allows for spontaneity and unpredictability of social interaction. Below is a brief outline of the group structure that follows a set agenda:

- Welcome back
- Selection of chair (encourages leadership and peer collaboration among participants)
- Each member discusses homework questions (connects psychoeducational talk to real life).
- Psychoeducational talk & discussion (i.e., curriculum topics) (see #11)
- Group-based cognitive exercises (requires participants to interact with a partner in front of the whole group)
- Each member provides feedback to the persons who have completed the cognitive exercise.
- Reading of next homework assignment (connects psychoeducational talk to real life)

9. GROUP-BASED WORK

As part of the structure of the weekly CET session, participants attend a social-cognitive group that addresses a psychoeducational curriculum which focuses on a different topic/lesson each week. Each participant takes turns chairing the discussion. The group work encourages participants to engage in many learning activities, some of which are listed below:

- Pay attention (and manage mental drifting)
- Be aware of and sensitive to changing verbal and social contexts—to figure out how to respond appropriately in new and complex social situations
- Think and speak gistfully (i.e., identify and articulate themes and avoid digressions about unimportant details)
- Take notes to pay attention and to organize, analyze, and prioritize information
- Give and receive respectful, relevant feedback
- Work in teams and negotiate with peers and coaches/therapists
- “Think on your feet” to solve problems spontaneously as social situations change
- Engage in homework assignments about social-cognition scenarios that are increasingly challenging
- Explore and understand the nature of one’s own mental illness

10. HOMEWORK

After the weekly group, each participant prepares a homework assignment individually with a CET coach in a separate, one-on-one session. Homework complements the psychoeducational presentations and discussions by requiring participants to reflect upon and apply to their daily lives the concepts they learned during the group. During the next group session (in the following week), each participant is required to answer the homework questions in front of their peers and coaches, who ask mostly open-ended questions to help each person reflect and elaborate upon his or her presentation spontaneously—in the moment and without

rehearsal. This interaction requires participants to “think on their feet”, to process information “on the spot”, and to exercise their brains. In this way, participants learn to hold several thoughts and feelings in their minds, to compare and synthesize their ideas, and to engage in speech that is relevant to the situation.

11. SPECIFIC CURRICULUM

The CET curriculum covers 55 weeks of CET’s duration. Each session focuses on a different psychoeducational topic. This content provides a focal point of discussion with which to practice, exercise, and master the cognitive and social-cognitive processes. Some examples of the psychoeducational topics in the curriculum include the following:

- Rationale for CET
- How the brain works
- Attention and memory
- Methods for dealing with criticism
- How to take the perspective of others
- How to accept and adjust to a disability/impairment
- How to cope with stigma
- How to establish meaningful life-roles

Each group member passes *milestones* during his or her work in CET by making presentations without notes. The milestone events culminate in a graduation speech.

12. GRADUATION

At the end of CET’s 55-week curriculum is a formal graduation celebration that is attended by CET participants, coaches, family members, and others invited by the graduates. The purpose of the event is to publicly acknowledge the hard work and accomplishments. At the celebration, each CET participant speaks publicly about his or her experiences and achievements in CET. It is an opportunity to publicly demonstrate new social competence.

Like CET participants, coaches learn to tolerate the ambiguity of spontaneous social interactions in CET groups.

ADDITIONAL COMPONENTS

FAMILY CET

CET strives to integrate family members into the recovery process. Family members are invited to some of the milestone-events that take place periodically in CET group. They are also invited to graduation. A brief multiple-family group psychoeducational class is available for family members. This gives them the knowledge, awareness, and capacity to understand the disability and to avoid the directive “do for” interactions of primary socialization and to engage in secondary socialization while interacting with their loved ones (see page 4). Family members who understand and use CET concepts and techniques are equipped to compassionately support and advance recovery.

POST-CET

CET provides a library of group-based exercises and computer-based exercises for CET graduates who wish to continue to enhance their cognition, social cognition, and mental processing speed in a semi-structured environment. Unlike the regular 55-week CET curriculum, the post-CET curriculum and group are less structured and less formal. Post-CET opportunities help participants maintain and expand their cognitive competencies, as well as their peer-networks of support and friendships. ■

CCI | CENTER FOR COGNITIVE INNOVATION

NATIONAL TRAINING | LOCAL SERVICES

The Center for Cognitive Innovation (CCI) provides training and consultation to community-based and inpatient health and human service organizations that wish to provide Cognitive Enhancement Therapy (CET) and other cognitive interventions to people with schizophrenia and related mental illnesses. CCI also provides direct services to those who wish to benefit from cognitive interventions. Below is a list of CCI's services:

Training & Consultation Services

The CCI provides the following to organizations outside of Northeast Ohio and throughout the United States:

- Training of CET coaches/therapists
- Ongoing consultation for CET coaches/therapists
- Education of mental health professionals and students
- Organizational consultation
- CET quality control
- Research
- Service systems consultation

Direct Service

- CCI provides CET groups/services at PLAN of Northeast Ohio, Inc. (see sidebar), for individuals with schizophrenia and related mental illnesses in Cleveland, Ohio and neighboring communities.
- CCI provides CET groups/services at community-based and inpatient mental health organizations in Northeast Ohio.

AN EVIDENCE-BASED PRACTICE

CET has been demonstrated to be effective in a controlled study funded by the National Institute on Mental Health (NIMH) Grant MH-30750. The results were published in *The Archives of General Psychiatry* in 2004. CET improves processing speed, cognition/thinking (attention, memory & problem solving) and social cognition (the awareness to interact wisely with others)—three capacities of the mind that are the foundation for success in all activities and outcomes of recovery. CET also enhances meaningful roles of people with mental illness, including employment.

EXPERIENCED CET TRAINERS

CCI's CET trainers are licensed professionals with experience in social work, psychology, and other related disciplines. They are also experienced CET coaches/therapists who provide direct service to individuals with mental illness who reside in Cleveland, Ohio and neighboring communities. CCI's trainers have accumulated the following experience with CET:

- 6 years providing CET
- 30 CET groups
- 210 graduates
- 90 percent attendance rate
- 88 percent graduation rate with an increased rate of volunteer and part-time and full-time employment experiences

Cognitive Enhancement Therapy (CET) was originally designed by Gerard Hogarty, MSW, Sam Flesher, Ph.D., Mary Carter, Ph.D., and Deborah Greenwald, Ph.D., at the University of Pittsburgh Medical Center, Western Psychiatric Institute and Clinic. Since 2000, CET has been conducted and refined at Mercy Behavioral Health in Pittsburgh, PA and by PLAN of Northeast Ohio. In 2006, the CCI was established to further the dissemination of CET and other cognitive innovations. This booklet was made possible with funding from The Margaret Clark Morgan Foundation, the William J. and Dorothy K. O'Neill Foundation, the Fairfax Foundation, and the Maltz Family Foundation.

The Center for Cognitive Innovation (CCI) is an initiative developed by Planned Lifetime Assistance Network (PLAN) of Northeast Ohio, Inc., a private non-profit organization that provides home-based social work services to people with mental illness and their families. By choice, PLAN is funded by non-governmental sources, including fees for service, private insurance, grants from foundations and other organizations, and contributions from generous individuals and families.

SOURCES

This booklet was created with reference to the sources listed below and with reference to the practice experiences of CCI's CET coaches/therapists and trainers.

Gerard E. Hogarty and Samuel Flesher (1999). Developmental Theory for a Cognitive Enhancement Therapy of Schizophrenia. *Schizophrenia Bulletin*, 25(4), p677-692.

Gerard E. Hogarty and Samuel Flesher (1999). Practice principles of cognitive enhancement therapy for schizophrenia. *Schizophrenia Bulletin*, 25(4), p693-708.

Gerard E. Hogarty, MSW; Samuel Flesher, Ph.D.; et. al. (2004). Cognitive Enhancement Therapy for Schizophrenia. *Archives of General Psychiatry*, v61, p866-876.

Gerard E. Hogarty, MSW; Deborah P. Greenwald, PhD; and Shaun M. Eack, MSW (2006). Durability and Mechanism of Effects of Cognitive Enhancement Therapy. *Psychiatric Services*, 57, December, p1751-1757.

Planned Lifetime Assistance Network of Northeast Ohio (2004). Samuel Flesher, Ph.D. and Sharon Shumaker, ACSW, LISW (ed). Cognitive Enhancement Therapy Coaches Manual. Cleveland Heights: PLAN of Northeast Ohio.

Gerard Hogarty, MSW, and Deborah P. Greenwald, Ph.D. (2006). Cognitive Enhancement Therapy: The Training Manual. Pittsburgh.

Jerry Floersch and Jeffrey Longhofer (2004). "Psychodynamic Case management," in *Psychodynamic Social Work*, p350-369, edited by Jerrold Brandell. New York: Columbia University Press.

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