The Learning Clinic Practices Develop Student Self-regulation and Generalization of Competencies: Clinical Role in the use of CBT

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What is the principle characteristic of behavior that most typically compromises student efficacy in the classroom, home, and work settings?

Student referrals to day and residential specialized education and treatment settings often find that a student is seeking admission after many attempts to adjust, remediate, or relocate their education by parent and educators have been made. The causes for the need to modify student and family services are many and are usually well documented in the packet. This includes educational, clinical, and medical testing and observational reports done by a range of experts that accompany the student admission request to various educational settings.

The most common types of student problems are rooted in the child's pattern of impulsivity. Their tendency is to act without prior information, preparation, objective or relationship to potential consequences. The impulsive behavioral pattern usually conflicts with the need for self-regulation inherent in student roles expected in the classroom and other "work" settings. Acting before thinking also compromises social interaction with adults or peers. Further, the consequences of the lack of self-regulation have implication for time-management and other goal- oriented behavior essential for a quality life.

Impulsivity is a characteristic of Attention Deficit-Hyperactive Disorder, Anxiety and Mood Disorders, Pervasive Developmental Disorder, and other DSM-IV diagnoses. An impulsive cognitive style also competes with higher-order learning and evaluative analyses. The requirement to prioritize data, compare, group and contrast related data, and predict consequences and specific outcomes related to past experience are frequently compromised by an impulsive cognitive style.

Such an impulsive cognitive style, as Barkley (1997) and Reinecke, et.al. (2003) have observed, make the most evidence based therapy, Cognitive Behavioral Therapy (CBT), ineffective. CBT relies on the individual's ability to mediate behavior though cognitive processes. The fundamental and essential assumption is that prior to acting, the individual can assess a situation and anticipate its implications for acts and consequences. This is a false assumption when applied to an impulsive cognitive style. Suspended action and mediated, considered thought are predicates for the use of CBT strategies. The need for predictable situations with reliable consequences is necessary for training CBT strategies.

The mismatch between a cognitive impulsive style and CBT becomes evident when one considers the modifications that are required to teach CBT to an impulsive individual. A reliable practice setting may compensate to some degree for impulsive styles of behavior. However, the generalization of effective CBT strategies to other non-specific and less reliable settings is compromised.

The effectiveness of CBT and the goal of internalized self-regulation depend upon the training environment and redundant repetitive practice. Even with such desirable 'practice' circumstances, it often becomes apparent that behavior repertoires taught through CBT techniques remain ineffective outside the controlled environment of predictable signals for eliciting CBT behavior strategies and reliable results.

The Learning Clinic (TLC) is effective in developing an individual's ability to self-regulate because of consistent signals in the Learning Clinic environment: 1) consistent daily routines; and 2) consistent responses to student actions. Expectations are defined, supported, prompted, and practiced. Consequences for behavior are relevant and each student receives a personal review of actions through and over time.

Self-reliance and self-regulation are expected in each TLC setting. Students are provided supportive "signals" that are gradually reduced through transitional steps which are pre-planned. This is based on student performance in each environment: residence, classroom, and home.

The description of the expectations and standards are reflected in TLC's environmental design and the program operational manuals such as, the Redbook. The Readiness for Assisted Living, Assisted Living, and Transition programs provide step down levels of supervision that provide graduated, controlled 'signals' to elicit skills for self-regulation. Self-reliance and self-regulation expectations for each individual are defined to be incrementally increased. The educational and therapeutic process of decreased supervision and increased self-regulation is diagnostic as it reveals which individuals are able to meet the increasing demands for self-regulation and which individuals continue to need specific types of supports in order to behave effectively. Video feedback is a critical and effective method for modeling and coaching behavior development during graduated decrease in degree of support.

TLC provides students with an array of 'signals' ('codes', prompts and reliable routines). Coaching, prompting, repetition, assessment, opportunities for failure, recovery and resiliency are required through the steps towards independent functioning and self-reliance.

Student role behaviors which are instrumental to the instructional aims of the classroom can be identified. Behaviors are defined and supported as the student moves through various academic, social, and independent living levels of experience in the treatment environments: classroom, residence, home and community. The staff are effective as coaches and partners with the students as they provide signals that are clear and instrumental.

The treatment/educational process may appear simple and direct -- but it isn't. Teacher, psychiatrist, parent and all the other significant individuals in various parts of the treatment setting, have different perspective on what the child is expected to do and why. Further, each "setting" elicits (signals) and supports different expectations peculiar to the setting the child is in at the time. Sometimes expectations are created by the specific arrangement of the 'setting' environment. The specific expectations inherent in each environment result from the size of environment, peer composition, types of tasks, student's previous experience, pre-requisites to success, etc. The setting may provide a structure to elicit (signal) and support behavior. Poorly planned settings yield consequences, types of endorsed behavior of the co-actors with the child that mix the 'signals' for expected behavior. The unintended results of poorly planned environments compete with CBT strategies and student self-regulation.

The more open the environment to unplanned, unanticipated events, the more vulnerable the impulsive child is to a misstep, ineffective response, or misunderstood 'signal' to cue behavior.

How teachers and clinicians perceive the child, his needs, his situation and their professional role is critically important to implementation of CBT strategies. The fit between the educational environment and staff perceptions of the child is also critically important. All persons are operating with their own perceptions of the child's needs as they act on the treatment and educational strategies planned for the student. Each parent, sibling, peer, teacher, authority figure may act on very different precepts. If those precepts provide 'signals' that are not able to fit the child's previous experience and instrumental pattern of behavior then the "impulsive" child is enabled to react outside an effective framework for treatment and instruction.

CBT may be an effective alternative therapeutic intervention *if the treatment prescriptions developed for an individual with an impulse disorder fit the specifics of a reliable treatment environment*. If the child's environment is "open" and subject to random or unilateral acts of change, then a CBT strategy has little instrumental value for the child. The Learning Clinic's model demonstrates evidence of positive results for students because it provides a cohesive, defined

treatment that incorporates related medical, educational, therapeutic and psychiatric diagnostic interventions across treatment settings.

Measurement of treatment objectives is a predicate for treatment planning and the assessment of treatment results. It is also a necessary part of the CBT process. The assessment of classroom performance, pragmatic language skills and independent living skill competencies are necessary aspects of a treatment plan. Three examples of procedures for the assessment of skills are illustrated. These examples demonstrate how to assess objectives for treatment and ensure ongoing monitoring of skills in relevant treatment environments. Data for each type of assessment relies on concurrent independent measurement by significant individuals (parent, client-child, teacher, therapist, and residential staff) in the treatment process. Independent assessment provides for different individuals to conduct the measurement of behavior in each part of the environment. The assessment of student performance is for measurement of results and treatment planning.

Behavioral variations and the perspectives of staff and significant persons provide valuable information for identification of treatment targets. This information also helps to identify and prioritize environments that need to be the focus of treatment: classroom, residence, and community.

Clinicians play a central role in interpreting data derived from the assessments and consultation with teachers, parents, and psychiatrists. Clinicians guide the conversion of the data into evidence-based applied practices in the selected environments. The clinician also will guide the selection of targets for intervention, based on the data derived from each assessment.

Data collected though assessments are also to be used to monitor treatment effects after a medication change. Clinicians provide this data to the child's psychiatrist and other medical professionals working with the child and family, as a guide to adjustment in medication.

The intervention method chosen, (e.g., social skills workshop, individual therapy, dyadic therapy, group therapy, process meetings, classroom adjustments, rehearsal tactics, therapy journaling, or other treatments) are included in the clinical treatment plan. The staff in each part of the program are rehearsed and coached on their role in the implementation of treatment interventions. Typically, such staff include teaching assistants, teachers, work crew supervisors, residential staff at the child's residence, extended day activity leaders, nurse, drivers, and other support staff associated with the implementation of the treatment plan.

The Learning Clinic Model (attached) illustrates the interconnection between various parts of the Learning Clinic program. The clinician plays a critical role in the communication between each program component and ensures consistent treatment implementation and assessment of the child-staff interactions across the program.

CBT, within a comprehensive, cohesive treatment model, applied in a predictable and supportive environment may provide positive results in developing self-regulation skills for each child or young adult in treatment. Cognitive Behavioral approaches to treatment have been empirically proven to produce treatment outcomes efficacious to children and adolescents. Outcomes from CBT vary however for different diagnostic groups.

The literature is replete with evidence-based treatments for clinical issues that range from phobias, weight management, cardiovascular dyscontrol, anxiety, depression, sexual dysfunction, Post Traumatic Stress Disorder, Obsessive Compulsive Disorder, and in particular, social skill and cognitive and emotional deficits related to Asperger Syndrome. CBT is used in conjunction with medication therapy, and when appropriate, in place of medication, with effective results.

The key assumptions underlying CBT are:

1. Clients participate in their treatment as informed participants
2. Maladaptive behaviors (e.g. phobic avoidance, anxiety, depression/hopelessness, poor interpersonal boundaries, excessive need for reassurance and social acceptance) are the result of a distortion and misinterpretation of experiential cues/available information that becomes established as erroneous core beliefs about oneself, others, and the world.
3. A client plays an active role in treatment in the definition of clinical issues and goals, self-assessing behavior to establish a baseline, developing treatment hierarchies, engaging in collaborative empiricism (i.e. systematically and repeatedly examining the evidence both supporting and disconfirming their distorted perceptions and beliefs), and applying skills learned in treatment settings to in vivo environments.
4. Client behavioral changes are related to fundamental changes in their cognitions (i.e. beliefs/assumptions/perceptions), and as the result of client mediation of their behavior
5. Therapist-designed interventions, in collaboration with clients, commonly result in measurable outcomes, which can be tracked over time and analyzed in terms of treatment approach and efficacy.

6. A favorable treatment environment includes multiple opportunities for exposure to challenging situations and for practicing learned skills. This should positively influence treatment results.
7. A favorable environment is cohesive, reliable, and interdependent.
8. A treatment environment, whether an institutional setting, community worksite, home, or other venue, requires a task analytical approach prior to the design of specific interventions.
9. Social Learning and behavior modification principles are the basis for intervention design. This includes, but is not limited to, role modeling from older and responsible students and staff/community leaders, use of token economies and other contingency management strategies, individual, yoked, and group contracting, reinforcing successive approximation of skills, use of video feedback, and self-instruction.
10. An integrated multisystemic approach, in conjunction with CBT, results in efficacious treatment. A multisystemic approach includes CBT, family work, possibly pharmacotherapy, psycho-educational aspects, and even community collaboration.
11. CBT uses multi-sensory stimuli, e.g., visual, auditory, tactile, olfactory, etc. as part of treatment interventions. For example, stimuli that elicit a phobic response may be stimulated with computer response training to overcome a fear reaction.
12. CBT enables clients to generalize behavioral change to novel situations and settings.
13. CBT interventions may be assessed to determine cost, resource use and treatment efficacy in relation to treatment outcome, through time and over time.
14. CBT facilitates the accountability of client and therapist in relation to program design and administration.

With regard to this therapeutic model, the best practice offers the following specific CBT-based interventions:

1. Weekly individual therapy with CBT-proficient clinicians
2. Family therapy which can involve the nuclear family, particular dyads/subsets (e.g. especially in blended/separated families), or the extended family.
3. All staff adhere to a common philosophy, language, and operational definitions, and deliver services according to a reliable manualized protocol.
4. This is exemplified in the use of the Functional Analysis model to assess student challenges, strengths, and progress, and to develop goals based upon this systematic and functional assessment.

5. Theme-based group therapy during school program (e.g. self-presentation, social pragmatic skills, anger management, moral decision-making, relationship issues, young women's/young men's issues).
6. Weekly residential group process therapy during residential hours (specific to each residence and the interpersonal dynamics/challenges therein).
7. 2 to 4pm Extended School Day social skills workshop: social skill-based activity groups that rotate every 5-6 weeks. Here students design a social skill goal and self-assess on this goal and track their own progress.
8. Dyadic/conjoint therapies as needed
9. Daily in-school/residence and in vivo community social skills coaching
10. Regular use of video feedback from the classroom, residences, and various therapy sessions. This has emerged as one of the most highly effective and empirically supported treatment strategies for social and self-regulatory deficits.
11. Scheduled and as-needed student treatment team planning meetings with the student, therapist, residential case manager, teacher, and administrator.

The effective use of CBT as a treatment model within a treatment milieu requires:

1. All clinicians must be knowledgeable in and proficient with CBT principles and techniques. They must be able to train, coach, and effectively collaborate with direct-care staff on CBT principles and approaches.
2. In addition, administrative team members must be knowledgeable of the principles of CBT and committed to the application of principles in all treatment venues. They must also be able to accept a high degree of performance accountability for staff at all levels of responsibilities.
3. Administrative team members must collaborate and consult within a team model with clinicians and direct-care staff to ensure adequate resources.
4. Sufficient planning and resource allocation must be provided in order to train staff to implement CBT -based interventions and monitor outcomes within the milieu.
5. A data-based system designed to provide ongoing assessment of client and overall treatment performance compared to program standards, through time and over time.
6. Data described and represented in a way that it can be used as a basis for determining treatment and program efficacy throughout the service system. The data must also be used as part of the process for program decisions at all levels in the milieu.
7. Technology and hardware to facilitate treatment interventions and enable real-time data utilization for decision-making purposes, real-time video monitoring, self-evaluation and measurements comparing baseline data to treatment changes over time.

TLC
Broad Clinical Goals

It is important for the treatment team to have a shared focus on the broad goals for treatment. Goals need to be consistent and relevant to client priorities and environmental and resource constraints. The aim of such goals is to provide students with the necessary skills and competencies to be self-reliant and capable of living within the larger community so they can achieve personal objectives. Treatment interventions must be consistent with these aims and need to accommodate student strengths and weaknesses.

The personal goals and objectives of each individual student also needs to be within the context of socially responsible behavior and a clear moral framework.

The primary goals of the clinical team incorporated into the treatment planning process require three equally relevant components:

I. A *personalized plan* to develop a student's:
   a. Competence
   b. Adaptability
   c. Resilience

II. A *methodology* that demonstrates:
   a. Use of the milieu as an integrated part of "therapy"
   b. Management of the ecology and it's resources to fit student needs
   c. Use of cognitive behavior principles
   d. Medication at levels to assist self-regulation but not compromise cognitive or other health related functioning
   e. Psycho-educational principles incorporated to assist students develop a student role that is generalized to future learning, and that result in academic competence

III. *Results* – The treatment and designated interventions must permit measurement and evaluation in key areas of performance:
   a. Independent living skills
   b. Ability to work in more open environments in the community
   c. Demonstrate competencies with academic content and application of tools/skills
   d. Maximum self-regulation, social competence, and moral judgment in non-supervised settings
   e. Measurement of results based on change from baseline assessment over time

Clinical Goals (example)

Operationalize self-regulation / self-control:

The demonstration of self-control has six parts:

1. *Self-regulation* responses by an individual are directed at self, rather than regulation that is imposed or initiated by the environment.
2. Actions that are designed to *alter the probability of subsequent responses* by the individual.
3. Functions that *change a later outcome*, rather than an immediate outcome.
4. Actions that enable students to develop a preference for *long-term rather than short-term outcomes*.
5. Illustrate actions by an individual that have the coherent property of bridging time delays across various behavioral contingencies …… time delays demonstrate preferences for future over immediate rewards …… related to *delayed gratification* that implies a level of executive functioning
6. Demonstrate the mental facility to *sense "time" and the future*, and establish a relationship between "time" and future in an organized manner to demonstrate a behavioral preference for the future rather than immediate rewards.
7. Demonstrate the ability to: 1) *speculate the future*, and 2) *identify patterns* in a chronologically sequential chain of events that implies goal directed persistence. (R. Barkley 1997)

Behaviors related to self-control are:

1. Memory (STM and LTM)
2. Perspective-taking
3. Sense of the past, sequence through and over time, plans that illustrate instrumental elements towards a goal, and a future orientation.
4. Ability to intentionally manipulate covert mental events ("inner speech" and images) that are used in the process to obtain self-control
5. Necessary control of impulsivity

Clinical Process

What components enable us to produce better clinical formulations for the student-client?

I. Comprehensiveness of student data:
   a. Neuropsychological data
   b. IQ measurement
   c. Academic levels in reading, writing, and other specific academic skill areas such as math and science
   d. Social competencies

II. Formulation and elaboration of treatment needs:
   a. Diagnosis and Prognosis
   b. Problems in global functioning
   c. Identify symptoms as target problems
   d. Predisposing experiences
   e. Precipitating stressors
   f. Psychological mechanisms
   g. Social cultural factors
   h. Strengths, e.g. resiliency, parent competencies
   i. Interfering events that may compete with therapy
   j. Precision of language
   k. Problem-solving ability
   l. Degree of environmental and resource support for treatment

III. Process in Treatment Formulation
   a. Complexity of issues
   b. Coherence of:
      i. Resources
      ii. Treatment environments
      iii. Staff competencies
      iv. Family support
   c. Goodness-of-fit of the formulation of treatment plan between CBT, child and family
   d. Treatment Plan elaboration to accommodate environmental and individual constraints
   e. Systematic formulation of the process for treatment, and child and family involvement
   f. Relevance of data collection to assessment of the outcome
   g. Criteria for determining successful outcomes
   h. Assessment for unintended outcomes

Cautionary Note and Reminder

CBT is a treatment approach not suited to all student-client. The environments in which they live and spend a substantial amount of time, while at work, or at school may compete or facilitate self-regulation.

The two client groups most questionable as a fit for CBT are, according to Barkley (1997) and Reneike (2003), those individuals with a diagnosis of either Attention Deficit/Hyperactivity Disorder, or Asperger Syndrome (or PDD NOS, or HF Autism).

These authors report that the limited treatment gains from CBT are due to the following client factors (corroborated by our research):

1. Impulsive cognitive patterns
2. Inability to process social cues 'in vivo'
3. Cognitive rigidity
4. Poor or impaired sub-vocal "mentalizing" ability, e.g. ability to mediate behavior
5. Lack of "empathy" or "perspective-taking"
6. Limited ability to operationalize moral imperatives under situational pressure or stress … and use of "virtual" vs. authentic models
7. Inability to generalize treatment interventions to authentic, open environments that require spontaneous, measured responses
8. Limited organizational skills, and general executive function impairment
9. Demonstrated need for extreme over-learning to master functional routines – thousands of repetitions
10. Marginal "sense of time" and time management skills

These ten competencies relate to the acquisition and application of strategies rehearsed in therapy. They also put the student-client in the position of controlling neurologically-based behaviors that are outside of their control.

CBT is a very effective treatment in developing skill hierarchies and replacement behaviors when applied in '***reliable***' well-structured home settings. CBT can also be effective in residential treatment setting that have defined, structured environments that cue and support CBT behavioral repertoires that are part of treatment.

Most clinicians who provide 'office' oriented therapies have little influence, let alone control over, the 'open' unstructured daily environments in which the student-client is to apply strategies and tactics that are part of the CBT routine. Clinicians using CBT must have a clear understanding of the clients' environments, their resiliency in those environments, antecedents that trigger behaviors, cues and supports, or the behaviors that compete for the CBT behavior repertoires. Assessments of the environment with the use of photos and videos, over time and through time, are necessary to establish high support, low risk settings to apply therapeutic CBT tactics for the replacement behaviors (opposite competing behaviors). For example, CBT strategies may be designed to increase "politeness" which is the competing behavior for rudeness, or for sitting which competes with "out of seat."

A professional pre-treatment visual treatment setting analysis of the environment is generally ***not*** the current practice, nor is the acknowledgement of the pre-requisites for client readiness for CBT treatment.

Clinical experience with student-clients with impulsive disorders, anxiety disorders, cognitive rigidity, unreliable ability to process social cues, auditory processing limits, and lack of sub-vocal language manipulation, indicates that use of the CBT protocol requires a highly structured, reliable and safe treatment milieu.

It is essential that CBT treatment interventions occur within properly designed environments with specific, graduated degrees of opportunity for self-regulated applications of "tactics" by student-clients. Such well designed environments for treatment provide supportive cues that elicit competency, quick responsive corrective interventions, and retraining and practice to recover skills.

If a child is unable to demonstrate self-initiated responses to environmental or task demands, then retraining is necessary, and performance standards must be again demonstrated before treatment can continue. A non-judgmental re-orientation and skill training is essential to establish future resiliency, and longer intervals between episodes of retraining. The arrangement of the CBT training environment and the similarity to natural settings is essential for skill generalization.

All too often, controlled treatment environment successes are 'false positive' indicators of readiness to reintegrate into non-treatment environments. The student-client is often able to demonstrate competence within the treatment milieu, but performance in the non-treatment environment remains unchanged. Unsuitable reintegration environments elicit problematic behavior. Often, minor changes to the reintegration environments will enable the student to maintain

learned skill levels, self-regulation, and resiliency. Such changes need to be anticipated and be in place prior to reintegration into a non-treatment environment.

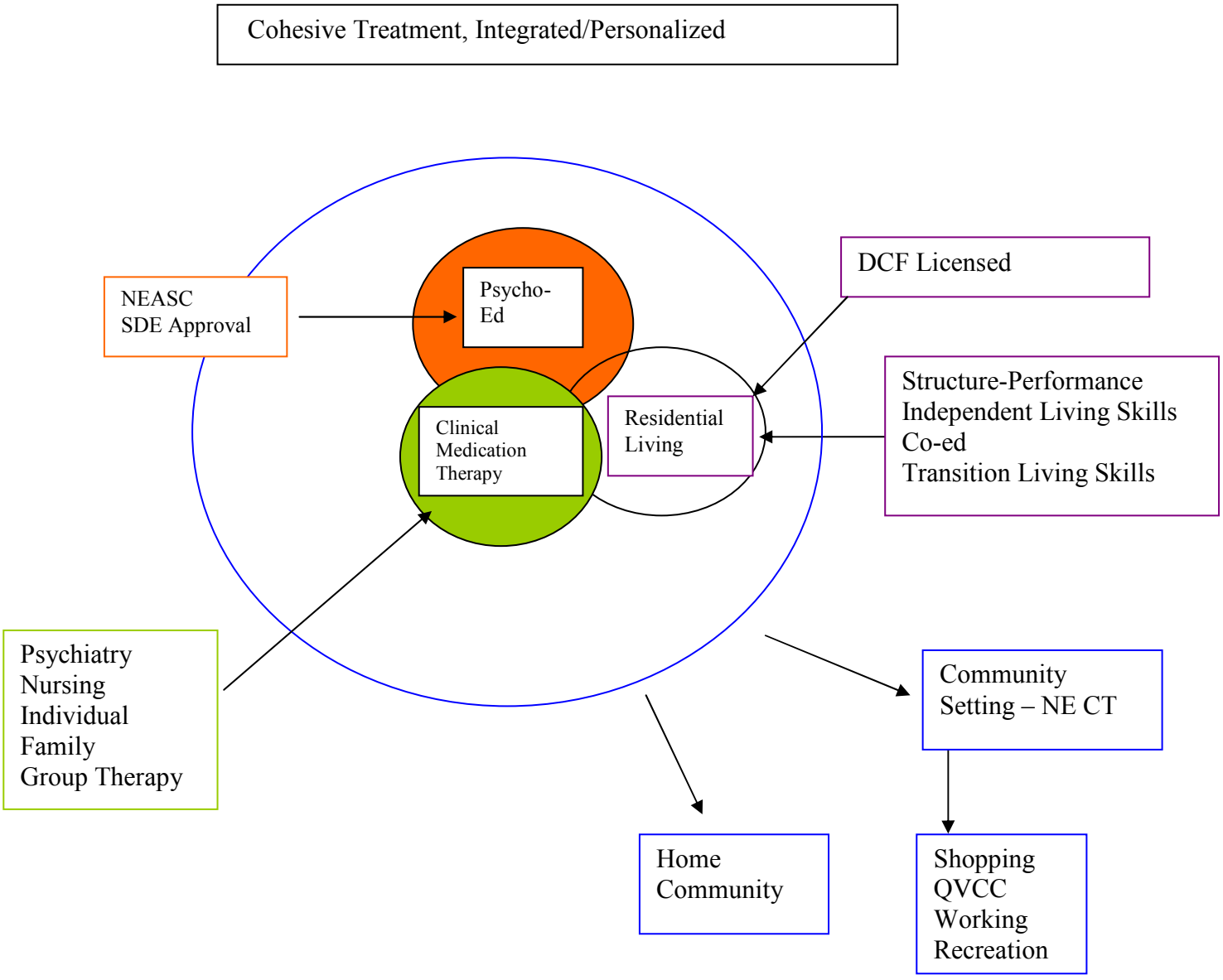
What are the key aspects of change for non-treatment reintegration environments?

This list is relatively short.

1. Small group size for instruction and therapy
2. Individual coaching on a scheduled and relevant basis, along with scheduled weekly individual therapy
3. Control of peer group composition. Disruptive, violent, explotive peers must be excluded.
4. Proper scaffolding of skill hierarchies for instruction
5. Social skill training, weekly
6. Post High School plan implementation for pre-vocational and college preparation
7. Appropriate assessments, and on-going measurement of skill acquisition and retention

The use of CBT within a treatment milieu may be very helpful. Positive self-regulation outcomes for students will result if there is a fit between a trained CBT clinician, environmental supports, relevant assessments, and diagnostic needs.

Ecological Treatment Model



References

Barkley, R. (1997). *ADHD and the nature of self-control.* New York. The Guilford Press.

Reinecke, M., Dattilio F., & Freeman A. (2003). *Cognitive Therapy with Children and Adolescents.* New York : The Guilford Press.