



Road to Recovery: A Model for a Cognitive Linguistics Therapy Group After Traumatic Brain Injury

By: Krupa Desai, BS, Jaclyn Kolano, BA,
Cassidy Mertz, BA & Megan Schafer, BS

Shelley Slott MS, CCC-SLP
Clinical Educator

What is a TBI?

A disruption in the normal function of the brain that can be caused by a bump, blow, or jolt to the head, or a penetrating head injury.

What is a TBI?

- **Pennsylvania Statistics:**
 - TBI related deaths in 2013:
 - Rates are highest for persons 75 years of age and older
 - Leading cause of TBI varies by age:
 - Falls: 65 and older
 - Intentional self-harm: 25-64 years old
 - Motor vehicle accidents: 5-24 years old
 - Assaults: 0-4 years old
 - Non-fatal TBI related injuries in 2013
 - Hospitalization rates highest among 75 years and older

Classification System of TBI Severity

Classification	GCS Score	Duration of Coma	Length of PTA (Post Traumatic Amnesia)
Severe	3 - 8	Over 6 hours	Over 24 hours
Moderate	9 - 12	Less than 6 hours	1 - 24 hours
Mild	13 - 15	20 minutes or less	60 minutes or less

Severities - Severe TBI

- Trauma induced physiological disruption of brain function as evidenced by at least one of the following:
 - *LOC over 6 hours*
 - *GCS score between 3-8*
 - *Loss of memory (PTA) over 24 hours*

Severities - Moderate TBI

- Trauma induced physiological disruption of brain function as evidenced by at least one of the following:
 - *LOC not greater than 6 hours*
 - *GCS score of at least 12 but not less than 9*
 - *Loss of memory (PTA) less than 24 hours*
 - *Any alteration in mental state*

Severities - Mild TBI

- Trauma induced physiological disruption of brain function as evidenced by at least one of the following:
 - *LOC not greater than 30 minutes*
 - *GCS score of at least 13 by 30 minutes*
 - *Loss of memory (PTA) less than 1 hour*
 - *Any alteration in mental state*
 - *Focal neurological deficits - can be transient*
 - *Radiological studies interpreted as normal*

Symptoms of Mild TBI

Thinking/Remembering	Physical	Emotional/Mood	Sleep
Difficulty thinking clearly	Headache; fuzzy or blurry vision	Irritability	Sleeping more than usual
Feeling slowed down	Nausea or vomiting dizziness	Sadness	Sleeping less than usual
Difficulty concentrating	Sensitivity to noise or light, balance problems	More emotional than usual	Trouble falling asleep
Difficulty remembering new information	Feeling tired, having no energy	Nervousness or anxiety	

Standardized Assessments

- From Seminars in Speech and Language/Volume 26, Number 4, 2005 , “standardized tests may be “functional” in the sense that they measure daily functioning, but because the administration is standardized, these tests are always limited in their ability to capture the unique characteristics of an individual's communication life.”
- “Standardized tests should be viewed as only one component of an evaluative process that includes multiple sources of information.”



Standardized Assessments

- Clients with a TBI tend to score much higher on standardized assessments and don't demonstrate their true functional deficits.
- Research, clinical expertise, and personal experiences show cognitive assessments are not a true measure of the client's actual function.

(Coelho, Ylvisaker, & Turkstra, 2005)

Advantages and Disadvantages

Advantages:

- Client-centered
- Relationships built within the group
- Client awareness of others that have similar or different difficulties than their own
- Broad varieties of activities and materials
- Self-monitoring is encouraged by reducing the client's dependence on the clinician
- More opportunities for counseling within the group
 - If one client requires more counseling than the rest, there are multiple clinicians to keep the session moving
- Encourages sharing of new strategies targeting “real world” activities

Advantages and Disadvantages

Disadvantages:

- Clients who are shy are less likely to partake in activities and benefit from the experience
- One or two members may become dominant of the group
- The group's progress may be too fast for the slowest members and too slow for the fastest members



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Group Therapy at Salus University Speech-Language Institute

- A weekly group therapy program was established to meet the needs of the TBI community and the community at large
- The goal of cognitive rehabilitation is for the client to regain functional skills and/or teach compensatory strategies



Group Therapy at Salus University Speech-Language Institute

- The goal of cognitive rehabilitation is for the client to regain functional skills and/or teach compensatory strategies
- Group programs are effective when both individual and group interventions are utilized to support client's needs for community re-entry
- Peer support can enhance coping skills and provide functional learning experiences

A brain left to its own devices, without facilitation and structure, does not move to its highest level.

--Chris Hagen



Therapy

1. Cognition is a complex collection of mental skills that allows each of us to make sense of our surroundings and function within these dynamic environments
2. Cognitive domains:
 - Orientation and arousal, attention, memory, executive functioning (problem solving, thought organization, reasoning), language skills, pragmatic/social language

Group Therapy

- Reinforce client behaviors and comments that are consistent with treatment goals
- Model the target behaviors or techniques group members are attempting to develop
- Encourage interaction within group by asking one member to demonstrate a target behavior for the other members
- Restructure comments or topics so they have appeal for all members of the group
- Use behaviors of individual members to form generalization that are applicable to the group as a whole

Group Therapy at the SLI



Activities: Thought Organization

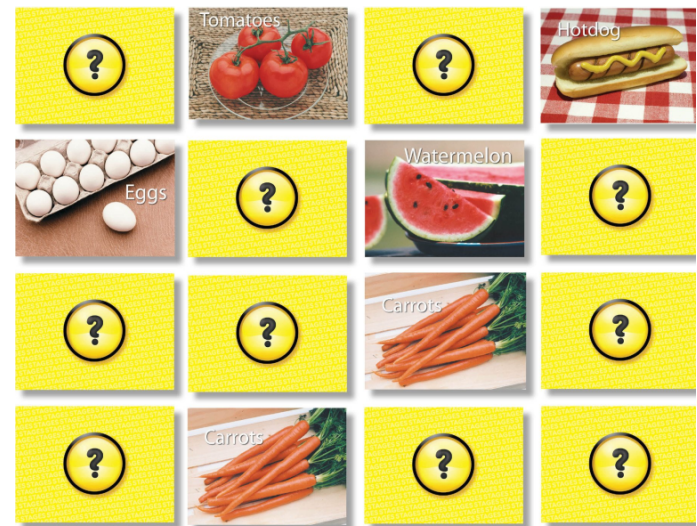
- **Purpose:** improve grouping and ordering components of common ADL's, use of organized verbal expression
- **Activities:**
 - Sequencing ADL's
 - Order of events when showering
 - Making dinner
 - Brainstorming tasks
 - Name a cooking ingredient and all the dishes that can be made from that ingredient



Retrieved from:
<http://www.brainfacts.org/thinking-sensing-and-behaving/thinking-and-awareness?page=2>

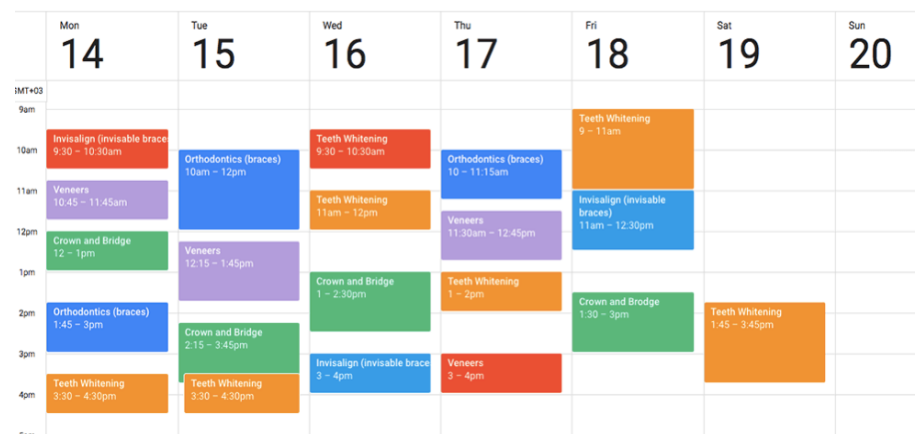
Activities: Memory

- **Purpose:** To increase focus/attention, use of external aids & priming activities for immediate memory, short term memory, long term memory
- **Activities:**
 - Games to involve 2-4 people such as matching card games, word associations, conversation recall, picture recall



Activities: Executive Functioning

- **Purpose:** Improve planning, initiation, self-awareness, goal setting and self-monitoring for safety and problem solving
- **Activities:**
 - Weekly appointments via calendar
 - Problem-solving strategies with daily barriers they face



Activities: Problem Solving

- **Purpose:** Improve ability to verbally strategize for solutions, execute and evaluate the results of those solutions; improve decision making/judgment for safety at home and in the community
- **Activities:**
 - Reasoning tasks (e.g. What would happen if...?)
 - Identify solutions to problems
 - Listing possible solutions to or causes of problems
 - Predicting outcomes and consequences of hypothetical problems
 - Games: Mastermind, Rush Hour traffic jam (computer game)

Activities: Pragmatics/Social-Language

- **Purpose:** Bring attention to what we say, how we say it, our body language, and whether it is appropriate to the given situation
- **Activities:**
 - Identifying inappropriate vs appropriate behaviors
 - Discussion of dating
 - Relating to people
 - Role playing = reading facial expressions
 - Tone of voice and body language
 - Understanding emotions



Retrieved from:
<https://www.care2.com/greenliving/the-lost-art-of-conversation-and-why-we-need-to-get-it-back.html>

Activities: Independence

- **Purpose:** To utilize the skills developed during the last 8 weeks to prepare for carryover and generalization of skills outside the therapeutic environment; review the program and elicit feedback (what worked/didn't work) for program development



Activities:

- Discussion of repair strategies
- Create a life map: from birth to the future - can be done with pictures, words, drawings to help with next step in adjustment process of living with brain injury

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What works?

- What SLI has found to be beneficial in our group is to start with individualized tasks designed to meet the needs and goals of each client
 - Word finding, memory strategies, attention tasks, problem solving
- SLI integrates the goal of the week into a group task which could be a game, a discussion, or learning new strategies to help the client manage in their environment during the next week

Client Testimonial

Activity

- 5 Second Rule (PlayMonster)
- Taboo (Hasbro)
- Headbandz (Spin Master Games)
- Clue (Hasbro)
- Mastermind (Pressman)

Salus University

Speech Language Institute

*Clinical training facility for speech-language pathology graduate students that provides **free** comprehensive services for children and adults through individual and group intervention sessions, and support groups for clients, parents and caregivers.*

(215) 780-3150

SLInstitute@salus.edu

8380 Old York Rd, Suite 2100
Elkins Park, PA 19027

<http://www.salusuhealth.com/Speech-Language-Institute/Home.aspx>



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