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Traumatic Brain Injury: Managing Challenging Situations During Rehabilitation, Case Study Applications

Steven Wheeler, PhD, OTR/L, FAOTA, CBIS

Janice Dowdy, MS, CCC/SLP, CBIS

Janice Dowdy, MS, CCC-SLP, CBIS

Janice Osborne Dowdy, MS/CCC-SLP, CBIS, is the lead speech-language pathologist at NeuroRestorative Ashland, Kentucky. Janice is a Certified Brain Injury Specialist, through the Academy of Certified Brain Injury Specialists. She is a graduate of Eastern Kentucky University and East Tennessee State University. Janice has been a practicing SLP for 19 years treating individuals with cognitive/communication/swallowing deficits as the result of CVA, brain injury, head and neck cancer, progressive neurological diseases, as well as other disease processes. She has worked in acute care, long term acute care, skilled nursing, and acute rehabilitation in inpatient, outpatient, and day treatment programs both as a staff therapist, and in various management roles prior to coming to NeuroRestorative. Janice also worked for Chattanooga Group/EMPI as Clinical Specialist for Vital Stim Therapy, traveling the USA providing education and consulting services to physicians and therapists in the management and treatment of dysphagia utilizing the modality of neuromuscular electrical stimulation (NMES). Janice has worked in the Ashland program since 2013.

Steven Wheeler, PhD, OTR/L, CBIS

Dr. Steven Wheeler is a professor and occupational therapy division chairperson at the West Virginia University School of Medicine. Prior to this, he served in a similar role at the University of Cincinnati. Dr. Wheeler is also principal investigator on the West Virginia TBI State Project which seeks to monitor, expand, and improve the lives of TBI survivors and caregivers through education, advocacy, and community outreach. Dr. Wheeler received his PhD in Health-Related Sciences with a Specialization in Occupational Therapy from Virginia Commonwealth University. He has conducted TBI related presentations nationally and internationally over the past 20 years and has numerous publications on the topic including co-authoring the American Occupational Therapy Association's “Occupational Therapy Practice Guidelines for Adults with Traumatic Brain Injury.”

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Learning Outcomes

After this course, participants will be able to:

- Identify common cognitive and behavioral factors that impede functional progress during rehabilitation following traumatic brain injury.
- Recognize strategies to evaluate and improve motivation, self-awareness, impulsivity, and issues with intimacy during the traumatic brain injury recovery process.
- Identify interventions to maximize functional independence and community participation following traumatic brain injury.

How TBI Changes One's Life Situation

- Less ability to communicate needs
- Less social support
- Less structured activities
- Fewer intrinsically meaningful activities
- Fewer ways to get needs met
- Less feelings of control

Ongoing Evaluation

- Important to let your patient "take the lead" to allow appropriate evaluation of executive dysfunction

Situation 1: Motivating the "Unmotivated: Client

- The recovery process is often a long, complex, and multidimensional road

- *The importance of client centeredness and motivation ……*
- *Consideration of what clients WANT to work on versus what they NEED to work on*
- *NONCOMPLIANCE?*

Motivation

- What is it?
  - Motivation is a state of readiness to change that fluctuates with time and situations.
  - Motivation can be increased through interaction.

- How is it impacted after by TBI?

Motivation and Apathy

- Apathy:
  - Among the most serious of executive dysfunctions
  - The impaired capacity to initiate activity
  - Decreased or absent motivation
  - Deficits in planning and carrying out the activity sequences that make up goal directed behaviors
  - Common following TBI - prevalence studies ranging from 46 – 71%

Lane-Brown and Tate, 2011

Motivation and Apathy –
Some Examples of Non-pharmacological Interventions

- Severe
  - Music therapy
  - Structured activity
- Mild to Moderate
  - Motivational interviewing
  - Goal directed activity
  - External compensation

- Important to use a client centered functional approach

Lane-Brown and Tate, 2011

The Relationship of Personal Goals and Motivation

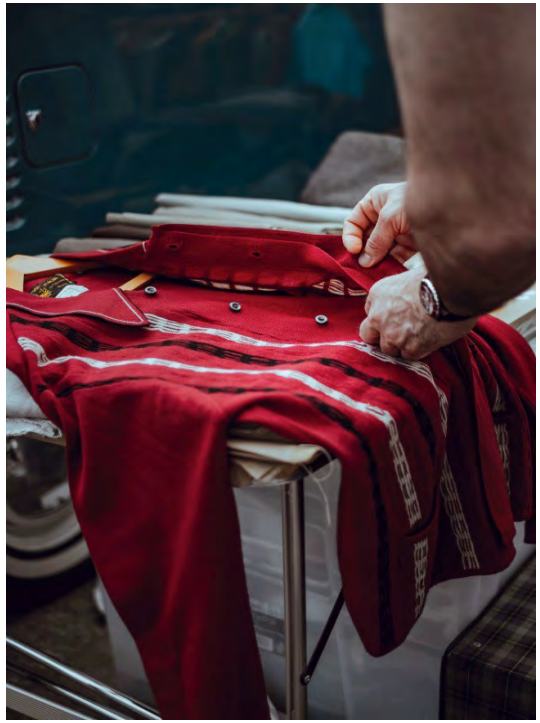
- How can therapists help clients be goal directed?
- Why is achievement of these goals such a challenge?

Client Centered Goal Setting: Establishing a Partnership and Accountability

- Things that person would like to do
- Things the person needs to do
  - Level of importance
  - Level of performance
  - Level of satisfaction

Contextualized vs. De-Contextualized Treatment

- Contextualized



- Quasi-Contextualized

- De-Contextualized

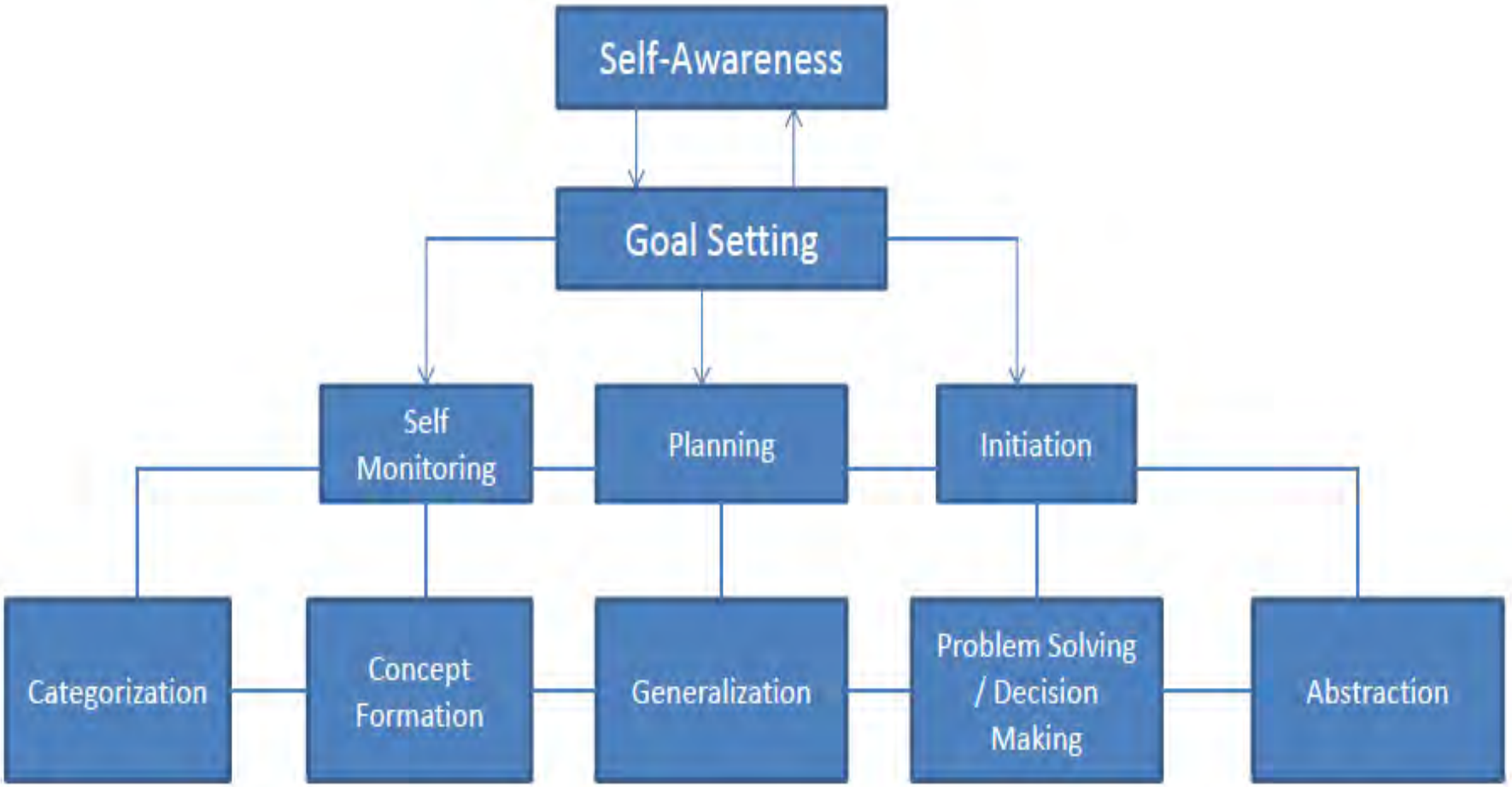
Are these good treatment tasks?

Findings Regarding Contextualized Treatment (Bogner et al., 2019)

- Increasing the proportion of treatment using a contextualized approach results in better community participation one year later
  - Patients with a 30% greater proportion of contextualized treatment were more likely to be out of the house 1-2 more days a week one year later.
- Patients with greater disability experienced more benefit in regard to self-care and mobility than patients with less severe disability
- Effect sizes were small, but meaningful
- The findings do not indicate that decontextualized should not be used, but to use contextualized treatment whenever possible given the therapy goal

The Relationship of Self-Awareness and Motivation

- Rehab benefits often disrupted by lack of engagement in the process.
- Many contributing factors – including impaired self-awareness of deficits
- Impaired self-awareness associated with poor motivation, unrealistic goal setting, and hampered functional outcomes (Fleming & Ownsworth, 2006; Smeets et al., 2017)

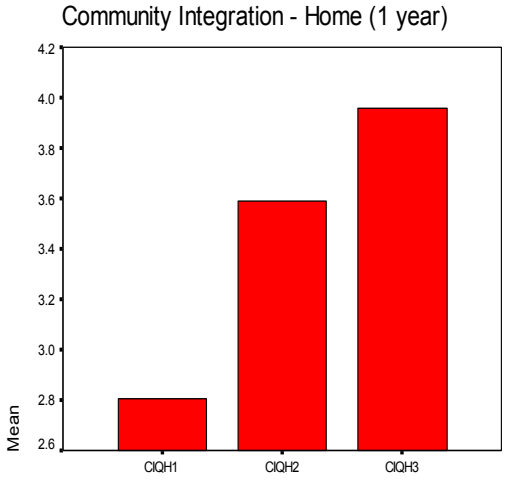


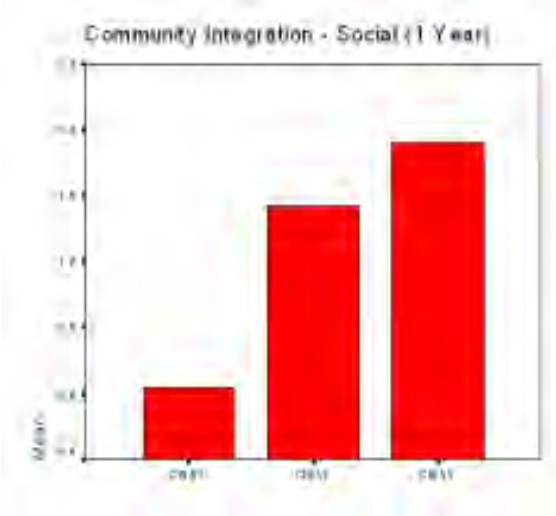
Treatment Planning to Address Executive Dysfunction

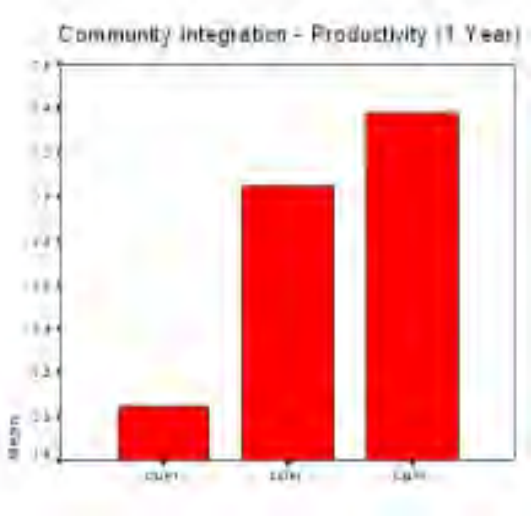
The Relationship of Self-Awareness and Motivation

- Factors characterizing effective interventions for self-awareness
  - Positive and accepting clinician-client relationship
  - Collaborative goal setting
  - Graded, individualized task selection
  - Sensitivity to emotional state and preparedness

The Impact of Community Based Rehabilitation on Community Participation







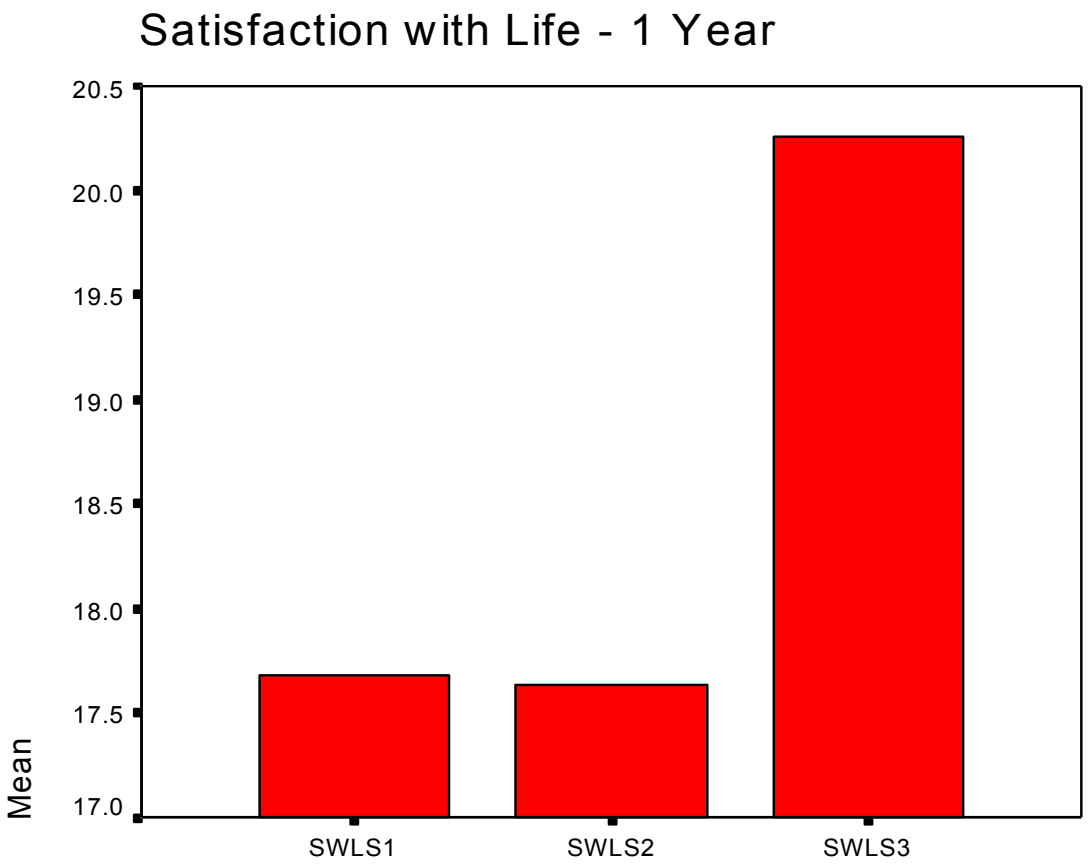
Measure = Community Integration Questionnaire

Graphs represent admission, 3 month, and 1 year follow during participation In community based rehabilitation.
Intervention included life skills coaching, group therapy, OT, SLP and Psychology

Wheeler (2012)

Life Satisfaction and TBI – 1 Year Follow-up

- Clients making biggest functional gains and highest life satisfaction at 1 year were those with decreased satisfaction at 12 week period.



Wheeler (2012)

Motivation and Motivational Interviewing

- What is Motivational Interviewing?

  A semi-directive, client centered counseling style for eliciting behavior change by helping people to explore and resolve ambivalence about change.

Collaboration – Working in Partnership

Evocation – Learning from the person

Autonomy – Person is responsible for own change

MI Principles to Facilitate, Self-Awareness, Motivation and Change

- Motivational interviewing has the potential to create optimal conditions for individual case formulation, improved self-awareness and goal setting, and constructive engagement in clinical rehabilitation interventions (Medley and Powell, 2010).
- Toglia and Kirk (2000) – a mode of interaction characterized by sensitive, respectful, and balanced feedback is favored over more confrontational approaches.

Motivational Interviewing: Readiness Rulers

Importance

- How important would you say it is to save money?
  - Why did you pick a ___ and not a (lower number)?
  - What concerns do you have about your use?

Confidence

- If you were to decide right now to start saving money each week, how confident are you that you could succeed?
  - Why did you pick a ___ and not a (lower number)?
  - What would help you to have a higher number?

Motivational Interviewing in TBI Rehabilitation

- Getting your patient back on their life journey

- The task of the practitioner is to:
  - Tap into the person's potential for change
  - Guide the natural change process already within the individual
  - Impart hope, belief in, and confidence that the person can make desired changes.

Situation II: Overcoming Impulsivity, Agitation, and Behavioral Issues in the Community

- Executive dysfunction and other factors create neurocognitive risks for persons with TBI

- Lower frustration tolerance
- Less mental flexibility
- Less reasoning skills
- Less impulse control
- Lower self-esteem
- More easily overwhelmed

Common Features of Impulsivity

- Acting without thinking
- Inability to save money or regulate finances
- Irritability and temper outbursts
- Too familiar with strangers and sharing very personal details
- Asking personal questions that cause discomfort
- Intruding or interrupting conversations
- Unable to wait patiently for their turn
- Sexual promiscuity.

Q9

Behavior Management Strategy

- Best long-term strategy is positive reinforcement- it may build self efficacy, sense of control, and self esteem

- REWARD Desired Behavior!

Environmental Modification

- Assessment of human and non-human environment important part of understanding your patient.

- If stimulus bound- may need environment modification- remove stimulus/trigger- substance of addiction, access to gambling, use of credit cards, computer controls on where the person can go.

Managing Agitation and Aggressive Behavior

Important Reminders:

- The pace of recovery and residual deficits following TBI are naturally frustrating
- Gains in self-awareness challenge a fragile self-esteem

Aggressive Behavior Following TBI

- Often a consequence of impaired behavioral regulation
- Prevalence rates in the literature vary – from as low as 11% to as high as 96% (Sabaz et al., 2014)

- Individual level impacts
  - Social isolation, vulnerable to retaliatory assaults, subject to criminal behavior
- Systemic level impacts
  - Caregiver stress, staff burnout, staffing costs, and exclusion from vital services.

Byrne & Coetzer, (2016)

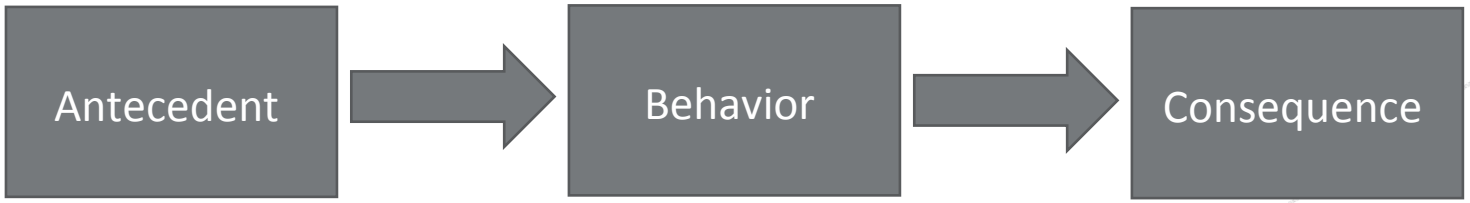
Aggressive Behavior Following TBI

- Should be conceptualized as a multifaceted difficulty
  - Premorbid personality
  - Post-injury coping styles
  - Pathological changes
  - Environmental factors
- Pharmacological and non-pharmacological interventions
- No substantial evidence for use of exclusive pharmacological treatment for aggressive behavior following TBI

Byrne & Coetzer, (2016)

Behavioral Approaches

- *Antecedent* – anything that happened or is present before the behavior
- *Behavior* – the action which generally functions as a way to communicate a need or desire
- *Consequences* – events that follow a behavior



Byrne & Coetzer, (2016)

Steps in Behavior Management

- 1. State the problem in behavioral terms
- 2. Identify behavior objectives
- 3. Take baseline measures – Frequency? Triggers?
- 4. Conduct naturalistic observations
- 5. Modify existing contingencies (A and C's)
- 6. Monitor the results

- Important to work integrate into a team approach in collaboration with a psychologist or behavioral specialist

Managing Impulsive and Aggressive Behavior: Suggestions on Setting Limits as to What Behaviors are Acceptable

- Clear and simple – facilitate client centeredness but limit choices, allow time, limit jargon
- Reasonable – fair and attainable
- Enforceable – can and will you enforce it?
- Stay Calm
- Avoid threats
- LISTEN and REFLECT

Replacement Behaviors

- Help person find alternative behaviors or alternative ways to communicate or get needs met.
- The importance of a functional approach
- Social / communication / skill-based approach
- Building a productive daily routine that includes physical activity

Cognitive Behavioral Treatment

- Contains elements of psychoeducation, self-monitoring, cognitive restructuring, and self-talk training
- Structured and goal-based approach
- Can be adapted for TBI related cognitive impairments: increased repetition, discrete behavioral goals, avoidance of metaphors, supplementary materials, part of group interventions (Clark, Sander et al., 2009)
- Evidence for effectiveness with aggressive behavior with TBI limited but growing

Byrne & Coetzer, (2016)

Grading Tasks to Facilitate Performance, Build Self Confidence, and Manage Frustration

Considerations:
Activity analysis for degree of difficulty relative to evaluated skill set
Degree of assistance needed – chaining (forward / backward); verbal / physical cueing

De-escalation Tips

- Be empathetic and non-judgmental
- Respect personal space (1.5 – 3 feet)
- Use non-threatening non-verbals
- Avoid overreacting
- Focus on Feelings
- Ignore “challenging” questions – redirect to issue
- Set limits – concise respectful choices / consequences
- Choose wisely what you insist upon
- Allow silence for reflection
- Allow time for decisions

Clinical Considerations - Groups

- Generally provide face to face interactions among people whose lives have been affected by brain injury.
- Many groups are operated through volunteer organizations, meet at regular intervals, and provide opportunities for information sharing and companionship.
- While the value of such groups is widely recognized, research to identify the impact of such programs on the various aspects of community participation of family/ caregiver functioning is sparse.

The Value of Group Activities

- 1) Facilitate assessment of social behaviors – social microcosm
- 2) Provides environment for receiving feedback regarding inappropriate social behaviors / enhance awareness
- 3) Provides forum for practicing skills related to social competence
- 4) Provides motivating environment for goal setting

Hammond et al., 2015

The Value of a Therapeutic Community – TBI Group Therapy

- TBI client – often show little interest in how others perceive them
- Frontal lobes – connect behavior to associated emotional states
  - If person can't feel what the impact of their behavior has on others, then they're indifferent to behavior

The Value of a Therapeutic Community – Group Therapy (cont'd)

- Group members – do start to care about what others think of them so group begins to have a profound impact on behavior
- Positive behavior = immediate positive feedback from friends
- Unacceptable behavior = will receive immediate constructive feedback from same group

Situation III: Intimacy and Family Support

Intimacy Goals and Challenges – Next steps in Recovery

Intimacy and Sexuality Following Brain Injury

- The desire for sex and intimacy varies throughout the course of our lives, even following a serious and life altering injury.
- Following an injury, there may be an increase or decrease in desire related to these areas.
- Intimacy can exist without sex, and sex can occur without intimacy.

Intimacy Extends Past “Sex”

- Psychological Components
  - Closeness
  - Trust
  - Respect
  - Safety
- Tactile Expression
  - Closeness
  - Physical touch

Intimacy and Sexuality Following Brain Injury

- Who is responsible for addressing this with the patient?
  - EVERYONE

- This is a topic most want to avoid because:
  - It is uncomfortable
  - It is too soon
  - It is challenging to engage in a discussion with disinhibited individuals
  - It is easier to “pass the buck” and call in a “specialist”

Calabro, et al. 2017; Moreno, et al., 2015

Things that are NOT addressed:

- Contraception
- Safer sex
- Condom application/use
- “Equipment” problems
- Disease prevention
- Medication effects on sexuality
- Adaptive equipment

Moreno et al., 2015

Ways to Improve

- Develop policies with your program
- Assign roles
- Provide/Seek out staff education
- Change the attitudes and misperceptions related to discussing these issues
- Make it a team effort – normalize the discussion

Moreno, et al., 2015

Most Significant Changes Occur In Patients With Severe, Moderate, or Complicated-Mild Injuries

- Changes in responsibilities within the relationship
- Changes within the established relationship roles
- Changes and challenges related to communication skills

Changes in Responsibilities

- Survivors give up roles such as “breadwinner”, household chores, being an equal “teammate”
- Partners assume new responsibilities
  - Managing household finances
  - Physically maintaining the inside and outside of the home alone
  - Organizing and coordinating events, schedules, therapies, transportation for all members of the household
- This can lead to stress, tension, resentment on both sides

Q10

Changes in Relationship Roles

- Often while survivors are recovering the partner takes on roles that they traditionally did not handle in the relationship
  - Managing childcare – the wife coordinated and now the husband has to decide and coordinate
  - Leading and calming the family –the husband was the spiritual and emotional calmer in the family, now the wife has to assimilate this role
  - These shifts can be small or significant depending on the previous setup of the family
  - It may become increasingly harder the longer the partner/survivor is in their new role

Communication Changes

- Communication is the foundation of all relationships, and it extends past verbal elements
  - Gestures
  - Physical touch
  - Facial expressions
  - “reading” ones mind

- Communication changes are often reports as one of the biggest changes post injury in the relationship – loss of ability to confide in survivor – impacted by memory or impulsivity

Cognitive Changes

- The survivor may have significant issues with thinking skills – memory, judgement, reasoning, emotional regulation, safety.
- Leaving the partner in the role of “mother/father”, “responsible party”, “guardian”
- All labels that do not emulate equal roles in the relationship, as was most likely the pre-injury situation

Physical Changes

- Survivor may need significant assistance with self-care, hygiene, eating/drinking, walking
- Issues with sex drive – on both sides
  - Survivor may have challenges with the physical components of intimacy related to neurological or medication related issues
  - Partner may have challenges with arousal, connection, attraction to the survivor which can impact the ability to participate in intimate relations
- Survivor may continue with high sexual satisfaction while partner is significantly decreased

Conclusions

- Successful TBI Rehabilitation is best accomplished through:
  - Patient engagement
  - Family involvement
  - Understanding of TBI and a Therapeutic approach
  - Ongoing Evaluation

Questions?

- Email
- swheeler@hsc.wvu.edu
- Janice.Dowdy@neurorestorative.com

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