Facilitating Community Integration Following TBI
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Community Participation
“Occurs at the intersection of what the person can do, wants to do, has the opportunity or affordances to do, and is not prevented from doing by the world in which the person lives and seeks to participate”
-Waddison & Hammel (2010)

“Having something to do, somewhere to live, and someone to love”
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**Community Integration**
- International Classification of Functioning, Disability and Health (ICF) promotes focus on participation vs. remediation of deficits
- Moves focus away from specific impairments, and more toward a focus on life satisfaction and meaningful participation
- Impact of environment: training and practice in a realistic setting leads to better carryover and generalization of skills

*Sloan, Winkler, Calloway (2004)*

**Research Study**
- Patients discharging from inpatient rehab with primary diagnosis of TBI, age 18-55
- Outcome measures completed at admission, discharge, 90 days following discharge, and 1 year following discharge
- Total of 25 participants; 13 completed entire study
- Average age: 38.4
- Average length of rehab stay: 20.1 days

**Outcome Measures**
- Outcome measures:
  - FIM: Functional Independence
  - MAPI-4: Abilities (Deficits), Level, Adjustment, Participation
  - Community Integration Questionnaire: Home Integration, Social Integration, Integration into Productive Activities
  - Satisfaction with Life Scale: Likert Scale, 5 items
  - Caregiver Burden Scale: Patient needs, caregiver’s perceived burden
Results

- **Significant Correlations ($p<.05$):**
  - Discharge FIM Score and Caregiver Tasks at 1 Year ($r=-.702$)
  - Discharge FIM Score and Survivor Needs at 1 Year ($r=-.699$)
  - Discharge FIM Score and CIQ Productive Activity at 90 day ($r=.651$) and 1 Year ($r=.604$)
  - Rehabilitation LOS and CIQ at 1 Year ($r=-.711$) as well as all 3 CIQ Subscales

  Also, moderate - strong relationship between social integration and life satisfaction at 1 Year ($r=.327$)

Evaluation Process

- Determine the client’s goals and analyze performance in a functional context
- Evaluate client and environmental factors
- Participation-level assessments are best for a realistic assessment of client performance
- COPM: Client-centered and can assist with goal setting
- Goal Attainment Scale: Assesses performance compared to desired outcome


Participation Level Assessments

- Brain Injury Community Rehabilitation Outcome-39
- Community Integration Measure
- Community Integration Questionnaire
- Functional Assessment Measure
- Mayo-Portland Adaptability Measure-4 (MPAI-4)
- Participation Objective, Participation Subjective
- Participation Profile

Components of Community Integration

1. Satisfaction and Quality of Life
2. Independence and Social Integration
3. Caregiver Burden
4. Return to Driving
5. Productivity

McCabe, et al. (2007)

Life Satisfaction/Quality of Life

- Often a decline in life satisfaction initially upon discharge from inpatient
- Assessment Spotlight: QOLIBRI (Quality of Life After Brain Injury)
- Leisure participation impacts quality of life
  - Improved self-esteem, goal attainment, self-awareness, emotional well-being
  - Rarely address in rehab settings
- Return to work: most important for quality of life
- Teach productive, problem-based coping strategies

Kersey, et al. (2001)

Independence and Social Integration

- Independence and social integration can impact all other components of community integration
- Social isolation one of the most distressing consequences of TBI
- Relies on sufficient cognition, speech/language/communication skills, emotional control and self-monitoring, and ability to attend to and follow social rules
- Assessment Spotlight: Functional Assessment Measure
- Often most limited by impairments with executive functioning and self-awareness

Wheelin (2015)
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Self-Awareness Assessment
- Awareness Questionnaire
- Neurobehavioral Functioning Inventory
- Self-Awareness of Deficits Interview
- Patient Competency Rating Scale
- Can also use discrepancy scores on a variety of functional assessment tools


Metacognitive Training
- Metacognitive approach:
  - Client estimates their performance on a task
  - Client completes the task
  - Client compares predictions with actual performance
- Global strategy training (Goal-Plan-Do-Check), domain-specific strategy training

Toglia & Kirk (2000)

Individualized Skill Training
- Address skills needed to achieve goals with a top-down approach
- Simplify or structure the task to set the client up for success, with training on use of compensatory strategies
- Build on existing strengths, or try activities that were enjoyed prior to injury for familiarity and ease of learning
- Develop routines so that task completion becomes automatic; provide repetitive and consistent practice opportunities

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Caregiver Burden

- Stress within the family can significantly impact the client’s outcomes.
- Caregiver burden can persist years or decades after injury.
- Marriages are often disrupted: dependency, loss of physical and emotional intimacy, behavioral and emotional issues, self-centeredness.
- Behavioral and cognitive impairments have the strongest negative impact on family functioning.
- Divorce rates consistent with the general population.

Marsh et al. (1996), Kreutz et al. (2007)

Caregiver Burden - Intervention

- Family needs to be involved in treatment, and stress level should be frequently re-assessed to determine needs.
- Identify appropriate social supports: respite services, personal care assistant, information resources, support groups.
- Not all assistance is perceived as helpful; resources must be perceived as valuable and supportive by caregivers.
- Teach coping skills for family members.
- Family Needs Questionnaire - Revised, Caregiver Strain Index, Severe Obstacles Scale


Return to Driving

- Individuals with TBI who have discontinued driving experience lower rates of life satisfaction and community integration.
- Impacted by impaired memory, attention, processing speed and executive dysfunction.
- 50% - 80% of individuals with severe brain injury return to driving.
- Two-thirds are never formally evaluated.
- Those with severe TBI who return to driving and are involved in a crash are more than twice as likely to be at fault.
- Family/caregivers are the most common cause for driving cessation.

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Driving Rehab Specialists
- When to refer: Patient should have the potential for success in order to preserve self-efficacy
- Screen for essential skills:
  - Vision: Depth perception, visual field, color perception, scanning
  - Path-finding: Trails B
  - Reaction speed
  - ROM, strength, coordination
  - Sustained attention
  - Safety awareness

Return to Work
- Return to work is more closely correlated to life satisfaction than any other activity
- Interpersonal difficulties is the most commonly cited reason for job separation following TBI
- Other challenges: Impaired social competency, self-monitoring, disinhibition, missed social cues, disorganized thoughts, aggression
- Employment rate following TBI: 20-50%
- TBI not always visible; employees often don’t get the supports they need

Return to Work
- Self-awareness is key
- Train time management, organizational skills, communication strategies, social and cognitive strategies
- Train on coping strategies, adaptive behaviors
- Employer education is essential; get them engaged in return-to-work plan
- Address public transportation access, mental health service needs, family education, and services available through state agencies

Trexler, et al. (2010)
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Return to Work Programs
- Vocational Rehabilitation: “Intensive individualized rehabilitation of work skills in a structured environment, guided work trials, and assisted job placement with transitional job support”
- Supported Employment: “Job placement, on-the-job training, and long-term support and job skills reinforcement”
- Case Coordination: “Holistic rehabilitation approach that is individualized to suit the client’s specific needs”

Fadyl & McPherson (2009)

Return to School
- Return to school can be limited by impulsivity, decreased self-awareness, organization, planning, sensory overload, language impairments
- High risk for failure
- TBI not always visible; students may not receive adequate support
- Educators may not understand the cognitive and behavioral challenges associated with TBI


Return to School- Interventions
- Discussion of strengths and weaknesses
- Establish specific academic and non-academic goals
- Train skills for time management, studying, interaction with classmates and teachers, coping skills
- Identify supports: family, friends, counseling, disability services
- Coaching, peer mentorship
- End-of-year portfolio: outline strategies and tools that were beneficial

Kennedy & Krause (2011)
Conclusions/Final Remarks

- Community integration is a multi-dimensional component of rehab that can be addressed at all stages of recovery.
- Assessments and interventions should reflect the natural environment and natural barriers as much as possible.
- Family and caregivers must be involved in the rehab process.
- Independence and social integration have a significant impact on other components of community integration.

References

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