Interpersonal Diagnosis and Functioning After Acquired Brain Injury

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“The human brain, this most sophisticated of instruments, capable of reflecting the complexities and intricacies of the surrounding world – how is it build and what is the nature of its functional organization? What structures or systems of the brain generate those complex needs and designs which distinguish man from animals?”

From A. R. Luria - *The Working Brain*
• “He who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god”

From Aristotle - *Politics*

• “For solitude sometimes is best society, And short retirement urges sweet return”

From Milton - *Paradise Lost*
At The Mall

- Interpersonal behavior of those with disability (TBI; Stroke; DD)
- My Daughter’s Tripartite Interpersonal Typology
  - “Emo”
  - “Emo-Wanna-Be’s”
  - Everybody Else
“...mental functions, as complex functional systems, cannot be localized in narrow zones of the cortex or in isolated cell groups, but must be organized in systems of concertedly working zones, each of which performs its role in a complex functional system, and which may be located in completely different and often far distant areas of the brain.” A. R. Luria, *The Working Brain*, p.31
• Example – Cognitive dysmetria in schizophrenia
• Prefrontal-thalamic-cerebellar circuitry dysfunction
• Poor rapid coordination of sequential mental activities

Brain Injury and Interpersonal Dysfunction

• Family/caregiver stress and burden
• Wade, et al. (2004)
  • Role of interpersonal resources and stressors to parental adaptation following pediatric TBI.
  • Life Stressors and Social Resource Inventory – Adult Form (LISRES-A; Moos & Moos, 1994); Family Burden of Injury Interview (FBII; Burgess et al., 1999)
  • “Support from friends and spouse was associated with less psychological distress, whereas family and spouse stressors were associated with greater distress”
  • Interpersonal resources attenuated long-term burden

Wade, S. L., et al. (2004). Interpersonal stressors and resources as predictors of parental adaptation following pediatric traumatic injury. JCCP, 72, 776-784.
Brain Injury and Interpersonal Dysfunction

• Impact of neurobehavioural dysfunction on personal relationships
• 48 partners – one who sustained TBI
• Factors perceived as placing the greatest burden on the relationship:
  – Mood swings
  – Aggression and quick temper
  – Unpredictable pattern of behavior

Brain Injury and Interpersonal Dysfunction

- Patient EVR
  - Age 35 “after a brief period of personality changes and visual disturbances, a cerebral tumor was diagnosed”
  - Orbitofrontal meningioma

Brain Injury and Interpersonal Dysfunction

– Post-surgery changes
  • Employers complained patient was tardy and disorganized
  • Deterioration of marriage after 17 years
  • Age 45 – considering another marriage
  • EVR could solve social problems in the abstract; could not execute in “real life.”
  • “Many of his actions could be described as ‘sociopathic.’”
  • MMPI “did not indicate psychopathology.”

– Interaction between cognitive and interpersonal behavior
Brain Injury and Interpersonal Dysfunction


• Sharing of emotional experiences and states with others

• Empathy – emotional, cognitive, and physiologic elements

• Inverse relationship between empathy and WCST
Brain Injury and Interpersonal Dysfunction


- Those with damage to the right frontal region reacted less, with diminished physical or emotional responses.

- Affective prosody aspect
Brain Injury and Interpersonal Dysfunction

• Personality changes after brain injury

  • Irritability, agitation, belligerence, agner, abrupt and unexpected acts of violence or episodic dyscontrol syndrome, impulsiveness, impatience, restlessness, inappropriate social responses, emotional lability, anxiety, suspiciousness, delusional, paranoia, mania, aspontaneity, sluggish, loss of interest in the environment, loss of drive or initiate, tires easily, depressed, childishness, self-centered, insensitivty to others, giddiness, overtalkativeness, exuberance, helplessness, lack of insight.
Influences


History of Interpersonal Diagnosis

  - Science of interpersonal living
  - Departure from mainline psychoanalytic theory
  - Evidenced in milieu therapy in the inpatient psychiatry units
  - Washington School of Psychiatry/Sheppard-Pratt Hospital
Interpersonal Theory

- “The field of psychiatry is the field of interpersonal relations... a personality can never be isolated from the complex of interpersonal relations in which the person lives and has his being” - From Conceptions of Modern Psychiatry
“Personality is made manifest in interpersonal situations and not otherwise”.
Interpersonal Theory

- *Interpersonal Theory of Psychiatry (1953)*
- Developmental-interpersonal theory
  - Infant-Caregiver (mother) interaction
  - Anxiety – “glial cells of the psyche”
  - Theorem of Reciprocal Emotions - The interpersonal transaction is a reciprocal process that involves:
    - Complementary needs are resolved or aggravated
    - Reciprocal patterns of activity are developed or disintegrated
    - Forsight of satisfaction or rebuff of similar needs is facilitated
Enter Timothy Leary

- Kaiser Foundation Hospital – Oakland
- University of California – Berkeley
- Circumplex Model of Personality
Leary’s (1957) Circumplex Model of Interpersonal Functioning
Kiesler’s 1982 Interpersonal Circle
Concept of Complimentarity
Interpersonal Diagnosis

• Multilevel pattern of interpersonal responses

• Leary’s Fifth Working Principle (1957):
  “Any statement about personality must indicate the level of personality to which it refers” (p.41).

Figure 2. Diagrammatic Representation of Interpersonal Interaction of a Patient During Twenty Hours of Psychotherapy. Radius of circle equals 1,000 interactions. This patient manifested 820 docile-dependent interpersonal actions (JK octant) and 260 confident-narcissistic actions (BC octant).
Brain Injury and Interpersonal Dysfunction


• Interpersonal Adjective Scales
• Compared to controls, those with frontotemporal dementia showed changes in social functioning
  • **Temporal** variant shifted toward severe interpersonal coldness with mild loss of dominance; **frontal** variant showed opposite pattern.
Wiggins Interpersonal Adjective Scale - Revised
Patient - Mother
“Well, what d’ya know! ... I’m a follower, too!”
The questions were getting harder, and Ted could feel Lucky's watchful glare from across the room. He had been warned, he recalled, that this was a breed that would sometimes test him.
• “Interpersonal” scales
  – Scale Pd
  – Scale Si

• Restructured Scales (Tellegen)
  • RCd  Demoralization
  • RC1  Somatic Complaints
  • RC2  Low Positive Emotions
  • RC3  Cynacism
  • RC4  Antisocial Behavior
  • RC6  Ideas of Persecution
  • RC7  Dysfunctional Negative Emotions
  • RC8  Aberrant Experiences
  • RC9  Hypomanic Activation
MMPI-2

• “Interpersonal” content scales
  • ASP: Antisocial Practices
    – ASP 1: Antisocial Attitudes
    – ASP 2: Antisocial Behavior
  • SOD: Social Discomfort
    – SOD 1: Introversion
    – SOD 2: Shyness
  • FAM: Family Problems
    – FAM 1: Family Discord
    – FAM 2: Familial Alienation
  • Do: Dominance
  • MDS: Marital Distress
MMPI-2

• “Interpersonal” content scales
  • PSY-5 (Personality Psychopathology Five)
  • AGGR - Aggressiveness
  • PSYC - Psychoticism
  • DISC - Disconstraint
  • NEGE - Negative Emotionality/Neuroticism
  • INTR - Introversion/Low Positive Emotionality
• Social Introversion Subscales
  • Si1 – Shyness/Self-Consciousness
  • Si2 – Social Avoidance
  • Si3 – Alienation—Self and Others
The Millon Matrix
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<th>Personality Disorder</th>
<th>Passive: Accommodation</th>
<th>Active: Modification</th>
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**Existential Aim**  
*Life Enhancement vs. Life Preservation*  
*Pleasure versus Pain*  
Pleasure (low)  
Pleasure-Pain Reversal

**Replication Strategy**  
*Propagation versus Nurturance*  
Self (low)  
Other (high)

**Deficiency, Imbalance, or Conflict**  
Pain (low or high)

**Personality Disorder**  
Schizoid
Depressive
Avoidant
Schizotypal
Borderline
Paranoid
Interpersonal Conduct

- Style of relating to others
- Impact message
- Attitudes that underlie, prompt, and give shape to behavioral acts
- Interpersonal theory and style
Case Study

• 40’s Female, TBI (moderate), 1 year post-injury
• MMPI-2
• Millon Behavioral Medicine Diagnostic
MMPI-2

- L-F-K hovering around T50
- VRIN, TRIN, F(B), S all WNL
- D – T58
- Hy – T60
- RCs all under T65
- All Content Scale under T65
- Do – 40-ish
- PSY-5 all within T48 to T58
MBMD

- Developed and standardized on medical patients
- Earlier version: Millon Behavioral Health Inventory (MBHI)
- Interpersonal Coping Scales parallel MCMI-III scales
- Grounded in Millon Personology Theory
### Medical Problem(s): Stroke

**Code:** - // - **-* // - **B D F + // - **-* J I + //

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<th>Response Patterns</th>
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Increasingly Problematic
Persistent Postconcussion Syndrome

- 40’s male, concussion, major disability
- 4 years post-injury
- Chronic pain, physically deactivated, dizziness
- Psychiatric hospitalization, voices, unusual behavior
- Major depressive disorder
**Medical Problem(s):** Accident/Injury, Pain


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**Psychiatric Indications**
- AA: 29 95
- BB: 38 95
- CC: 27 95
- DD: 25 80
- EE: 20 61

**Coping Styles**
- 1: 15 85
- 2A: 31 110
- 2B: 18 106
- 3: 24 110
- 4: 3 10
- 5: 5 20
- 6A: 12 55
- 6B: 6 20
- 7: 29 82
- 8A: 27 80
- 8B: 25 110

**Stress Moderators**
- A: 34 95
- B: 28 95
- C: 40 95
- D: 29 95
- E: 28 95
- F: 0 0

**Treatment Prognostics**
- G: 27 95
- H: 18 95
- I: 3 40
- J: 23 95
- K: 5 14

**Management Guides**
- L: 18 105
- M: 17 105

**Increasingly Problematic**
Personality Assessment Inventory (PAI)

- Validity, Clinical, Treatment, Interpersonal Scales
- “Interpersonal” Clinical Scales
  - Borderline Features (BOR)
  - Antisocial Features (ANT)
- “Interpersonal” Treatment Scales
  - Nonsupport (NON)
- “Interpersonal” Subscales
  - Social Detachment (SCZ-S)
  - Negative Relationships (BOR-N)
  - Antisocial Behaviors (ANT-A)
  - Egocentricity (ANT-E)
  - Aggressive Attitude (AGG-A)
• **Interpersonal Scales**
  
  – **Dominance (DOM):** “Assesses the extent to which a person is controlling and independent in personal relationships. A bipolar dimension with a dominant style at the high end and a submissive style at the low end”.
  
  – **Warmth (WRM):** “Assesses the extent to which a person is interested in supportive and empathic personal relationships. A bipolar dimension with a warm, outgoing style at the high end and a cold, rejecting style at the low end.”

PAI

• DOM and WRM correlate: .31, .37
• DOM – IAS Dominance = .61
• DOM – IAS Warmth = .08
• WRM – IAS Dominance = .25
• WRM – IAS Warmth = .65
Inventory of Interpersonal Problems

• 64-Items, 4-point Likert Scale

• It is hard for me to….
  …Join in on groups
  …Feel close to other people
  …Forgive another person after I’ve been angry

The following are things that you do too much.
  …I open up to people too much
  …I argue with other people too much.
IIIP

- Octant Scales (T-Score)
  - Domineering/Controlling
  - Vindictive/Self-Centered
  - Cold/Distant
  - Socially Inhibited
  - Nonassertive
  - Overly Accommodating
  - Self-Sacrificing
  - Intrusive/Needy
Case Study

Case 1 - Patient Rating

Case 1 - Informant Rating
Case Study

Case 3 - Patient Rating

Case 3 - Informant Rating

T-Score Before TBI
T-Score After TBI
A conclusion is the place where you got tired of thinking.

- **Comedian Steven Wright**
Directions for Interpersonal Diagnosis

- Personality functioning is difficult to assess in those with acquired brain injury
- Self-Report/Objective Personality Measures – Paper-and-Pencil limitation
- Retrospective analysis difficult
- Enduring and Pervasive aspect of personality disorders is difficult to ascertain in a single evaluation
Directions for Interpersonal Diagnosis

• Inclusion of observational methods
  – Benjamin’s *Structural Analysis of Social Behavior* (SASB)

• Impact of interpersonal behavior on the interactant
  – Kiesler’s *Impact Message Inventory* (IMI)
Directions for Interpersonal Diagnosis

• Dimensional view of interpersonal functioning
• Multilevel (Leary)
• Spectrum v. categorical (Kraepelin’s *forme fruste*)
FIGURE 8.2. Modified threshold liability model that accounts for discontinuities in the expression of pathology. Under this model, the same multifactorial causes are still exerting an influence that creates much of the variability between people, 0 to $T_1$, $T_1$ to $T_2$, with the addition of one or more significant genetic and/or environmental causes that creates the patient group ($T_2$ to $\infty$). Adapted from Faraone, Tsuang, and Tsuang (1999). Copyright 1999 by The Guilford Press. Adapted by permission.
Implications for Treatment in ABI

- Interpersonal interventions that:
  - Modify enduring transaction patterns
  - Take into account neurocognitive and neurobehavioral deficits
  - Incorporate social network of the person with ABI
“It’s homemade cookies Santa. You can have them only if you agree to use Internet Explorer 4.0 on all your computers at the North Pole.”

Bill Gates’ daughter Jennifer visits Santa Claus