Neuropsychological, Psychological and Vocational Assessment of High Achievers: Challenges and Solutions in Forensic Context

Izabela Z. Schultz
Ph.D., R. Psych., ABPP, ABVE
Professor, University of British Columbia
American Board of Vocational Experts
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Who are high achievers?

Quiz about Assessing High Achievers: TRUE OR FALSE?

1. Vocational experts do not need to assess high achievers, except for those with physical injuries.
2. High achievers adapt well and have limited losses after injuries.
3. Neuropsychological assessments of high achievers are highly valid.
4. Psychological assessments of high achievers in a forensic context are simple and straightforward.
5. Vocational experts do not have a perfect toolbox when assessing high achievers.
5. Neuropsychological testing is especially sensitive to the detection of subtle problems among people of advanced intelligence and high achievers.

6. Research on assessment of high achievers does not provide clear best practices or guidelines for assessors, including vocational experts.

7. Assessments of high achievers are easy to defend in court.

8. High achievers are more truthful and have more insight into their problems so their assessments are easier.

9. Research shows that traumatized achievers cope better than non-achievers and underachievers.

10. The best knowledge base about achievers comes from clinical psychology and neuropsychology.

11. It is difficult to assess achievers without knowledge of industrial/organizational psychology and predictors of success in their field.

12. This presentation will provide a cookie-cutter approach to assessment.

Achievement Motivation

• Motivation is a function of perceived value of the goal and probability of achieving success (Atkinson)

and perhaps:

• divided by the cost of getting there
Problems with Assessments of High Achievers

1. Personal characteristics:
   • Highly competitive and driven
   • Impatient
   • Often minimize or deny problems
   • Too driven to take time off after injury
   • Work too hard when not yet ready – more problems develop

Problems with Assessments of High Achievers (cont’d):
   • Don’t have time for appointments
   • May work too hard in rehabilitation
   • Expect immediate results
   • Extremely disrupted by neuropsychological and psychological difficulties & impairments
   • Distressed by loss of competitive edge but resourceful
   • Develop considerable compensatory strategies for difficulties
   • Have considerable brain reserve capacity

BRAIN RESERVE CAPACITY
   • Disjunction between the degree of brain pathology/damage and clinical manifestations of damage
   • Brain activity to cope or compensate for damage (Stern, 2002)
   • Ability to use a brain network more efficiently or recruit alternate brain networks or strategies in response to increased demands (Stern, 2002)
Problems with Assessments of High Achievers (cont’d):

2. **Vocational domain issues:**
   Expert’s limited knowledge of achievement domains:
   • Sample questions: What predicts success in:
     • Medical school? Graduate school?
     • Business leadership and entrepreneurship?
     • Arts? Writers, artists, performers?

Problems with Assessments of High Achievers (cont’d):

• Literature on high achievers is highly domain specific and not often generalizable to other domains
• Without understanding the domain, difficult to discern the key variables to be measured and assessed
• Without selections of domain success predictors, we can’t make vocational determinations

Problems with Assessments of High Achievers (cont’d):

3. **Measurement Problems:**
   • Not always clear what to measure and why
   • What aptitudes, abilities and personality traits are uniquely relevant for a domain?
   • Psychological, neuropsychological and vocational tests are designed mainly for average people
   • Neuropsychological tests have low ceiling and don’t detect subtle difficulties of highly intelligent and talented people
Problems with Assessments of High Achievers (cont’d):

• Many problems are subtle and relative to premorbid level and work demands rather than absolute impairments
• High achievers often not represented in norms: we compare apples to oranges
• Neuropsychological tests often lack ecological validity: what tests predict loss of creativity among artists or loss of innovation among business leaders?

Problems with Assessments of High Achievers (cont’d):

• Difficult to find tests that tap vocationally important but advanced domains such as creativity, initiative, risk tolerance, decision making, planning, emotional intelligence, social problem solving…
• Reliance on a single method approach such as tests or self-report
• Not updating knowledge on vocational predictors and outcomes to be measured

Problems with Assessments of High Achievers (cont’d):

• Not updating knowledge on outcomes or relying on a single outcome
• Poor norm selection
• Avoidance of qualitative data
• Insufficient use of collateral data
• Test unfairness
**Test Fairness:**
a multifaceted construct

*Accessibility:* all test takers have unobstructed opportunity to demonstrate standing on the test:

1) Fairness in access to the constructs measured
2) Lack of measurement bias
3) Validity of individual score interpretations for the intended use

Source: Standards for Educational and Psychological Testing (2014)

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**In the courtroom...**

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**Project:**
Development of Assessment Model for Business Leaders
Method

1. Predictors of vocational outcomes in business leadership and entrepreneurship: Review of research
2. Identification of the strongest predictors and relevant vocational capacity outcomes

Method (Cont’d)

3. Development of the integrative assessment model
4. Identification and evaluation of instruments to measure key factors captured by the model
5. Selection of psychometrically best instruments
6. Selection of methods to assess constructs for which appropriate tests could not be selected
7. Administration of the instruments: multimethod approach: collection of quantitative and qualitative evidence
8. Data interpretation and integration to answer a referral question

Assessment Model for Business Leaders, Executives and Entrepreneurs
PERSONALITY CHARACTERISTICS

Big Five Personality Theory:

1. Conscientiousness: achievement, competence, order, dutifulness, self-discipline and deliberation
2. Emotional stability: anxiety, depression, anger, self-consciousness, impulsivity, vulnerability
3. Extraversion: warmth, gregariousness, assertiveness, excitement seeking, positive emotions
4. Openness to fantasy, feelings, actions, ideas, values and esthetics

Instrument: NEO-PR PERSONALITY INVENTORY

COGNITIVE ABILITY AND INTELLIGENCE

1. Verbal and nonverbal intellectual abilities
2. Fluid and crystallized intelligence
3. Attention
4. Language
5. Perception/information processing
6. Visual-motor abilities
7. Executive functions
8. Academic skills

CREATIVITY / INNOVATION

1. Torrance Tests of Creative Thinking, Verbal and Nonverbal:
   - Aspects measured:
     • Fluency
     • Flexibility
     • Originality
     • Elaboration
     • Resistance to closure
2. Aspects of NEO-openness
3. Aspects of leadership tests: declared focus on innovation
EMOTIONAL AND SOCIAL INTELLIGENCE

1. EQ-I: self report of:
   • Self-perception
   • Self-expression
   • Interpersonal composite
   • Decision making
   • Stress management
   • Shows risk for derailment in leadership role

2. Mayer-Salovey-Caruso Emotional Intelligence Test:
   • Perceiving Emotions
   • Using Emotions
   • Understanding Emotions
   • Managing Emotions

SOCIAL PROBLEM SOLVING

1. Social Problem Solving Inventory-Revised:
2. Positive and negative problem solving orientation
3. Rational problem solving
4. Impulsivity/Carelessness
5. Avoidance style
6. Problem definition and formulation
7. Generation of alternative solutions
8. Decision making
9. Solution implementation and verification
10. Total social problem solving index

SELF-EFFICACY/SELF ESTEEM/JOB SATISFACTION

Multidimensional Self-Esteem Scale:

1. Global self-esteem
2. Competence
3. Lovability and Likability
4. Self-control
5. Personal Power
6. Moral Self-Approval
7. Body Appearance and Functioning
8. Identity Integration
9. Defensive Self-enhancement
Brief Overall Job Satisfaction Measure  
(Judge, Boudreau, & Bretz, 1994)

Simple research measure:
- % satisfied with the job
- % dissatisfied with the job

CORE SELF-EVALUATIONS  
Leadership and Organizational  
Psychology Research:

Core Self-Evaluation Measure  
(Judge, Locke, Durham & Kluger, 1998):

1. Declared self-esteem
2. Positive perspective on self-efficacy
3. Locus of control
4. Emotional sensitivity

Core Self-Evaluations Measure  
(Judge, Locke, Durham, & Kluger, 1998)

1. I feel that I am a person of worth, at least on an equal  
   basis with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel that I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.
LEADERSHIP STYLES AND SKILLS

Comprehensive Leadership Skills Profile:
Interpersonal Effectiveness and Task Orientation:
1. Self-discipline
2. Thoroughness
3. Dependability
4. Monitoring
5. Objectivity
6. Short term and strategic planning
7. Organizing work of others
8. Decisiveness
9. Facilitating teamwork
10. Conflict management

Leadership Styles and Skills Profile
(Cont’d)

11. Delegation
12. Subordinate involvement
13. Social astuteness, persuasiveness
14. Attracting staff
15. Motivating others
16. Inspirational role model
17. Flexibility
18. Short term and strategic planning
19. Achievement and motivation, ambition
20. Risk taking, etc.

KNOWLEDGE, EXPERIENCE AND EXPERTISE

1. Interview, collateral data and CV; product analysis

2. Expertise: You and Your Employment (Van der Heijde & Van Der Heijden, 2006) translated from Dutch:
   • Occupational expertise
   • Anticipation optimization
   • Ability to balance
   • Corporate sense
   • Personal flexibility
Achievement motivation:
a sub-domain on several tests

- NEO
- California Personality Inventory
- Comprehensive Leadership Skills Profile
- Work Personality Inventory

Work commitment

SURVEY OF WORK STYLES:
- Impatience
- Anger
- Work involvement
- Time urgency
- Job dissatisfaction
- Competitiveness
- Total Type A

DATA INTEGRATION

   frequently seen
2. Interpret the score given context of the referral and
   other data
3. Identify person’s strengths and vulnerabilities
**PRE-MORBID – POST-MORBID WORK CAPACITY COMPARISON**

- INTERVIEW WITH COLLATERAL SOURCES IN THE WORKPLACE about PRE- and POST-leadership and entrepreneurial characteristics
- WORKPLACE VISIT to determine resources, supports and demands
- SIGMA RADIUS LEADERSHIP EFFECTIVENESS; rating scale to complete in the premorbid context:
  - Cognitive Managerial Skills
  - Interpersonal Managerial Skills
  - Personal Managerial Qualities
  - Teamwork, Supervision, Planning and Productivity
  - Total Leadership Effectiveness

**Putting the puzzle together:**
Next step in assessment

1. Integrate behavioral presentation, interview, collateral data, test data, records and other data patterns to establish impairments, strengths and impact on employment and employability
2. Use the assessment model as a guide in data interpretation
3. Do additional research and literature case research to finding missing puzzle pieces, for example pertinent employment and labor market data, business records, earnings data
4. De-bias your assessment
5. Provide your opinion based on identified Facts and Assumptions

**CAUTION:**

- Testing does not equal assessment: multimethod assessment is recommended to maximize validity.
- Special populations, such as high achievers, require an expanded assessment model tapping relevant cognitive abilities that are not identified via conventional test batteries.
CASE STUDY: BLIND ANALYSIS

Implications for Practice: Take home messages

1. Achievers pose special assessment challenges: avoid a cookie cutter approach and CUSTOMIZE
2. Study specific domain of achievement to understand key vocational issues and predictors of success/failure
3. Identify key predictors and key vocational outcomes of interest in a given domain
4. Examine work demands and available supports
5. Develop a mini-model or framework to guide your assessment

Take home messages (cont’d)

6. Find appropriate tools to measure your factors of interest: valid, reliable, fair and having appropriate norms for achievers
7. Don’t be afraid to expand your toolbox as long as you have science behind you: embrace innovation; You may be looking for a needle in a haystack and need a new approach
8. Be sure to use independent data sets, not only self-report data
Take home messages (cont'd)

9. Factor in defensive response style, especially self-enhancement and positive impression formation
10. Establish converging patterns of evidence
11. Interpret and integrate all data
12. Factor in personal and workplace resources and supports available to the client and balance them with work demands

Take home messages (cont’d)

13. De-bias your preliminary opinion
14. Opinion: Answer referral question(s)
15. Caution: Any caveats or limitations of assessment?
16. Re-read your report the next day!

This is our work...
Thank you.

Please contact:
ischultz@telus.net
604-221-4199

Cortex
Centre for Advanced Neuropsychological and Psychological Assessment
Affiliated with University of British Columbia
Vancouver Canada