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Continuing Education for Rehabilitation Professionals

Malingering: The Impact of Effort on Outcome

Gordon J. Horn, PhD
Clinical Neuropsychologist
National Deputy Director of Clinical Outcomes

Introduction

Sometimes it is quite difficult to distinguish effort from many other things that influence outcomes.

Sometimes it is difficult to distinguish between various conditions or disorders by presentation alone.

An example…. Which one is malingering?

Answer: None

Learning Objectives

At the conclusion of this activity, the participant will be able to…

1. Understand the term “effort” and how this may be positive, negative, or involuntary.
2. Understand Somatic symptom disorder.
3. Understand Conversion disorder.
4. Understand Malingering (and Factitious Disorder)
5. Understand how to detect and assess for each of the conditions described in a rehabilitation context.

Effort

… is difficult to assess and may have positive or negative effects. Therefore, it can be assessed in multiple ways so that accuracy increases.

Does standing on a ball take effort?

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Effort - Defined

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Clinically:

. "Exertion of physical and/or mental effort"

"An earnest or strenuous attempt"

Statistically:

"Reliability and Validity measurement"

Legally:

"Truthfulness"

Dictionary.com

Effort

Effort is difficult to assess and may have positive or negative effects. Therefore, it can be assessed in multiple ways so that accuracy increases.

In rehabilitation, effort can be as simple as showing up for the correct appointment at the correct time. It may also include compliance with homework. It may be seen in the completion of therapist request.

In outcomes, effort may be related to unexpected changes in score on outcome measures. For instance, those of you with NeuroRestorative know that if we see an outcome measure that is “out of the ordinary” then we directly call the programs or send the data back for rescoring.

In neuropsychological assessments, effort may attempt to influence measures to show more or less impairment. Therefore, validity and reliability of testing is assessed in obvious and unobvious ways.

Effort - Considerations

Effort may also vary as a function of another problem, but may still have a negative impact on measurement or outcomes.

For instance, effort may be compromised if one is having sleep deprivation, or a heart attack.

Another factor may be that something in the person's life, aside from rehabilitation, has changed now influencing their ability to concentrate in treatment for positive improvement. An example would be a person is in rehabilitation and now has a close relative that expires while they are undergoing care. The individual served now is having a hard time following through on the tasks at hand.

Effort and Setting

The setting of where the person functions day to day is important to consider.

For instance, are the symptoms presented equally at home vs. at work or in the community?

Is there a difference in reporting of symptoms to family and friends vs. a professional?

Who is reporting the symptoms upon presentation? Is it the patient or is it family?

Motivation

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"The reason or reasons one has for acting or behaving in a particular way."

Dictionary.com

Motivation may impact Effort on examination. Effort impacts performance.

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Internal vs. External

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What is the underlying reason?

Depends on the problem and depends on the individual. One thing is for sure… things are either internally (from the person) or externally (outside of the person) motivating.

Using the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)….

(DSM-5, 2013)

Somatic Disorders – Internally Focused

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Somatic Symptom Disorder (DSM-5):

A. One or more somatic symptoms that are distressing or result in significant disruption of daily life.
B. Excessive thoughts, feelings, or behaviors related to the somatic symptoms or associated health concerns as manifested by at least one of the following;
    1. Disproportionate and persistent thoughts about the seriousness of one's symptoms.
    2. Persistently high level of anxiety about health or symptoms.
    3. Excessive time and energy devoted to these symptoms or health concerns.
C. Although any one somatic symptom may not be continuously present, the state of being symptomatic is persistent (usually > 6 months).
D. Specify: with or without pain; also specify mild, moderate or severe (2 or more of the items are fulfilled in Criterion B.

Somatic Disorders – Internally Driven

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Other Specified Somatic Symptom and Related Disorder (DSM-5):

This category applies to the presentation in which symptoms characteristic of a somatic symptom and related disorder that causes clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet full criteria.

Examples: brief somatic symptom disorder (< 6 months duration); brief illness anxiety disorder (< 6 months duration); Illness anxiety disorder without excessive health-related behaviors; and pseudocyesis (false belief of being pregnant that is associated with objective signs and reported symptoms of pregnancy.

Somatic Disorders – Internally Driven

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Unspecified Somatic Symptom and Related Disorder (DSM-5):

This category applies to the presentation in which symptoms characteristic of a somatic symptom and related disorder that causes clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet full criteria for any of the disorders in the somatic symptom and related disorders diagnostic class. Only use if insufficient information exists.

Conversion Disorder – Internally Driven

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Functional Neurological Symptom Disorder (DSM-5):
("Conversion Disorder") is based on the following:

A. One or more symptoms of altered voluntary motor or sensory function.
B. Clinical findings provide evidence of incompatibility between the symptoms and recognized neurological or medical conditions.
C. The symptom or deficit is not better explained by another medical or mental disorder.
D. The symptoms or deficit causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrants medical evaluation.

Conversion Disorder – Internally Driven

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Functional Neurological Symptom Disorder (DSM-5): (continued)

Types:

- Weakness or paralysis
- Abnormal movement
- Swallowing symptoms
- Speech symptoms
- Attacks or seizures
- Anesthesia or sensory loss
- Special sensory symptom (visual, olfactory, hearing)
- Mixed symptoms.

Specify: with or without a psychological stressor

Factitious Disorder – Internally Driven

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Factitious Disorder Imposed on Self (formerly Munchausen) – To be Sick

A. Falsification of physical or psychological signs or symptoms, or induction of injury or disease, associated with identified deception.
B. The individual presents himself or herself to others as ill, impaired or injured.
C. The deceptive behavior is evident even in the absence of obvious external rewards.
D. The behavior is not better explained by another mental disorder, such as delusional disorder or another psychotic disorder.

E. Specify: single or recurrent episode(s)

Factitious Disorder by Proxy

Factitious Disorder Imposed on Another (by proxy; formerly Munchausen by proxy) – To make one Sick.

A. Falsification of physical or psychological signs or symptoms, or induction of injury or disease in another, associated with identified deception.
B. The individual presents another individual (victim) to others as ill, impaired or injured.
C. The deceptive behavior is evident even in the absence of obvious external rewards.
D. The behavior is not better explained by another mental disorder, such as delusional disorder or another psychotic disorder.

E. Specify: single or recurrent episode(s); the perpetrator is provided the diagnosis.

Malingering – Externally Driven

The essential features of Malingering.. Secondary Gain

Intentional production of false or grossly exaggerated physical or psychological symptoms,

motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs.

Under some circumstances, malingering may represent adaptive behavior

Example: feigning an illness while a captive of the enemy during wartime.

Malingering – Externally Motivated

Malingering should be strongly suspected if any combination of the following is noted:

1. Medicolegal context of presentation (e.g., the individual is referred by an attorney to the clinician for examination, or the individual self-refers while litigation or criminal charges are pending).
2. Marked discrepancy between the individual's claimed stress or disability and the objective findings and observations.
3. Lack of cooperation during the diagnostic evaluation and in complying with the prescribed treatment regimen.
4. The presence of antisocial personality disorder.

Malingering vs. Factitious Disorder

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Malingering differs from factitious disorder in that the motivation for the symptom production in malingering is an external incentive, whereas in factitious disorder external incentives are absent.

Malingering is differentiated from conversion disorder and somatic symptom-related mental disorders by the intentional production of symptoms associated with it. Definite evidence of feigning (such as clear evidence that loss of function is present during the examination but not at home) would suggest a diagnosis of factitious disorder if the individual's apparent aim is assume the sick role, or malingering if it is to obtain an incentive, such as money.

Video - Malingering

The following video is one example of those being evaluated during a Functional Capacity Evaluation and demonstrated exaggerated symptoms that may not fit the stated problem or injury.

https://youtu.be/fA0DQUQJu0s

Please keep in mind that there is great variation of symptom reporting and symptom presentation.

A diagnosis of malingering is a combination of inconsistent responding or behavior over time, and ruling out other potential causes prior to the diagnosis.

Cardinal Rule: determine the reason one may be malingering. Is it externally or internally driven.

Measuring Outcomes & Assessing Effort

Malec & Lezak, 2008
Horn & Lewis, 2018

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Outcomes – MPAI-4

Rehabilitation has many measures of outcome from specific measures within a specialty or sub-specialty to overall outcome measurement techniques.

In post-hospital care, the Mayo Portland Adaptability Inventory – 4 (MPAI-4) has been shown to be an accurate measure of outcomes. In particular, the Adjustment Index has measures that provide insight into the topic of today.

Any measure that has a reference sample can be used for assessing effort.

In particular, the MPAI-4 Adjustment Index has items most relevant to our topic:

- Pain & Headache
- Fatigue
- Sensitivity to Mild Symptoms
- Inappropriate Social Interactions
- Impaired Self-Awareness
- Family / Significant Relationships

Outcomes – MPAI-4

Item 16. Pain & Headache: pain complaints and behaviors.

Rating = 0; None.

Rating = 1; pain is present but does not interfere or only minimal interference

Rating = 2; pain complaints and behaviors occur at a frequency that interferences with some but not the majority of ideas.

Rating = 3; pain complaints and behaviors interfere much of the time and can interrupt any activity to the point that those with this level of pain must withdraw from the activity.

Rating = 4; pain complaints and behaviors are totally or almost totally disabling.

Outcomes – MPAI-4

Item 17. Fatigue: feeling tired, low in energy; feeling low in mental or physical energy after a relatively low level of activity.

Rating = 0; None.

Rating = 1; fatigue is present but does not interfere or minimally limits activity.

Rating = 2; fatigue interferes with some but not the majority of activities.

Rating = 3; fatigue interferes much of the time and can interrupt any activity that requires more than a small amount of physical or mental exertion.

Rating = 4; fatigue is totally or almost totally disabling.

Outcomes – MPAI-4

Item 18. Sensitivity to Mild Symptoms: focusing on post-traumatic cognitive, physical, or emotional problems (focus is on how bad).

Rating = 0; None.

Rating = 1; distress about and focusing on symptoms or denial of psychological issues is mildly excessive but does not interfere or minimally limits activity.

Rating = 2; distress about and focusing on symptoms or denial of psychological issues interferes with some but not the majority of activities as well as with recommended rehabilitation and other treatments.

Rating = 3; distress about and focusing on symptoms or denial of psychological issues interferes with many and presents a clear obstacle to rehabilitation and psychological or other treatment.

Rating = 4; distress about and focusing on symptoms or denial of psychological issues creates a disability in and of itself.

Outcomes – MPAI-4

Item 19. Inappropriate social interaction: acting childish, silly, rude; behavior not consistently fitting to the time and place or age-appropriate.

Note: those with frontal injuries tend to score high (3 or 4) on this measure due to neurobehavioral impairment.

Rating = 0; age-appropriate behaviors.

Rating = 1; infrequent or very mildly disinhibited or socially inappropriate behavior in social situations.

Rating = 2; disinhibited or socially inappropriate behavior is apparent in some but not the majority of social situations.

Rating = 3; disinhibited or socially inappropriate behavior occurs in many social encounters in both informal and more structured social settings including at work and school.

Rating = 4; disinhibited behaviors is apparent almost continuously.

Outcomes – MPAI-4

Item 20. Impaired self-awareness: lack of recognition of personal limitations and disabilities and how they interfere with everyday activity, work, school.

Rating = 0; age-appropriate recognition of personal deficits and this affects activities; this does not mean perfect awareness.

Rating = 1; limited self-awareness is represented primarily by a tendency to minimize personal weaknesses. Show ability to compensate.

Rating = 2; individuals at this level generally are able to report deficits and may even consistently compensate for them with the use of a technique.

Rating = 3; impaired self-awareness affects many interpersonal interactions and activities. May recognize deficits without anticipating the interference.

Rating = 4; awareness of personal limitations is so impaired that it creates almost constant problems for individuals at this level in most of their interactions.

Outcomes – MPAI-4

Item 21. Family/significant relationships: interactions with close others.

Rating = 0; normal stress; family is able to cope.

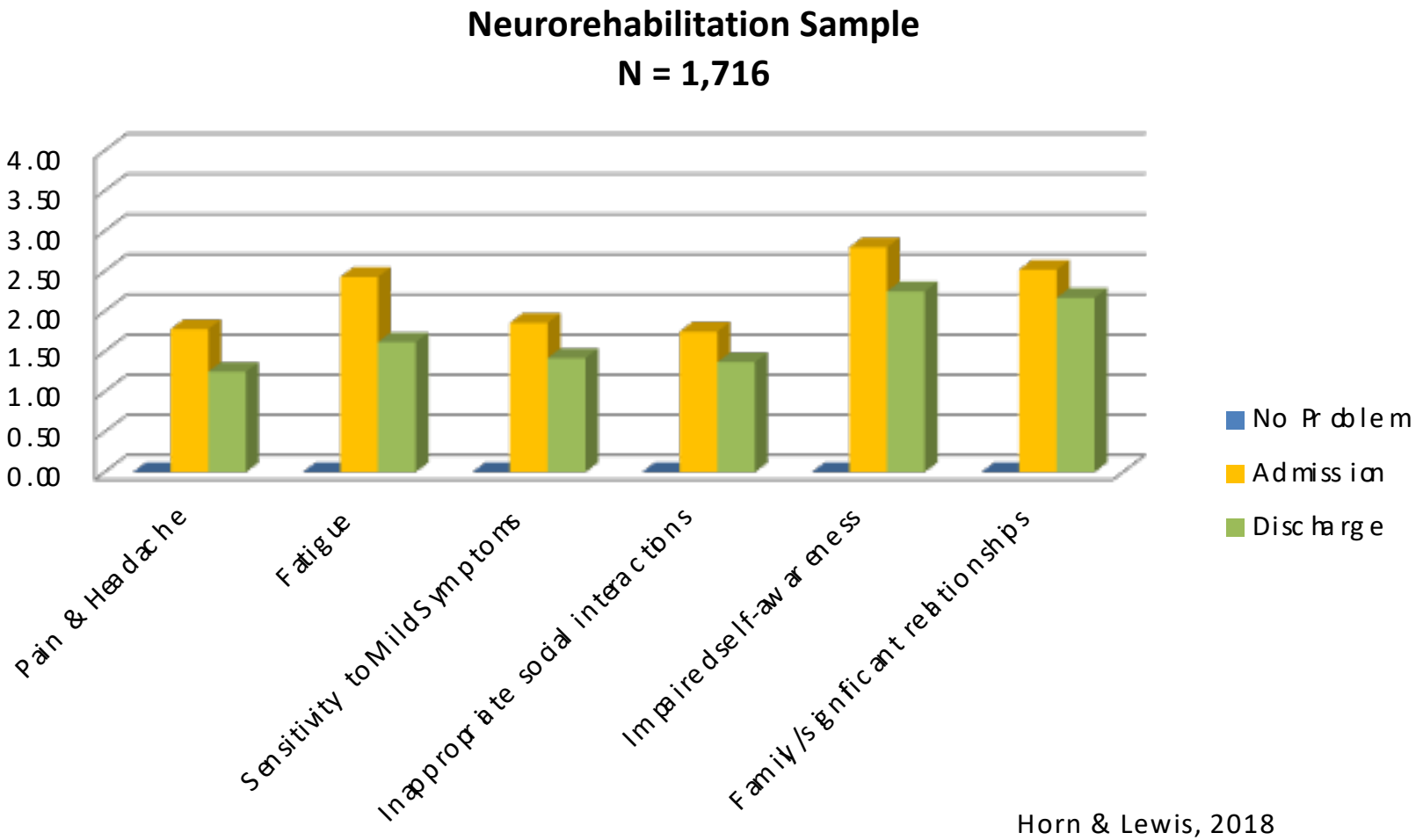
Rating = 1; stress is significant enough to challenge the ability of members of the family to cope but does not result in sustained distress and does not significantly disrupt the family routine or maintenance of the household.

Rating = 2; family functioning is disrupted in some but not the majority of the time. Routines are not completed consistently; arguments are noted; family feels the situation can improve.

Rating = 3; family routine, household functioning, and mutual support with the family are unsatisfactory to family members much of the time. Arguments and isolation of family members occurs frequently.

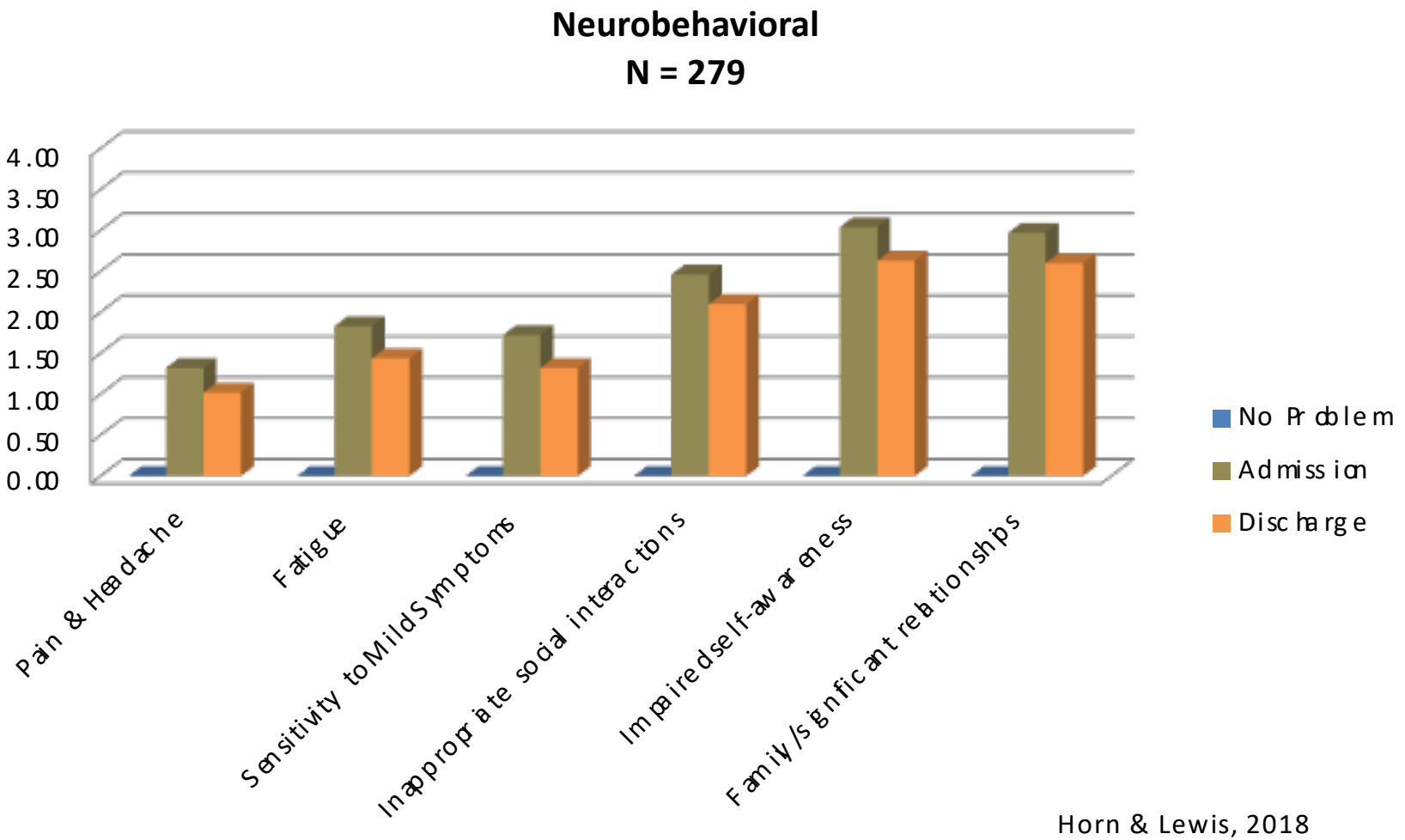
Rating = 4; the family is characterized by an almost complete lack of cohesion or obviously pathological enmeshment.

MPAI-4 Reference Values



Horn & Lewis, 2018

MPAI-4 Reference Values



Horn & Lewis, 2018

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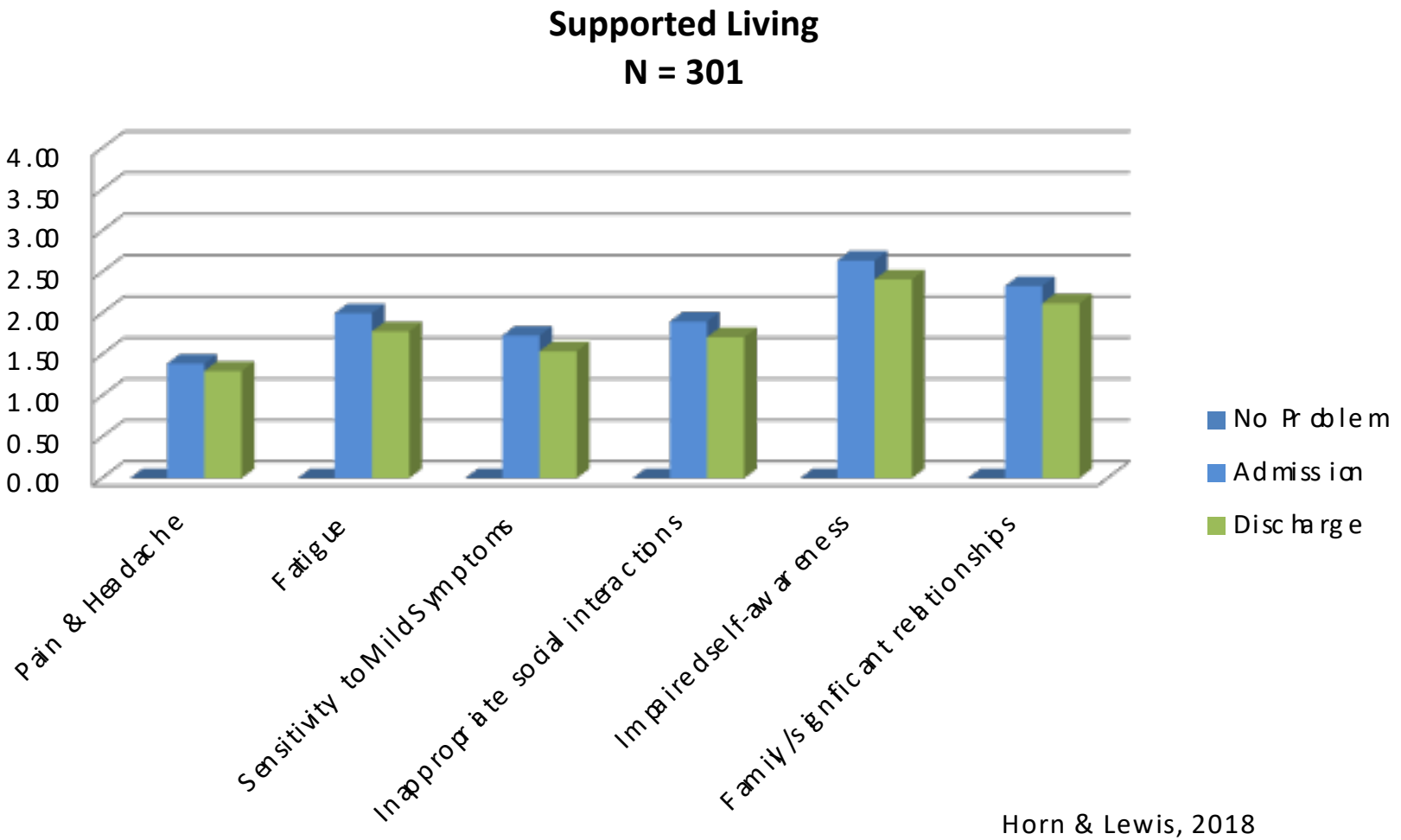
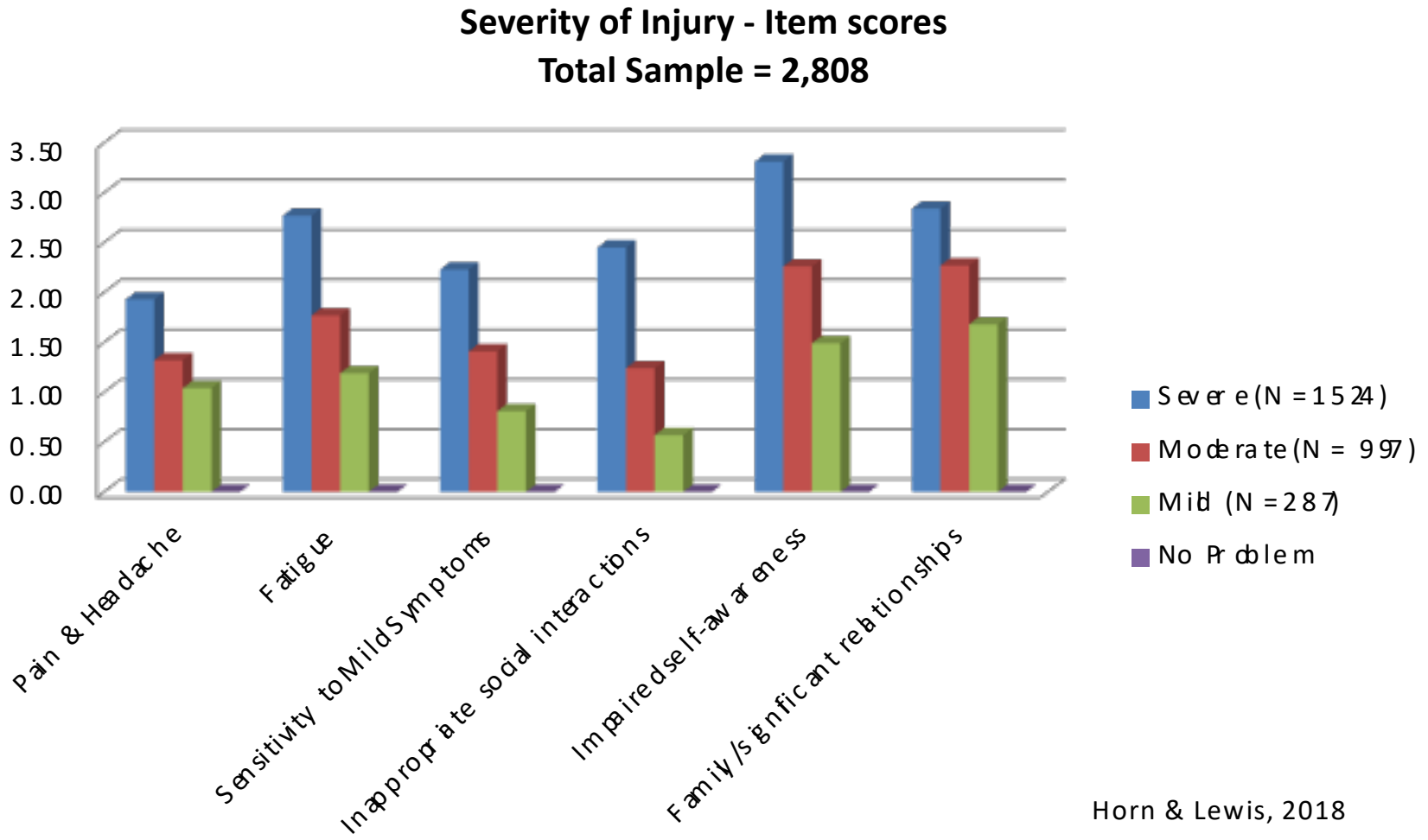


Horn & Lewis, 2018

MPAI-4 Reference Values



Horn & Lewis, 2018

MPAI-4 Reference Values

Reference Sample = 2,808 MPAI Scores	Severe (N = 1,524)	Moderate (N = 997)	Mild (N = 287)	No Problem
Pain & Headache	1.93 (1.29)	1.32 (1.19)	1.04 (1.09)	0.00
Fatigue	2.77 (1.14)	1.77 (1.14)	1.19 (1.04)	0.00
Sensitivity to Mild Symptoms	2.23 (1.36)	1.41 (1.16)	0.81 (0.92)	0.00
Inappropriate social interactions	2.45 (1.40)	1.24 (1.26)	0.57 (0.92)	0.00
Impaired self-awareness	3.31 (0.96)	2.26 (1.04)	1.49 (1.06)	0.00
Family/significant relationships	2.84 (1.12)	2.27(1.23)	1.68 (1.26)	0.00

Horn & Lewis, 2018

MPAI-4 Standard Deviation Model

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Statistically derived method of determining effort.

Formula:

1. Take the raw score of the individual and subtract from the average of the reference group.
2. Divide the number obtained from #1 by the standard deviation of the group.

Formula shows how far the score deviates from a known reference group being compared with the individual. If a score deviates beyond an expected level of variance, then either there is an event or injury that produced this finding, or a person is showing deficit that is improbable.

In statistics, the range is like this…

MPAI-4 Standard Deviation Model

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Score of the Participant – Average of Reference Sample
/ Standard deviation

Example:

Sensitivity to Symptoms score = 4.00
Reference Sample Average Score = 0.81

Formula >> 4.00 – 0.81 / 0.92 = 3.46
This person's score was 3.46 deviations from the reference group

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0.00 – 0.99 standard deviation = acceptable

1.00 – 1.99 standard deviations = possible

2.00 – 2.50 standard deviations = unlikely

2.50 or greater = improbable

Measurement of Validity (Effort) in Psychological and Neuropsychological Examinations

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Measures to assess

There are two basic philosophies in neuropsychological testing.

Option A: evaluate using acceptable clinical methods that are comprehensive and have some overlap to evaluate consistency. Within various measures, performance validity is measured as part of the assessment.

Option B: provide an assessment and supplement the evaluation with measures specific to validity of responses.

Although both options are considered acceptable, in both cases an examiner must consider false positives (e.g., indicating that someone is feigning or malingering when they in fact are not).

Measures to assess

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Interview Assessment of Validity (Examples):

Structured Interview of Reported Symptoms (SIRS)

Structured Inventory of Malingered Symptomatology (SIMS)

- These measures are designed to differentiate from usual vs. unusual symptoms.

Tests of Validity (Examples):

Victoria Symptom Validity Test (VSVT)

Test of Memory Malingering (TOMM)

- These measures look at the patterned responses based on total correct out of a total possible scores.

Psychological Assessment Resources, 2018

Measures to assess

Tests of Performance with Embedded Validity (examples):

Minnesota Multiphasic Personality Inventory – 2
Personality Assessment Inventory
Neuropsychological Assessment Battery
Intellectual assessments

- Tests and/or batteries such as these looks at the performance patterns based on injury or diagnosis, in addition to looking at patterned performance.
- There is also a reference sample used to help identify deviation.
- The statistical method for deviations can be used in these types of tasks to produce a probability score.

Psychological Assessment Resources, 2018

Measuring validity (effort)

In the neuropsychological literature…

Performance Validity – viewing the profile of performance in relation to a reference sample, and statistical deviation model.

Symptom Validity – the reporting of symptoms or concerns (over- and under-reporting of symptoms (physical, cognitive, emotional).

Chronicity also has an impact on neuropsychological performance which has the potential of causing results to appear different than acute findings.

Koocher, Norcross & Hill, 1998

Conclusions

Effort is multifaceted and varies across tasks, across people, and across time. There are many influences that impact effort including internal elements (like mood, fatigue, physical discomfort) and external elements (like pressure from others, incentives such as financial or legal).

Validity is statistical term that is used to mean a way to make sure that you are measuring what is supposed to be measured, and that deviations in data can be explained. In assessments, there is a difference between performance validity and symptom validity.

Effort and validity measures add together to determine if someone is malingering or somehow feigning, embellishing, or believing that deficits exist when there is a lack of evidence to support these claims.

In rehabilitation, you can use outcome measures to help assess motivation, effort, and validity while providing intervention. Any measure that has a reference group that provides scores and standard deviations can be used to benchmark performance and then compare with individualized performance.

Malingering (presenting as disabled), Functional Neurological Symptoms Diagnosis (presentation mimics true disorders), Somatic Symptom Disorder (symptom complaints without a pattern), and Factitious Disorder (presenting as ill) are all exclusionary diagnoses.

Gordon J. Horn, Ph.D.
Presenter

gordon.horn@neurorestorative.com

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