

Detection of Malingering in Psychiatric Patients

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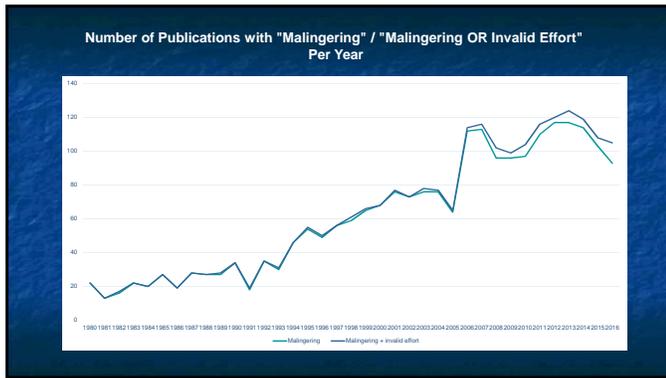
True Stories in IME History

"A resident is called by the attending to provide a second opinion (playing up the significance of the anticipated conclusions). He then asked the patient: "Show Dr. [Resident] what you can't do with that arm."

The patient responded 'I can't do this' (putting his hand behind his head), 'I can't do this' (putting his hand in the small of his back) - demonstrating everything he said that he could not do with his dysfunctional arm."

Typical Practice

- Settings?
- Diagnoses?
- Estimated Prevalence Rates?
- Methods?



Definitions

- **DSM-5¹**
 - "...the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs"
 - Should be strongly suspected if any combination of the following is noted:
 - Medicolegal context of presentation
 - Marked discrepancy between the individual's claimed stress or disability and the objective findings and observations
 - Lack of cooperation during the diagnostic evaluation and in complying with the prescribed treatment paradigm
 - The presence of antisocial personality disorder
- **ICD-10²**
 - "...the intentional production of feigning of either physical or psychological symptoms or disabilities, motivated by external stresses or incentives. ... The commonest external motives for malingering include evading criminal prosecution, obtaining illicit drugs, avoiding military conscription or dangerous military duty, and attempts to obtain sickness benefits or improvements in living conditions such as housing. Malingering is comparatively common in legal and military circles, and comparatively uncommon in ordinary civilian life."

¹American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5). American Psychiatric Publishing, Washington DC.
²World Health Organization. Accessed 2/23/2017. The ICD-10 Classification of Mental and Behavioral Disorders, Clinical descriptions and diagnostic guidelines. <http://www.who.int/classifications/icd10/browsers/en/>

Are our definitions evidence-based?

- **Decades-old criticisms of DSM-x criteria¹**
 - Base rate issue with APD
 - Paradox of "uncooperative" patients
 - All "medicolegal" not created equal
 - Essentially, intuitive rather than empirically-supported criteria that falter on close examination

"... the failure to update the criteria for malingering in DSM-5 ignores more than 30 years of empirical and theoretical work on the topic. The evolution of symptom validity and malingering literature in recent decades has culminated in a sophisticated conception of malingering that essentially renders DSM-IV TR criteria obsolete."

¹Rogers R (1990). Prof Psychol, 21(3), 182-188.
²Berry DTR & Nelson W (2010). Psychol Inq & the Law, DOI: 10.1007/s12207-010-9087-7

What Have We Learned?

But First: A Brief Detour ...

How Well Do We Identify Malingering?

Infamous Moments in Malingering History

- Case study
 - Vincent Gigante
(http://www.nytimes.com/2005/12/19/obituaries/vincent-gigante-mafia-leader-who-feigned-insanity-dies-at-77.html?_r=0)
- Iconic study
 - On being sane on insane places¹

¹David L. Rosenhan, "On Being Sane in Insane Places," Science, Vol. 179 (Jan. 1973), 250-258.

Science of Detecting Deceit

- Ekman (1991) Who Can Catch a Liar

Observers	0-30	40-60	70-100
Secret Service	0	47	53
Federal polygraphers	5	73	22
Robbery investigators	8	66	26
Judges	9	57	34
Psychiatrists	5	63	32
Special interest	10	59	31
College students	15	59	26

Detecting Deceit

- Meta-analysis of 108 studies covering >16K subjects suggests accuracy unrelated to:
 - Confidence
 - Age
 - Experience
 - Education
 - Gender
- Dunning-Kruger effect: Those who are least capable are likely to be the least insightful

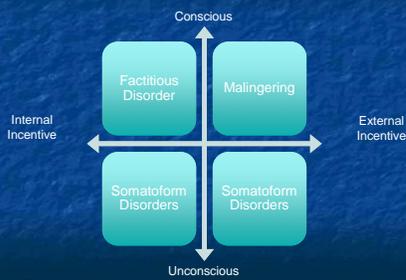
What Have We Learned?

Societal Impact

- In 2008 dollars, it is estimated that approximately \$180 billion in Federal and State disability funds was spent on individuals who met criteria for probable malingering¹
- Research progress/clinical decision-making impeded by obscuring known biomarker relationships²
 - Olfactory function and TBI severity
 - Memory test performance and hippocampal volume
 - Memory test performance and CT abnormalities

Chalkey M (2011). Psychol Rev and Law, 4, 225-244.
 Scoville, CA (2010). Proceedings of National Academy of Neuropsychology, Seattle, WA.

Medically Unexplained Symptoms: Simplified DSM-x Model



Refining Definitions: Approaches to Malingering

- Pure malingering
 - Intentional fabrication of symptoms
- Partial malingering
 - Exaggeration of existing symptoms
- False imputation
 - *Intentionally* attributing existing symptoms to unrelated cause

Refining Definitions: Choosing a Reachable Goal

- Reading minds is hard
 - Core differences between somatoform disorders, factitious disorders, and malingering boil down to incentives (internal vs. external) and intentions (conscious vs. unconscious)
 - DSM-x can be interpreted as suggesting that only one of these is operating at a time
 - (e.g., only conscious or unconscious, only internal or external)
- Solution
 - Move towards definitions that are *probabalistic* and/or *limited in focus* to validity of the presentation

A Note on Probabilities and Validation

- Diagnosis is inherently probabalistic
- The *single* observations, symptoms, or bits of information are often not, in and of themselves unexplainable – it's their combination or context that makes them rare or medically unexplainable
- Validation methods
 - Doesn't match what we know about the disease
 - Statistically rare
 - How rare? In whom?
 - Multivariate base rates important
- When you don't know the diagnostic characteristics of your technique (i.e., you can't answer "so, tell me doctor, you say that based on ____ my client was trying to look worse than he actually is – how accurate is that?") you could be setting yourself up for a more uncomfortable conversation than you'd prefer.

Prevalence: Setting Matters

- Medicolegal
 - Compensation Seeking
 - Criminal Justice
- Clinical Treatment Setting
- Clinical Trial

Prevalence in Medicolegal Settings

- Compensation-Seeking
 - 40% + 10¹
 - Social Security Disability: 30 – 72.4%
 - Personal Injury: 29%
 - Neurotoxic Injury: 40 - 57.2%
 - PTSD in combat veterans: 20%²
- Criminal
 - Pre-trial, pre-sentence neuropsych: 54.3% definite/probable
- Family / Administrative Law³
 - Low-IQ claimants seeking to enter state-sponsored work rehab: 6.7%
 - Low-IQ individuals seeking reunification with their children (DFCS): 0%

¹Lambert et al (2009). *The Clin Neuropsychol*, 23(5), 841-849.
²Prash BC et al (2009). *Clin Psychol Review*, 23, 853-885.
³Chen et al (2011). *Arch Clin Neuropsychol*, 26, 306-313.

Variable Prevalence in Clinical Settings

- Based on very limited data, rates appear to be around 10% in most general medical and psychiatric clinical settings¹⁻⁴
- Settings where these numbers are blurrier
 - VA PTSD clinics
 - Review of randomly selected 2100 cases granted compensation at >49%, modal pt continued to worsen until obtaining 100% service-connected disability – then psych visits dropped by 82% while non-psych visits remained constant⁵
 - College-based ADHD clinics
 - Rates may hover closer to 20%⁶

¹Martens W et al (2002). *J Clin Exp Neuropsychol*, 24(8), 1094-1102.
²Combs et al (2011). *Arch Clin Neuropsychol*, 26, 446-453.
³Reiss et al (2011). *Neuropsychology*, 25(2), 262-271.
⁴Yates BJ et al (1998). *Psych Serv*, 47(3), 998-1002.
⁵Wagner, Major General of the Inspector General (2009). VA Office of Inspector General report no. 05-00765-137. Retrieved from <http://www.va.gov/OIG/Reports/050765137.htm>
⁶Milroy BM & Gouvier WD (2012). *Journal of Attention Disorders*, 16(10), 1177-1187.

Malingering Is Not Unidimensional

- Psychopathology
- “Brain damage” (e.g., cognitive problems)
- Somatic problems / Pain

Berry DTR & Nelson N (2010). *Psychol Bg & the Law*. DOI:10.1007/s12207-010-9087-7

Psychopathology Examples: Decision Model for PTSD

- A. Is there a clear and substantial external incentive?
- B. At least two of the following criteria
 - Irregular employment or job dissatisfaction
 - Prior claims for injuries
 - Capacity for recreation but not work
 - No nightmares, or, if nightmares, exact repetitions of the civilian trauma
 - Antisocial personality traits (not applicable to criminal-forensic cases)
 - Evasiveness or contradictions
 - Noncooperation in the evaluation
- C. Confirmation of malingering by one of the following criteria
 - Confession of malingering
 - Unambiguous psychometric evidence of malingering
 - Strong corroborative evidence of malingering

Based on Rensick PJ et al (2008), Posttraumatic disorders. In Rogers R Clinical Assessment of Malingering and Deception, New York: Guilford

Psychopathology: Instruments

- Inventories
 - MMPI-2 / MMPI-2-RF
 - Personality Assessment Inventory (PAI)
- Structured Interviews
 - Structured Interview of Reported Symptoms (SIRS)
 - Miller Forensic Assessment of Symptoms Test (M-FAST)

True Stories in IME History

- 47 year old man with pathologically-verified Lyme disease complains of disablingly-severe cognitive deficits, particularly memory (including being unable to recall salient details of his remote history and the names of his children). Fails multiple tests of performance validity on exam.
- On 2nd day of evaluation, stated that his attorney told him the previous evening that one of the PVTs was administered incorrectly, and demanded a second administration. Results looked less valid the second time.

Empirically Supported Approach: Cognition

- Symptom/Performance Validity testing have revolutionized this approach since the mid-1990's

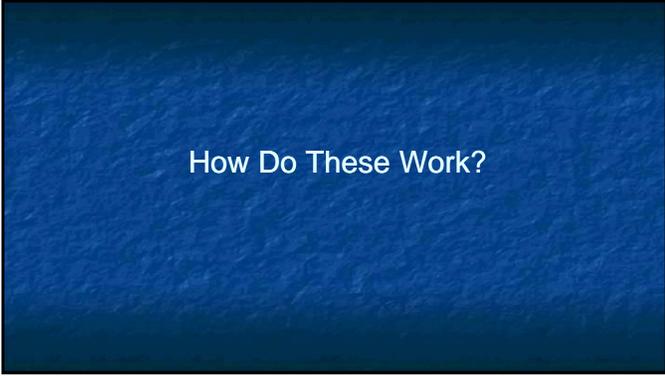
Symptom Validity Tests

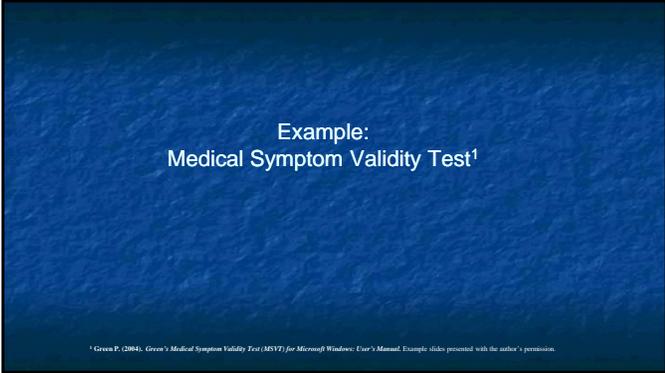
- Patterns of patient-reported symptoms shown to be clearly anomalous relative to patterns demonstrated by the target patient groups (similar in concept to Rogers 2008)
 - Similar to the aforementioned measures from inventories, but validated on different populations/questions (e.g., MMPI-2/MMPI-2-RF FBS or SVS, RBS)

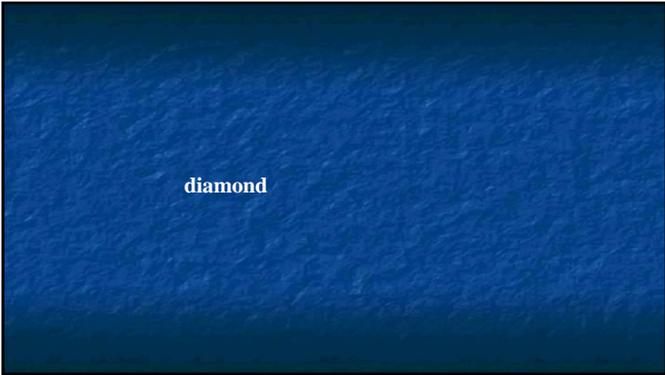
Performance Validity Tests

- Identify *levels* or *patterns* of performance that are normatively rare and inexplicable among target population
 - Level-based tasks typically based on binomial theorem
- State of the art: Sensitivity > 50%, Specificity > 90%
 - Rely on more than one measure in an examination
- Standard in Neuropsychology Practice Guidelines
 - American Academy of Clinical Neuropsychology¹
 - National Academy of Neuropsychology²

¹Hollman RL, et al (2001). *The Clin Neuropsychol* 23(7), 1093-1124.
²Bush SS et al (2005). *Arch Clin Neuropsychol* 20(6), 415-426.







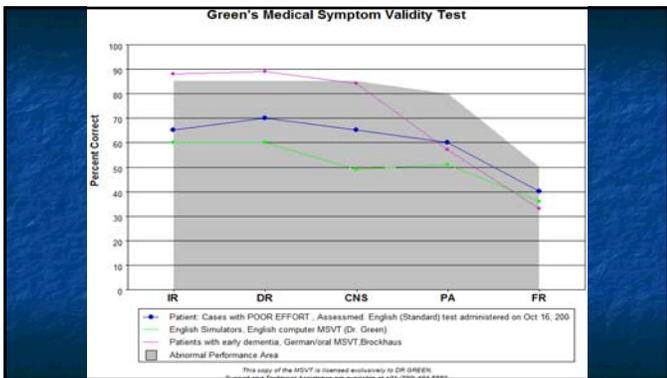






Which word did you see?

ring lamp



Example: Embedded Measures

- Reliable Digit Span¹
 - Sum of longest forward + longest backward (7)
- California Verbal Learning Test: Recognition² (11)

¹Juraska L.J. et al. (2011). *Journal of Clinical and Experimental Neuropsychology*, 33(7), 908-914. ²Green RW et al. (2009). *Assessment*, 16(3), 237-248.

What Have Two Decades of PVT Research Taught Us?

- When there is external incentive to exaggerate, rates of exaggeration are higher
 - Disability
 - Litigation
 - Academic
- Invalid data sometimes occur in the absence of obvious external incentives, though less often
- Exaggeration of cognitive complaints, emotional problems, or pain problems can occur independently of each other
- Disorders with known consequential rates of PVT failure in clinical practice include adult ADHD, mild TBI, PTSD, chronic low back pain, and fibromyalgia
- Invalid data are generated more often by individuals diagnosed with disorders marked by vague somatic symptoms

What Have Two Decades of PVT Research Taught Us?

- Some types of cognitive problems are more likely to be exaggerated than others
- Malingering / invalid data does not rule out genuine pathology
- These are *not* "malingering tests," in that they cannot be interpreted in isolation, though they provide valuable and distinctive information that can aid in this determination

Boiling it down: Evidence-based criteria for Malingered Neuropsychological Dysfunction (MND)

- **Criteria A: Clear and substantial external incentive**
- **Criteria B: Very strong indicators of exaggeration/fabrication of neuropsychological problems or deficits**
 - B1: Below chance performance on one or more forced choice measures
 - B2: High posterior probability (>.95 that performance is substantially below actual ability level) on one or more well-validated indices
 - B3: Self-reported symptoms are unambiguously incompatible with or directly contradicted by directly observed behavior and/or test performance
- **Criteria C: Possible indicators of exaggeration/fabrication of neuropsychological problems or deficits**
 - C1: Data from one of more well-validated psychometric measures, while note sufficient to meet Criterion B1 are on balance more consistent with noncompliance than compliance
 - C2: Marked and implausible discrepancy between test performance and level of function expected based on developmental and medical history
 - C3: Marked and implausible discrepancy between test performance and directly observed behavior and capabilities
 - C4: Marked and implausible discrepancy between test performance and reliable collateral reports concerning behavior and capabilities
 - C5: Marked and implausible discrepancy between self-reported and documented history, consistent with exaggeration of preinjury level of function and capabilities, minimization of pre-existing injuries or neuropsychological problems, and/or the exaggeration of new injuries
 - C6: Marked and implausible discrepancy between self-reported symptoms and level of function expected based on developmental and medical history
 - C7: Marked and implausible discrepancy between self-reported symptoms and information obtained from reliable collateral informants.

Slisk D & Sherman EMG (2012). Differential diagnosis of malingering and related clinical presentations. In Sherman EMG & Brooks B. Pediatric Forensic Neuropsychology. New York: Oxford.

Proposed Diagnostic Criteria

- **Primary MND**
 - **Definite**
 - Presence of a substantial external incentive (Criterion A)
 - One or more very strong indicators of exaggeration/fabrication of neuropsychological problems or deficits (Criteria B1-B3)
 - Behaviors meeting necessary criteria are not substantially accounted for by psychiatric, neurological, or developmental factors
 - **Probable**
 - Presence of a substantial external incentive (Criterion A)
 - Three or more strong indicators of possible exaggeration/fabrication of neuropsychological problems or deficits (C1-C7)
- **Secondary MND**
 - Criteria for definite or probable MND are met but there are compelling grounds to believe that the examinee did not have the cognitive capacity to understand the moral/ethical/legal implications of his/her behavior and/or was unable to control his/her behavior secondary to immaturity (i.e., in childhood) or bona fide developmental, psychiatric, or neurological disorders or injuries.
- **MND by Proxy**
 - Criteria for definite or probable MND are met but there are compelling grounds to believe that a vulnerable examinee acted primarily under the guidance, direction, influence, or control of another individual.

Slick D & Sherman EMS (2012). Differential diagnosis of malingering and related clinical presentations. In Sherman EMS & Brooks B. (Eds.) *Forensic Neuropsychology*. New York: Oxford.

True Stories in IME History

"A postal worker who was bit on the shin by a small dog was being evaluated for chronic pain and PTSD, as well as embarrassment about the scar. She came in wearing sweat pants, and since she complained of excruciating pain from the bite that had occurred several months before, she was asked if she minded rolling up her pants high enough so that the scar could be seen.

She rolled up her left pants leg, to which the examiner said 'can you point out the scar please? I can't see it.' She said oops, its the other leg. So she rolls up the right pants leg. Again, the examiner didn't see the scar.

To which she says, 'I'm not sure where I got bit, but I can tell you it hurts terribly.'"

Other Somatic / Pain Presentations

- Variations on the same theme, with therapeutic area specific knowledge substituting in as appropriate (e.g., the role of video telemetry in simulated seizures)

What Does This Tell Us About Volition and PVT?

If these performances are purely volitional, then the matrix of motivations must differ across contexts

Conclusions derived upon the body of evidence compiled in different therapeutic conditions and/or different motivational contexts need to be replicated before they can be assumed to generalize

Diagnostic Dilemmas

- Malingering vs. Somatoform vs. Factitious Disorders
 - PVT and SVT can help identify invalid performances but do not speak directly to motivation
 - Some patterns on MMPI-2-RF, SIRS, and PAI have been found to be helpful in teasing apart malingering, somatoform, and factitious disorders

Bringing it All Together

- If there is compensation at issue (financial, legal, academic), base rates suggest that exaggeration should be crossing your mind
- Malingering is not all or none – it can occur independently across the domains of psychopathology, cognition, and pain, and it is more likely to be seen in some cognitive domains than others
- GET RECORDS – those relevant to injury/illness, educational hx, medical hx before and since, legal hx, psych or academic testing hx
- Rely on more than one indicator
- First, identify invalid presentations. Then move to motivation, which is inherently much tougher, more of an educated clinical guess, but relevant clinically (see somatoform disorders)
- If you're going to court, understand that you probably can't say "malingering" --- be able to say why the presentation is not consistent with a true psychiatric diagnosis

Waddell's signs

- **Tenderness tests:** superficial and diffuse tenderness and/or nonanatomic tenderness
- **Simulation tests:** these are based on movements which produce pain, without actually causing that movement, such as axial loading and pain on simulated rotation
- **Distraction tests:** positive tests are rechecked when the patient's attention is distracted, such as a [straight leg raise](#) test
- **Regional disturbances:** regional weakness or sensory changes which deviate from accepted neuroanatomy
- **Overreaction:** subjective signs regarding the patient's demeanor and reaction to testing
