Malingering vs Credibility: A call of caution and robust clinical analysis

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“Slick et al. (1999) assert that the clinician only has to determine whether a psychiatric, neurological, or developmental disorder fully accounts for the non-credible symptoms; If it does not, the diagnosis would be malingering.

But how is this assessment made and is it realistic?”

Assessment of Feigned Cognitive Impairment
A Neuropsychological Perspective

Edited by Kyle Brauer Boone
Helpful Conceptualization or Overly Simplified?

Boone (referencing Berry) considers conceptual intersection of “external goal” and “unconscious” determinants of behavior:

<table>
<thead>
<tr>
<th>Conscious</th>
<th>External goal</th>
<th>Internal goal</th>
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<tbody>
<tr>
<td>Malingering</td>
<td>Factitious</td>
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| Unconscious   | X             | Somatoform    |

X = Survival instinct of conscientious person?

“...despite the fact that somatoform/conversion phenomena have been described for over 100 years, we do not have data showing that they exist separately and are dichotomous from malingering, nor do we have objective techniques to objectively differentiate somatoform conditions from malingering. Thus, we are unable to follow the Slick et al. (1999) recommendation when diagnosing MND to rule out other psychiatric conditions including non-conscious impetuses to symptom production. As a result, to attempt to diagnose malingering is highly problematic.

“However, it is questionable whether in fact we even need to make a determination as to whether feigned symptoms are due to malingering or somatoform mechanisms. As clinical neuropsychologists our mandate is to determine whether patients have objectively verified (i.e., credible) cognitive dysfunction.”

Can clinical/rehab psychologists take the same position?

“In conclusion, we need to discard the terms “malingering” in all but the most rare circumstances in which there is incontrovertible evidence of malingering (asymptomatic behavior on surveillance tape, patient admission of malingering, etc.). Instead, the terms that describe behavior not intend such as “non-credible symptoms/performance,” “negative response biased,” and “non-physiological, suspect or suboptimal effort,” should be substituted.”

“It is recommended that Slick et. al (1999) terminology be changed from “diagnosis of malingered neuro-cognitive function” to “determination of non-credible neuro-cognitive function.”

Slick et al. (1999) suggest that “definitive” MND can only be determined by below-chance on forced-choice measures.
Boone regards Slick criteria as “problematic”:

- It is assumed that below chance-performance is only found in malingerers.
- Definitive non-credible performance can be based on results from a single measure.
- Further, they limit the diagnosis of definitive non-credible performance to only “unsophisticated” patients.
- A “significantly below chance” performance theoretically could occur in 5 of 100 credible patients ($p < .05$).

Rejecting reliance on single effort measure:

“It can be argued that use of several effort indicators in combination is more reflective of “definite” non-credible performance than any single effort test, including forced choice measures, particularly when the former are supplemented by behavioural criteria … Further, it is problematic to hinge our ability to diagnosis “definite” non-credible performance on only one technique (i.e., forced choice) in which patients, unfortunately can be readily coached.”

Recommendations

- It is recommended that the criteria for definite non-credible performance be determined by failure on at least three validated effort measures with minimal shared variants and cut offs set to ≥ 90% specificity and behavioral evidence of non-credible symptoms (i.e., dramatic inconsistency between test scores and activities of daily living (ADLs). (e.g., very low scores but normal ADLs) and / or claimed diagnosis (e.g., dementia after mild traumatic brain injury), and/or across sequential exams)

Paraphrasing one discussant:

Consistently research demonstrates that those who fail SVT's reflect individuals who have been previously identified as probable malingers or those who have been instructed to exaggerate cognitive impairment.

- Is this perception accurate?
- Is failing a single SVT a gold standard?
Even if Malingering Specific, Gold Standard?

- Binder and Willis (1991) reported below-chance performance in only 2 of 13 simulators.
- Wiggins and Brandt (1998) indicated that none of their 48 simulators scored significantly below chance.
- Slick et. al. (1994) documented that only 15% of feigning subjects scored below chance.
- Thus, identify limited subtype of “malingerers”.

“In fact, most authors have found that most subjects feigning cognitive symptoms show above-chance levels of accuracy on forced choice paradigms.”

What about false positives?

- By definition, .05 significance level, allows 5% false positive rate

- The recommended failure of 3 or more validity measures addresses this concern

- Are many of us administering at least 3?

Minimum Three Failed Measures: Probability theory

“If the false-positive rate on the effort techniques is set at 10% (by choosing cutoffs that have at least 90% specificity), and if the tests are uncorrelated, the chance that three abnormal scores could have occurred by “chance” would be 1 in 1,000 (i.e., $1/10 \times 1/10 \times 1/10$), while four abnormal scores would be associated with a probability of 1 in 10,000, and so on. Effort measures are at least modestly correlated with each other (Nelson et al., 2003); thus, the probability of several failed-effort indicators in a credible subject is higher than that for uncorrelated measures.”

My assertions

- SVT “non-credible” profiles can potentially still rule out organic impairment, but can’t rule in

- An uninterpretable profile re organicity or innate maximal capacities (e.g. vocationally), if solidly grounded in credible somatic/emotional impairments, can still be valid in disability determination context

Group views?
Embedded Measures
Good Chapter Reviews Embedded Measure Methodologies by Domains

- **WAIS-WAIS-III:**
  - “efficient method to determine effort”
  - varied indices have comparable sensitivity (about 50%), when specificity set to >90% → can “rule in” noncredible, but nor “rule out malingering”

- **Better methods:**
  - Reliable Digit Span (total f/b, both trials)
  - Digit Span – Vocabulary

Babikian, T & Boone, K.B (2007); Intelligence Tests as Measures of Effort; “Assessment of Feigned Cognitive Impairment”; p. 120 - 123
Given that the clinician is faced with the task of conducting a thorough neuropsychological evaluation under limited time constraints, a preferable alternative is to find patterns of performance that discriminate suspect effort and feigned or exaggerated deficits from true cognitive dysfunction with instruments.

Lu, P.H; Rogers, S. A; Boone, K.B (2007); Use of Standard Memory Tests to Detect Suspect Effort; ; “Assessment of Feigned Cognitive Impairment;”; p.146
Embedded Memory Measures

“We reviewed numerous studies that have investigated the effectiveness of five commonly administered tests of memory functioning in detecting feigned or exaggerated memory impairment and found that in general, various variables can be extracted from the tests which demonstrates promise in discriminating non-credible effort from co-operative patients.”

- WMS-R (more studies than) WMS-III e.g. Att/Con-GM
- RAVLT (especially recognition trial <11 cut off)
- Rey Complex Figure (especially effort equation)
- CVLT recognition
- Warrington RMT (especially Words section)

Lu, P.H; Rogers, S. A; Boone, K.B (2007); Use of Standard Memory Tests to Detect Suspect Effort; “Assessment of Feigned Cognitive Impairment”; p.146
Executive & Sensory Motor Measures Summary

- Category test useful: “Easy” & “rarely missed items” (by normal and TBI); “difficult” items not supported
- Fluency tests not supported
- Not commented on Trails B<A, but intuitive/support

- Motor (sensory): Suggest better at ruling in than out
  - Very depressed tapping speed/grip absence physical cause, likely supported
  - Otherwise, emerging

Sweet, J & Nelson, N,W (2007); Validity Indicators within Executive Function Measures- Use and Limits in Detection of Malingering; “Assessment of Feigned Cognitive Impairment”; p.159 - 165
Favoured & better at “ruling in” poor effort at moment

“...we are not aware of any embedded index that has consistently demonstrated classification accuracies that are as impressive as those demonstrated by dedicated cognitive effort measures...even embedded measures that have demonstrated excellent classification accuracies in identifying insufficient cognitive effort, we must continually consider the possibility that standard ability effort indices may also be sensitive to a variety of conditions or other variables.”

In context of an “impairment/credibility” model this may be an acceptable limitation, especially as SVT influencing variables not well understood...
Effects of Pain & Fatigue
Chapter notations chronic pain and fatigue:

- Summarize that in most studies, the majority of those with pain/fatigue do not demonstrate poor effort.

- But, warns against attributing poor SVT performance in pain/fatigue population automatically to willed deception.

- “Other possible nonneurological contributions can and should be considered.”

Important Alternate Considerations re Poor Effort:

- Persons with 1-3 / 3-1 MMPI code types fail cognitive malingering instruments at an extremely high rates (68% of Boone et al. (1999) sample), though intact MMPI validity scales:

  “Somatization/conversion disorders (…high preponderance of medically unexplained symptoms) can also extend to presentation with noncredible cognitive impairment”

Under-researched Additional Considerations

- "Cogniphobia...the fear that engaging in cognitively effortful tasks will exacerbate pain symptoms (such as headache), thus patients will avoid putting forth too much effort into cognitive tasks.

- Chronic headache suffers with negative expectations about cognitive performance related to HA when provided related literature have reduced memory performance (preliminary study).

Effects of Psychiatric Conditions
Chapter notations psychiatric conditions:

- Relatively few studies, most look at discreet “clean” psychiatric subgroups

- Depression no impact on 12 SVT, including: TOMM, 15 item, Dot Counting, Warrington RMT-W; CARB, WMT not meet inclusion criteria

- Psychosis: modest increases in false positives, especially –ve symptoms, concentration difficulties, lower education

Chapter notations psychiatric conditions:

Overall huge caution:

“No information...found regarding the effect of bipolar illness, personality disorder, or PTSD on effort tests...our knowledge regarding the relationship between cognitive effort indicators, anxiety disorders, OCD, and somatoform conditions is limited.”

Further Thoughts re Somatic/Emotional Factors

- Unclear proportion of studies using comprehensive battery versus shorter ones, to maximally tax sustained effort or noting placement of SVTs in battery

- Insufficient literature re the synergistic contributions of pain, fatigue/sleep disturbance, emotional disorders ESL/culture in context of sustained concentration/effort

- Appears minimal literature measuring/correlating fluctuating levels of somatic/emotional symptoms in testing

- Clinically consider symptom monitoring observation sheet correlated with task performance
Recent OPA List Serve Discussion

Dr. ______ wrote:

“I think it is useful, therefore, to pay close attention to how an individual is responding to items on the TOMM, balancing qualitative and quantitative data. It might also be beneficial to ask individuals their response to the process, and if they felt they were able to give their best effort.”

- **Do any of us ask?**

- **What might we ask to interpret psychological SVT influence?**
Dr. Salmon emerging Post Assessment Questionnaire

- How did you feel about the testing process?
- At any point did you have difficulties comprehending what was being asked of you?
- Did you feel that the assessing clinician and test examiner were respectful to you and addressed any concerns that you raised? If not, do you feel that this affected how you performed on testing? How so?
- At any time were you irritated or angry? If so why and around when (test or time)?
- At any time were you bored? If so why and around when (test or time)?
- At any time did you feel rushed or were you rushing through the process? If so why and around when (test or time)?
- At any time did you feel embarrassed or intimidated? If so why and around when (test or time)?
- At any time did you feel like giving up or stopping? If so why and around when (test or time)?
- At any time were you distracted or unable to focus on the tests? If so why and around when (test or time)?
- At any time were you concerned that full effort would result in increased symptoms? If so why and around when (test or time)?
- At any time did you feel like intentionally giving a wrong answer? If so why and around when (test or time)?
- At any time did you feel that you had the same test item(s) previously? If so how long ago and can you describe the items that you were familiar with?
Arguably the Best Methodology?
Similar to Triar of fact...
“Credibility”: Case law vs. NAN

Sivananthan v. State Farm
(FSCO A02-000307, 2004), Arb. Sone

“Credibility. In order to assess her credibility as a witness, I may evaluate:
- her demeanor
- internal inconsistencies in her evidence,
- contradiction by others,
- contradiction by documents,
- the inherent implausibility of her evidence, given general knowledge of the human condition.
- If raised, also examine allegations of dishonesty or fraud.”

NAN, Bush et al. 2005, p. 421)

3.1 Consistency. Inconsistencies may indicate misrepresentation or fabrication of symptoms:
(a) self-history inconsistent with documented
(b) symptoms inconsistent with known patterns of brain functioning
(c) symptoms inconsistent with observations
(d) symptoms inconsistent with information from reliable collateral informants
(e) Symptom profiles that are inconsistent with performance levels on psychometric tests
“Credibility”: Case law vs. NAN cont…

Sivananthan v. State Farm (FSCO A02-000307, 2004), Arb. Sone

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3.2. Performance on neurocognitive tests:
(a) performance consistent with feigning on empirically derived indices obtained from scores of ability measures
(b) performance patterns on ability measures indicative of invalid responding
(c) inconsistencies between test results and known patterns of brain functioning
(d) inconsistencies between test results and observed behavior
(e) inconsistencies between test results and reliable collateral reports
(f) inconsistency between test results and documented background information
Additional Critical Considerations

- Has the claimant evidenced reasonably cooperation with and engagement in, the rehab process?

- Is there indication of clinical and functional improvement over time?

- If premature clinical/functional stagnation or deterioration, can this be explained on an organic or psychological basis?
A Study of Ontario Case Law: Contrasting clinicians to arbitration outcomes

Over FSCO 120 files, searched by "malingering", where dx of malingering

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Number</th>
<th>Opinion</th>
<th>Arbitrator Agrees</th>
<th>Arbitrator Disagrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatry</td>
<td>12</td>
<td>5 (42%)</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Psychology</td>
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<td>5 (100%)</td>
<td>100%</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td></td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
<td>50%</td>
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- 1 case Arb. made specific reference to TOMM; re psychologist’s lowest score ever seen
Summary

- Clearly study n too small for meaningful interpretation, but sound method to address:
  - Do arbitrators agree with clinician opinions re malingering (ecological validity)?
  - Is an “evidenced based” approach superior re triar of fact concordance (eco. validity) vs “clinical judgement”?
  - Should clinicians be opining on “malingering” (vs impairment/credibility of findings) what does the evidence reveal; & what do triars of fact say on the matter?
Conclusions

- Boone prefers “credibility” which also parallels case law orientation
- Focusses us on impairment determination, not “lie detection”

- But suggest we consider “credibility” relative to:
  - Consistency analysis (NAN criteria, parallel to case law)
  - Versus test “interpretability” relative to:
    - Neurocognitive/vocational test integrity i.e. organic impairment ID; innate absolute cognitive/vocational ability versus minimal demonstrated functional abilities
    - Consider profile utility regardless of SVT results
Controversially, Boone recommends 3+ (vs 2+) positive effort tests to recognize “non-credible” performance (not person)

Consider embedded measures approach to help ascertain test interpretability throughout testing

Integrate comprehensive clinical psych work up to understand effort issues

Only unitary depression SVT-resistant but only for some SVTs; psychosis increases false positives; bipolar illness, personality disorder, anxiety/PTSD unknown SVT influence
Conclusions cont...

- Somatization/conversion show **substantial** SVT failure rates & **no valid means** to differentiate from malingering

  → *Extreme caution re diagnosing malingering based on SVTs (better re ruling out interpretable findings) re above 2 points*

  → *Suggests at best may opine differential/ “rule out” malingering dx:

- Correlate symptoms/performance variability/effort

- Survey client experience to better understand influencing psych factors (anger, boredom, overwhelm, distraction, language-comprehension, culture etc.)
Pen mightier than the stomach?

Woman who swallowed pen 25 years ago has it removed... and it still works!

When questioned, the patient remembered that 25 years before she had used a felt-tip pen to poke her tonsils while looking at them in a mirror. However, she had then fallen forward off a step and swallowed the pen by accident. Her husband and GP had dismissed her story at the time after plain X-rays came up normal.

In British Medical Journal Case Reports, the team led by Dr Oliver Waters, concluded: “Occasionally it may be worth believing the patient’s account however unlikely it may be!”