

NAN position paper

Symptom validity assessment: Practice issues and
medical necessity
NAN Policy & Planning Committee

Shane S. Bush*, Ronald M. Ruff, Alexander I. Tröster, Jeffrey T. Barth,
Sandra P. Koffler, Neil H. Pliskin, Cecil R. Reynolds, Cheryl H. Silver

496 Smithtown Bypass, Ste. 304, Smithtown, NY 11787, USA

Accepted 28 February 2005

Abstract

Symptom exaggeration or fabrication occurs in a sizeable minority of neuropsychological examinees, with greater prevalence in forensic contexts. Adequate assessment of response validity is essential in order to maximize confidence in the results of neurocognitive and personality measures and in the diagnoses and recommendations that are based on the results. Symptom validity assessment may include specific tests, indices, and observations. The manner in which symptom validity is assessed may vary depending on context but must include a thorough examination of cultural factors. Assessment of response validity, as a component of a medically necessary evaluation, is medically necessary. When determined by the neuropsychologist to be necessary for the assessment of response validity, administration of specific symptom validity tests are also medically necessary.

© 2005 Published by Elsevier Ltd on behalf of National Academy of Neuropsychology.

Keywords: Malingering; Symptom validity testing; Medical necessity; Neuropsychological assessment

Clinical neuropsychologists are responsible for making determinations about the validity of the information and test data obtained during neuropsychological evaluations. The manner in which such determinations are made may vary considerably depending on the context in which the evaluations are performed. Publications related to symptom validity assessment have increased substantially in recent years, with the development of measures, indices, and other strategies for assessing symptom validity seeming to have outpaced the development of

* Corresponding author. Tel.: +1 631 334 7884.

E-mail address: sbushphdnp@medscape.com (S.S. Bush).

professional guidelines that clarify their role in the evaluation process. The purposes of this paper are to (1) briefly summarize the current state of neuropsychological symptom validity assessment, (2) offer recommendations for appropriate symptom validity assessment, and (3) educate those who have an interest in neuropsychological methods and procedures regarding the essential nature of symptom validity assessment and the medical necessity of symptom validity testing in many evaluation contexts.

1. Definitions

A primary step in the interpretation of the information and test data obtained during a neuropsychological evaluation is to make a determination about the validity of the information and data. That is, did the examinee give a complete and accurate portrayal of symptoms and history, and did the examinee put forth appropriate effort on the tests? The reporting of valid information and data is generally straightforward. In contrast, a variety of terms have been used in the neuropsychological literature to describe invalid information or test data. Some terms focus on the examinee's self-report or observed behavior, whereas others focus on the potential reasons underlying an invalid performance. The terms listed below have been used to describe measures and procedures used to assess the validity of an examinee's responses. Although definitions may vary between publications, the following definitions are used in this paper:

- Symptom validity—the accuracy or truthfulness of the examinee's behavioral presentation (signs), self-reported symptoms (including their cause and course), or performance on neuropsychological measures
- Response bias—an attempt to mislead the examiner through inaccurate or incomplete responses or effort
- Effort—investment in performing at capacity levels. Although often not specified in discussions of *effort testing*, this term refers to the examinee's effort to perform well; that is, to *pass* an effort test is to do well on the test.
- Malingering—the intentional production of false or exaggerated symptoms, motivated by external incentives. Although symptom validity tests are commonly referred to as *malingering tests*, malingering is just one possible cause of invalid performance.
- Dissimulation—the intentional misrepresentation or falsification of symptoms, by over-representation or under-representation of a true set of symptoms in an attempt to appear dissimilar from one's true state.

The terms *assessment* and *testing* have been used to describe the evaluation process. For the purposes of this paper, *assessment* refers to all methods and procedures upon which a clinician may draw in the determination of symptom validity, whereas *testing* refers solely to a psychometric approach to the evaluation of symptom validity (Matarazzo, 1990). For the purposes of this paper, the terms *symptom validity assessment* and *symptom validity tests/testing* (SVT) are used.

2. Purpose of symptom validity assessment

There are many potential threats to the validity of the information and test data obtained in the course of a neuropsychological evaluation. Examples of such threats include the potential for personal gain (malingering), a factitious disorder, opposition to the evaluation, and the presence of clinical factors that may interfere with successful participation in a neuropsychological evaluation. In order to place maximal confidence in the ability to interpret accurately results from cognitive measures and/or tests of personality or mood, a determination must be made that the examinee put forth appropriate effort on tasks and responded honestly to questions. Symptom validity assessment is the process through which such determinations are made.

In addition to exaggerated or fabricated symptoms, there are instances in which examinees intentionally minimize or deny symptoms (Cima et al., 2003). Whereas the presence of neuropsychological deficits may result in personal gain for some individuals, the presence of such deficits for others may result in consequences that examinees wish to avoid. For example, neuropsychological evaluations that address decision-making capacity have direct implications for the examinee's autonomy. To avoid a loss of independence, some examinees may present an inaccurately positive picture of themselves. This is also a form of symptom invalidity. Although less of an issue with respect to test performance, invalid symptom reporting can affect the outcome of the evaluation and must be assessed.

In summary, the assessment of symptom validity is an essential part of a neuropsychological evaluation. The clinician should be prepared to justify a decision not to assess symptom validity as part of a neuropsychological evaluation.

3. Methods of symptom validity assessment

The manner in which symptom validity is assessed may vary depending on context. Symptom validity assessment may include specific tests, indices, and observations, but need not always include tests designed to assess symptom validity. The following are common methods for assessing symptom validity (Larrabee, 2003; Reynolds, 1998; Slick, Sherman, & Iverson, 1999; Sweet, 1999).

3.1. Consistency

Consistency of information obtained from interviews, observations and/or test results can contribute to a determination of symptom validity. The following inconsistencies may indicate misrepresentation or fabrication of symptoms:

- (a) self-reported history that is inconsistent with documented history
- (b) self-reported symptoms that are inconsistent with known patterns of brain functioning
- (c) self-reported symptoms that are inconsistent with behavioral observations
- (d) self-reported symptoms that are inconsistent with information obtained from reliable collateral informants

- (e) self-reported presence or absence of symptoms that are inconsistent with performance levels on psychometric tests

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

3.3. *Performance on psychological tests*

Evidence of exaggerated or fabricated problems may be evident from the original and more recently developed validity scales of self-report psychological tests, such as the MMPI-2.

3.4. *Symptom validity tests*

Performance below established cut-off scores on one or more well-validated tests designed to measure exaggeration or fabrication of cognitive deficits suggests insufficient effort to do well.

3.5. *Forced-choice tests*

Performance on one or more forced-choice measures of cognitive functioning that falls below chance to a statistically significant degree indicates biased responding.

As can be seen, the neuropsychologist has access to a variety of methods and procedures for determining the validity of the examinee's responses and performance. It is impossible to predict a priori which particular methods or procedures will reflect an examinee's invalid reporting or performance. Determination of how to assess response validity is made by the clinician based on the unique factors of a given evaluation, including the reason for the evaluation and the specific characteristics of the setting and the examinee.

Invalid responding or performance is not a dichotomous phenomenon. Examinees may vary their performance along a continuum from complete effort and honesty to a complete lack thereof. Similarly, effort and honesty may vary from one point in the evaluation to another. Examinees may attempt to mislead the examiner with regard to cognitive and/or emotional symptoms. In the case of sophisticated examinees, an approach that involves multiple methods at multiple points in time is typically required in order to obtain a sufficient understanding of the validity of the examinee's symptoms and performance. Use of multiple SVTs generally provides nonredundant information regarding examinee credibility (Nelson, Boone, Dueck, Wagener, Lu, & Grills, 2003). Knowledge of the classification accuracy of the SVTs used is critical in order to maximize accuracy in the determination of response validity (Bianchini, Mathias, & Greve, 2001; Hom & Denney, 2002).

4. Evaluation contexts

4.1. Forensic

The potential for symptom fabrication or exaggeration is higher in forensic contexts than in many clinical contexts (Larrabee, 2003; Mittenberg, Patton, Canyock, & Condit, 2002). As a result of the increased incentive to mislead the examiner, neuropsychologists have a responsibility to conduct more extensive assessment of symptom validity. Although there may be instances in which the use of specific symptom validity tests would not be indicated in forensic contexts, failure to administer at least one symptom validity test and/or administer tests with internal symptom validity indicators would need to be justified. As Iverson (2003) stated in the context of forensic practice, “Any neuropsychological evaluation that does not include careful consideration of the patient’s motivation to give their best effort should be considered incomplete” (p. 138).

4.2. Clinical

The nature of clinical practice varies substantially among settings and may vary among examinees within settings. Although there is typically less incentive to mislead the examiner in clinical contexts than in forensic contexts, the potential for invalid performance due to intentional or unintentional exaggeration or fabrication remains. In certain clinical contexts that may not have foreseeable forensic relevance *at the time of the evaluation*, such as when determining degree of disability for rehabilitative purposes, the potential for dissimulation in the direction of malingering may approach that of forensic contexts. Even examinees with well-documented brain injury can present with greater neuropsychological impairment than they actually sustained.

Although the use of SVTs in clinical contexts may not always be indicated (Meyers & Volbrecht, 2003), such as with some patients who require 24-h supervised care, determinations regarding the validity of patient performance are generally aided by the inclusion of SVTs in neuropsychological evaluations. Neuropsychologists in clinical settings must assess symptom validity in the manner that is most appropriate given the context and specific details of each evaluation.

5. Symptom validity testing: procedures and interpretations

Although the diversity of neuropsychological practice prohibits universal adherence to guidelines for SVT selection, use, and interpretation, some general recommendations can be offered based on common practices of neuropsychologists with expertise in this area (e.g., Iverson, 2003; Slick, Tan, Strauss, & Hultsch, 2004).

5.1. Procedures

- (a) Remain abreast of trends in the symptom validity assessment literature.

- (b) Approach the assessment of symptom validity proactively.
- (c) Assess whether cognitive, psychiatric, and/or behavioral symptoms are embellished.
- (d) Use a *multi-method* approach. A distinction is made between a *multi-method* approach and a *multi-test* approach. Whereas the administration of multiple tests may or may not contribute incrementally to the validity of the clinical determination, the use of multiple methods that extend beyond testing is likely to contribute to such validity.
- (e) Inform the examinee at the outset of the evaluation and as needed during the evaluation that good effort and honesty will be required (the examiner may inform the examinee that such factors will be directly assessed).
- (f) Use SVTs with the most appropriate psychometric properties, given the characteristics of the examinee and setting.
- (g) Disperse SVTs or measures with symptom validity indicators throughout the evaluation, with administration of at least one SVT early in the evaluation process.
- (h) Report the results of symptom validity assessment.

5.2. Interpretation

- (a) Data from SVTs should generally be given substantially greater weight than subjective indicators of suboptimal effort. Subjective indicators, such as examinee statements and examiner observations, should be afforded less weight due to the lack of scientific evidence supporting their validity.
- (b) Invalid performance on a measure of personality does not allow for an a priori conclusion that the neurocognitive test results are also unreliable, and vice versa.
- (c) The examiner must consider the nature of the performance on SVTs and other evaluation findings when generalizing from the results of SVTs to other test results.
- (d) Strong evidence of invalid performance on SVTs or other indicators of symptom validity raise doubt about the validity of all neurocognitive test results. In the presence of invalid performance on measures or indices of symptom validity, interpretation of performances on other tests as valid would need to be justified.
- (e) When evidence of invalid performance exists, scores on cognitive ability tests may be interpreted as representing the examinee's minimum level of ability.
- (f) Performance slightly below cut-off on one SVT may not justify an interpretation of biased responding; converging evidence from additional indicators may be required.
- (g) If an evaluation that has been discontinued due to insufficient effort or invalid responding is later continued, the confidence that could be placed in the validity of the results would remain limited.
- (h) Appropriate probabilistic language based on the nature and extent of convergent evidence should be employed when offering explanations for symptom exaggeration or fabrication (see, for example, Slick et al., 1999). Vague or misleading terminology to describe invalid performance should be avoided (Iverson, 2003).

6. Cultural factors

As with any neuropsychological assessment or the interpretation of specific neuropsychological tests, the examinee's cultural background should be evaluated. For example, cultural factors may lead to either exaggeration of symptoms or denial of symptoms without any conscious or unconscious motivation to "deceive." Similarly, simply because an SVT has been validated in the majority culture does not mean that the test is equally valid with individuals from a minority culture. Therefore, neuropsychologists working with culturally diverse populations must ensure that their assessment of response validity includes a thorough examination of the examinee's cultural background. The use of SVTs with culturally diverse populations for whom validation data do not exist must be carefully considered, and practitioners must be able to justify decisions for doing so.

7. Medical necessity

Neuropsychological evaluations that are requested by physicians and other medical professionals are medically necessary to increase the understanding the brain–behavior relationships of the examinee, often in order to facilitate diagnosis and/or treatment. The methods that comprise a medically necessary neuropsychological evaluation are, by extension, medically necessary. Assessment of response validity, as a component of a medically necessary evaluation, is medically necessary. When determined by the neuropsychologist to be necessary for the assessment of response validity, administration of specific symptom validity tests are also medically necessary.

8. Conclusions and discussion

Symptom exaggeration or fabrication occurs in a sizeable minority of neuropsychological examinees, with greater prevalence in forensic contexts. Adequate assessment of response validity is essential in order to maximize confidence both in the results of ability measures and in the diagnoses and recommendations that are based on the results. Such assessment includes a thorough examination of cultural factors. Symptom validity assessment methods should not be inconsistent with assessment guidelines established by the American Psychological Association (e.g., American Educational Research Association, American Psychological Association, & National Council on measurement in Education, 1999; American Psychological Association, 1991, 2002).

The neuropsychologist maintains responsibility for the measures administered and should accept, extend, or reject assessment recommendations from the referring party and/or payor based on the appropriateness of such recommendations for a given evaluation. The neuropsychologist may be ethically obligated to document in the evaluation report any constraints placed on the evaluation by third parties.

When the potential for secondary gain increases the incentive for symptom exaggeration or fabrication and/or when neuropsychologists become suspicious of insufficient effort or

inaccurate or incomplete reporting, neuropsychologists can, and must, utilize symptom validity tests and procedures to assist in the determination of the validity of the information and test data obtained. Determination of how to best assess the validity of the information and data obtained during neuropsychological evaluation, like all other domains assessed, rests with the examiner.

References

- American Educational Research Association, American Psychological Association, & National Council on measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- American Psychological Association. (1991). *Guidelines for providers of services to ethnic, linguistic, and culturally diverse populations*. Washington, DC: American.
- American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57(12), 1060–1073.
- Bianchini, K. J., Mathias, C. W., & Greve, K. W. (2001). Symptom validity testing: A critical review. *The Clinical Neuropsychologist*, 15(1), 19–45.
- Cima, M., Merckelback, H., Hollnack, S., Butt, C., Kremer, K., Schellbach-Matties, R., et al. (2003). The other side of malingering: Supernormality. *The Clinical Neuropsychologist*, 17(2), 235–243.
- Iverson, G. L. (2003). Detecting malingering in civil forensic evaluations. In A. M. Horton Jr. & L. C. Hartlage (Eds.), *Handbook of forensic neuropsychology* (pp. 137–177). New York: Springer Publishing Company.
- Hom, J., & Denney, R. (Eds.). (2002). *Detection of response bias in forensic neuropsychology*. Binghampton, NY: The Haworth Medical Press.
- Larrabee, G. J. (2003). Detection of malingering using atypical performance patterns on standard neuropsychological tests. *The Clinical Neuropsychologist*, 17(3), 410–425.
- Matarazzo, J. D. (1990). Psychological assessment versus psychological testing: Validation from Binet to the school, clinic, and courtroom. *American Psychologist*, 45(9), 999–1017.
- Meyers, J. E., & Volbrecht, M. E. (2003). A validation of multiple malingering detection methods in a large clinical sample. *Archives of Clinical Neuropsychology*, 18(3), 261–276.
- Mittenberg, W., Patton, C., Canyock, E. M., & Condit, D. C. (2002). Base rates of malingering and symptom exaggeration. *Journal of Clinical and Experimental Neuropsychology*, 24, 1094–1102.
- Nelson, N. W., Boone, K., Dueck, A., Wagener, L., Lu, P., & Grills, C. (2003). Relationship between eight measures of suspect effort. *The Clinical Neuropsychologist*, 17(2), 263–272.
- Reynolds, C. R. (Ed.). (1998). *Detection of malingering during head injury litigation*. New York: Plenum Press.
- Slick, D. J., Sherman, E. M. S., & Iverson, G. L. (1999). Diagnostic criteria for malingered neurocognitive dysfunction: Proposed standards for clinical practice and research. *The Clinical Neuropsychologist*, 13, 545–561.
- Slick, D. J., Tan, J. E., Strauss, E. H., & Hultsch, D. F. (2004). Detecting malingering: A survey of experts' practices. *Archives of Clinical Neuropsychology*, 19(4), 465–473.
- Sweet, J. J. (1999). Malingering: Differential diagnosis. In J. J. Sweet (Ed.), *Forensic neuropsychology: Fundamentals and practice* (pp. 255–285). Lisse, NL: Swets & Zeitlinger.