In forensic neuropsychological settings, maintaining test security has become an emergent issue. Over the past decade, researchers have been examining what effect coaching, or instructing people how to perform on tests has on their performance. The source of coaching most commonly referred to is the attorney who provides overly explicit information about certain neuropsychological tests to their litigating client. It has been reported that many lawyers think it is helpful and appropriate to alert their clients about validity scales and effort testing (see Wetter & Corrigan, 1995; Youngjohn, 1995). Other sources of coaching may include fellow litigants (such as those involved in a class-action lawsuit), or even psychologists, unwittingly (see Youngjohn, Lees-Haley, & Binder, 1999). More recently, this issue has come to the forefront particularly in regard to tests designed to measure effort. In their studies on coaching, researchers have used memory-impaired simulators to examine how resistant certain effort measures are to the effects of coaching.

People can be coached on measures of effort in various ways. In their 2004 study, Powell, Gfellar, Hendricks, and Sharland examined how different groups of memory-impaired simulators performed on the Test of Memory Malingering...
Green, & Cox, 1997) and the Word Memory Test (WMT; Green, Allen, & Astner, 1997). They had four different high-cut-off score for discriminating those who put forth adequate effort from those who put forth incomplete effort. Below the cut-off scores for detecting incomplete effort. The authors posited that this might be due to the relatively low amount of effort that participants put forth. In comparison, those who put forth adequate effort were detected as malingering. Both coached groups were detected as malingering. Although the mean of the test-coached group was higher (i.e., they performed better) than that of the symptom-coached group, both groups performed well below the cut-off scores for detecting inadequate effort. The authors posited that this might be due to the relatively high-cut-off score for discriminating those who put forth adequate effort from those who put forth incomplete effort.

Another study that examined the effects of coaching on effort testing was conducted by Dunn, Shear, Howe, and Rix (2003). In their study, they examined the Computerized Assessment of Response Bias-97 (CARB-97; Allen, Conder, Green, & Cox, 1997) and the Word Memory Test (WMT; Green, Allen, & Astner, 1997). They had four different conditions of malingering participants, each of which were asked to read a vignette about an accident (pretending it happened to them), and then to feign head injury when test-taking. One group was simply asked to take the WMT. Another group was given information about the cognitive sequelae of brain injury, and then was asked to take the WMT. Another group was not given information about brain injury, but was given information on how to “pass” the test. Finally, the last group was given information about brain injury and on how to pass the test. The control group simply took the WMT without being asked to feign impairment, and without reading the vignette. Results showed that although the coached groups were able to perform at levels better than chance, their scores were still substantially worse than those of participants who were instructed to put forth their full effort on the WMT. Additionally, the coached malingering performances fell in the “suspicious” range, where it was suspected they were not trying their hardest.

The group that was given information about brain injury did not do any better than the groups that were not provided the information. This somewhat surprising finding was also reported in Hayes, Martin, and Gouvier’s (1995) study. The results of the studies discussed above seem to suggest that effort tests that are not solely based on “above chance” performance may not be susceptible to coaching to the extent that coached performances will enable people to “pass” the tests. After all, even when participants were educated about test-taking strategies to avoid detection, their performances were still in the “suspicious” or failure range. These findings stand in contrast to several studies that have shown that coaching has a negative effect on the validity of test results, or memory-impaired simulators are perceived as genuinely brain-injured (Baer & Wetter, 1997; Storm & Graham, 2000). This discrepancy may be due to differences in how the tests were constructed, what they were designed to measure, differential coaching paradigms, and/or different susceptibilities to coaching of each test. Of course with research studies, there is the question as to how closely feigning research participants resemble “true” malingers, and to what extent participants versus litigants try to feign impairment due to the highly discrepant financial incentives (a few dollars for research participants versus potentially thousands for litigants).

It may appear that these select coaching strategies do not greatly impact the validity of effort test results; however, it is important to recognize that there are additional ways in which people can be coached. For example, people can, with good intentions, search for information about neuropsychological testing in general by looking in the library or bookstore for information, or on the Internet. In these contexts, people might come across information that they should not be privy to prior to testing. Perhaps the worst of all situations, as first explored by Ruiz, Drake, Glass, Marcotte, and van Gorp (2002), might be what people can find out over the Internet (on their own, or subsequent to being coached) to aid in their portrayal of a brain-injured individual while undergoing neuropsychological evaluation. In their study, Ruiz et al. explored information about psychological tests and evaluations that was available over the Internet. The search terms they used were psychological evaluations, neuropsychological evaluations, independent medical evaluations, malingering, faking on neuropsychological tests, forensic evaluations, depression, and MMPI. They classified relevant websites into different threat level categories according to how they might aide people in avoiding the detection of malingering. The majority of websites they found fell in their “minimal threat” category. That is, the information provided in these websites might only minimally assist people in symptom dissimulation. A smaller number of websites were categorized under “indirect threat” because they included signs of symptom feigning and names of formal effort measures that one could expect to encounter in a forensic evaluation. Finally, a very few websites were placed into the “direct threat” category because some included specific test stimuli, and others directed people on how to respond “appropriately” to different tests, such as the MMPI-2 and the Rorschach. The authors concluded that for reasonably stable, intelligent people who want to present themselves in the best light possible, many of the sites they found could be used to successfully feign cognitive impairment.
The present study sought to more directly explore the coverage of symptom validity tests over the Internet. Specifically, the TOMM, the WMT, and the Victoria Symptom Validity Test (VSVT; Slick, Hopp, Strauss, & Thompson, 1997) will be examined. Due to their increasingly widespread use in recent years, there is likely to be a corresponding increase in their Internet coverage. This exploration is important because although some studies (reviewed above) have demonstrated that at least the WMT and the TOMM are resistant to some coaching strategies, it is not known to what extent people can be coached or informed about these tests over the Internet.

1. Method

The search engine “Google” was used to explore these tests on the Internet. As of June 2004, Nielsen NetRatings Search Engine Ratings reported that Google is the most widely used search engine in American homes and businesses (available: http://searchenginewatch.com/reports/article.php/2156451). One search was conducted in June 2004, and the other was conducted in October 2004. Several websites found in June had been removed by October; therefore, the results from the October search, because they are more current, are presented. The full name of each test was entered in the search: Test of Memory Malingering, Word Memory Test, and Victoria Symptom Validity Test. The acronym for each test was also entered for exploratory purposes: TOMM, WMT, and VSVT. A graduate student classified the top 50 websites from each search using the full name of the test into four “threat level” categories: none (no information is provided), low (includes minimal or basic information about the test), moderate (gives a description of the test format, or studies that have examined the test), and high (explains scoring, or provides specific cut-off scores).

2. Results

Results of searches for each test are displayed in Table 1. Since similar information about the tests was available from websites classified in the “none” threat category, they are not included in the table. Generally, the “none” category included websites that were no longer available, were restricted, or required passwords. Some websites simply provided a list of neuropsychological or psychological tests, and others seemed to have nothing to do with the particular test being searched for.

The TOMM search results produced the most “high” threat level websites, and were followed by the VSVT search results. The WMT search results produced the fewest. A similar pattern bore out when acronyms were used in the search. When “TOMM” was entered into the Google search, the full name of the test was produced on the first page of results, fifth from the top. When “VSVT” was entered into the Google search, the first website link that appeared (i.e., was search result #1) was to a sample report complete with the full name of the test, a range of scores, and classifications of those scores. When “WMT” was entered, the name of the test was not found in the first 50 websites produced. No websites were found that were aimed towards aiding people in symptom dissimulation. Also, it should be mentioned that there were a few websites that would have been classified into the “high risk” category due to the explicit information they provided; however, what the sources revealed about the tests was slightly inaccurate, such as providing incorrect cut-off scores.

3. Discussion

The search results indicated that there are several websites that threaten test security, and could potentially coach or inform people how to perform on the TOMM, the VSVT, and the WMT. An examination of Table 1 indicates that perhaps the most potentially damaging information that is available over the Internet is on the TOMM. Although over half of the websites were categorized in the “none” threat category, 26% of the websites were classified into “moderate” or “high” threat categories. More importantly, taken together, these websites provide information about the purpose and the format of the test, how malingerers versus non-malingerers typically react to verbal feedback after their responses, what the cut-off scores for suboptimal effort are, and exactly who should perform well on this test. Unfortunately, the design of the TOMM may be particularly conducive to understanding and applying the available information. Only one cut-off score needs to be kept in mind and the general format of the test is uncomplicated and easily explained. Therefore, people might not have too much difficulty translating what they read over the Internet to taking the actual test.
Some potentially damaging information was also available on the Internet about the VSVT. Again, the majority of the websites were categorized in the “none” threat category; however, 22% of the websites were classified into “moderate” or “high” threat categories. Quite obviously, posting a sample report that reveals all of the components of the test and some classification labels is a sure threat to test security. People could find out the format from the report, along with the information provided on other websites. Information about who should perform well on the test, and how many questions are needed to get correct in order to “pass” is also available. Additionally, people can find out that reports and graphs can be generated from this test to educate courts and juries! The added information about courtroom usage of the test could make it more salient, and worthwhile to learn about. Due to the format of the VSVT, it could be more difficult for people to piece together how they should perform on the test to pass it. However, it is not unreasonable to imagine that intelligent, highly motivated individuals could assimilate all of the information available and use it to their advantage.

Finally, most of the websites on the WMT were classified in the “none” threat category and only 12% were classified into the “moderate” threat category. People could glean information about who should do well on the test, and could also feel “threatened” by the claim that malingerers are easily detected, but they would have little to no information about the test’s format or how they should perform as head-injured individuals. The information available on the WMT is less detailed than what was provided to participants in the study discussed above (Dunn et al., 2003), so it could be surmised that information available over the Internet about the WMT is not particularly threatening to the validity of the test.
At this point, it is important to discuss how some of the information found on the Internet could differ and be more damaging than the information provided to memory-impaired simulators in the studies discussed above. Most obviously, some of the websites that have information on the TOMM and the VSVT reveal specific cut-off scores. That is, whoever is taking the test could literally try to keep track of and count how many questions they get right or wrong in order to “pass.” Secondly, real-life litigants could be much more highly motivated to dissimulate than research participants. They might take an excruciating amount of time to search the Internet and find out about these tests. Even if some of the terminology includes psychological or neuropsychological jargon, they might pursue and try to figure out what is being said and how to perform on each test. At this point, it is unknown to what extent non-psychologists can apply the information they have read about a test over the Internet to actually taking the test. It is also unknown to what extent attorneys could or do read about these tests over the Internet, and then inform their clients about how they should perform on them.

Another area of interest involves how often litigants or attorneys know the names of these tests to perform an Internet search on them. Due to their increased usage in the courtroom in determining the validity of neuropsychological test results, it is very possible that attorneys are becoming familiar with the names of these tests. Even if (only) the acronyms are searched for, at least with the TOMM and the VSVT, the full name of the test is easily obtained. This is not true for the “WMT” because the same acronym is used for “Wal-mart,” “Web Marketing Today,” and a host of other company names. The fact that it is a popular acronym might make it prohibitory for people who are looking for information on the WMT without knowing the full name of the test.

Although the extent to which patients or litigants use the Internet to research symptom validity tests is unknown, it is clear that there is some potentially damaging information available that could threaten the validity of these tests. As information becomes more accessible over the Internet in days, months, and years to come, steps must be taken to preserve the integrity of these symptom validity tests along with other neuropsychological measures. Since there were several websites that contained either abstracts or full-length articles with published cut-off scores, it might be important for researchers to consider withholding that information from their manuscripts. They could simply refer to participants performing “above” or “below” the recommended cut-off score without providing the actual number(s). Or a different plan of action could be for journals or other academic websites to restrict access to such sensitive information. Another option is to have readers contact the authors for this information if need-be. Most of the time, however, it’s conceivable to believe that the intended audience (i.e., professional psychologists) will already be aware of these cut-off scores, or if not, they can easily obtain the information themselves.

Another step to preserve the validity of symptom validity tests certainly includes not posting sample reports over the Internet. There is no good reason to do this. If a clinician wants or needs to examine a sample report, test publishing companies or colleagues should be consulted to provide the needed information in a confidential, appropriate manner. Posting reports that are available for anyone to read could be considered professionally irresponsible.

Other options for preserving the validity of symptom validity tests are more difficult to formulate because the Internet is used for marketing purposes, and to massively share and disseminate information to psychological professionals and the general public alike. It would be best, of course, if people who are going to take symptom validity tests did not find out about the actual names of the tests. Then, perhaps, they would not find information about the tests on the Internet. If people did discover the names of the tests, perhaps along with the names of other neuropsychological tests they would be taking, it would be best if the information they found was vague, and did not specifically spell out how they should perform. In the future, it will likely be up to neuropsychologists, test designers, publishing companies, journal editors, and more general website managers to ponder and problem-shoot these issues at different levels.

Keeping the above findings and recommended courses of action to improve the current situation in mind, there are some limitations to the present study. First, as Ruiz et al. (2002) mentioned in their limitations, these websites were reviewed by a graduate-level student studying neuropsychology. It is possible that people from a non-psychological background would not find all of the information as enlightening; however, as was mentioned before, an extremely motivated litigant, for example, might put in extra time and sizeable effort to make sense of the available information. Exploring this possibility experimentally could be an idea for future research studies.

Also, only the first 50 websites that resulted from each search were examined by one graduate student and only the search engine “Google” was used. It is possible that a more exhaustive search performed by several graduate students utilizing many search engines would yield more information on the TOMM, the VSVT, and/or the WMT. Hence, Table 1 should be used as a rough guide, and certainly not as a chart to definitively promote the usage of one test over the other, or to disparage the use of any of the tests.
In sum, considering the findings and limitations of the present study, information was found over the Internet on the TOMM, the VSVT, and the WMT that could potentially threaten their validity to differing degrees. As there does not seem to be a decrease in litigating cases in the court system, the usage of symptom validity testing to detect symptom dissimulation during neuropsychological evaluation continues to be a regular practice. To preserve the integrity of these tests and to promote their further usage, steps should be taken by different professionals at various levels to limit the type of information that is available about these tests over the Internet.

References


