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The Detection of Malingering on Measures of Competency to Stand Trial: A Study of Coached and Uncoached Simulators

Rachael Elizabeth Springman
University of Missouri-St. Louis

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by

Rachael E. Springman
M.A., Psychology, University of Missouri – St. Louis, 2005
M.A., Forensics, University of Denver, 2001
B.A., Psychology, University of Notre Dame, 1999

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Advisory Committee

Brian Vandenberg, Ph.D.
Chairperson
Kamila White, Ph.D.
Committee Member
Steven Bruce, Ph.D.
Committee Member
Carl Bassi, Ph.D.
Committee Member

Abstract

The present study investigated the detection of coached and uncoached malingering on two measures of competency to stand trial: the Georgia Court Competency Test (GCCT) and the Evaluation of Competency to Stand Trial – Revised (ECST-R). Using a simulation research design, undergraduates (n = 101) were randomly assigned into Control (instructed to respond honestly), Uncoached Malingerer (instructed to feign incompetency but did not receive any tips to elude detection), and Coached Malingerer groups (instructed to feign incompetency and received tips to elude detection) and presented with a hypothetical criminal case scenario that required them to undergo an evaluation of their competency to stand trial. Scores on the GCCT and the ECST-R Factual Scale served as indicators of competency, while scores on the GCCT Atypical Presentation (AP) and ECST-R Atypical Presentation (ATP) scales served as indicators of malingering. As expected, results indicate that the two malingering groups appeared markedly impaired on overall competency scores in comparison to the Control group. Furthermore, the two malingering groups appeared markedly elevated on malingering scale scores in comparison to the Control group. Contrary to expectations, test-strategy coaching exerted little impact on competency and malingering scale scores. Both malingering scales effectively discriminated between malingerers and honest responders.

The Detection of Malingering on Measures of Competency to Stand Trial: A Study of Coached and Uncoached Simulators

Competency to stand trial serves as one of the most significant mental health issues in the criminal justice system, and evaluations of competency to stand trial serve as the most frequently requested forensic evaluation (Melton, Petrila, Poythress, & Slobogin, 1997; Nicholson & Kugler, 1991). In fact, recent estimates suggest that 60,000 defendants are referred for competency evaluations each year, and defense attorneys initiate the competency inquiry in approximately 8% to 15% of their felony cases (Bonnie & Grisso, 2000; Hoge, Bonnie, Poythress, & Monahan, 1992; Hoge, Bonnie, Poythress, Monahan, Eisenberg, & Feucht-Haviar, 1997; Melton et al., 1997b; Poythress, Bonnie, Hoge, Monahan, & Oberlander, 1994). The prevalence of these evaluations, coupled with the serious implications that decisions about competency inevitably hold for the parties to the legal proceedings, highlights the importance of investigating factors that impact the validity of competency evaluations performed by mental health professionals.

Mental health professionals play an important role in the legal competency decision, as evidenced by forensic clinical researchers' attempts to translate "the legal construct of fitness into psychological terms to assess and measure it" (Hart & Hare, 1992, p. 55). Contemporary definitions of trial competency maintain that an individual must be competent to participate in the criminal process, such that "only the acts of an autonomous individual are to be recognized by society" (Melton et al., 1997, p. 119). The assurance of a fair trial serves as a core objective of the modern American justice system, and one that dates back to 17th century English common law. In *Dusky v. United States* (1960), the United States Supreme Court rendered a landmark decision that established the modern standard for the definition of competency to stand trial. In

the judgment, the Supreme Court opined that "it is not enough . . . that 'the defendant [is] oriented to time and place and [has] some recollection of the events,' but that the 'test must be whether he has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding – and whether he has a rational as well as factual understanding of the proceedings against him'" (*Dusky v. United States,* 1960). The *Dusky* standard has emerged as the predominant standard in the field of forensic psychology, and clinicians have generally adopted the definition of the competency construct that has been delineated by legal authorities: a factual understanding of the proceedings, a rational understanding of the proceedings, and an ability to consult with counsel (Rogers, Grandjean, Tillbrook, Vitacco, & Sewell, 2001).

Studies have clearly demonstrated that judicial authorities rely heavily upon the expert testimony of the psychiatrists, psychologists, and social workers called upon to perform competency evaluations (e.g., Reich & Tookey, 1986; Zapf, Hubbard, Cooper, Wheeles, & Ronan, 2004). In fact, courts often defer to the findings in the report and proceed without holding a formal competency hearing (Cox & Zapf, 2004; Grisso, 2003; Zapf et al., 2004). Qualitative research reveals that judges believe "that mental health professionals are more qualified (through their specific training) to answer the question of competency than are judges or other legal professionals" (Zapf et al., 2004, p. 35). The serious implications associated with these judgments – individuals' rights, liberty, due process – require that the competency inquiry be performed with the highest level of proficiency and integrity. To that end, researchers have increasingly emphasized the importance of the assessment of malingering to increase the validity of the clinical opinions offered in competency evaluations (Skeem & Golding, 1998).

Competency Evaluations

Malingering

The DSM defines malingering as "the 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" (American Psychiatric Association, 2000, p.739). In a non-forensic context, mental health professionals generally accept their clients' reports of presenting problems and symptomatology as genuine and legitimate. Competency evaluations, however, occur within a forensic context, and the motivation of defendants to deceive or distort their presentation requires assessment by the practitioner (Schlesinger, 2003). The distinct types of referral questions in traditional clinical settings versus competency cases can manifest very different examination techniques. For example, traditional clinical cases typically focus on "how a patient perceives or feels about the world – what is real to that patient – not factual or historical truth" (Hunsley & Bailey, 1999, p. 53). Forensic clinicians, however, seek to render clinical opinions based on historically accurate events that have been corroborated using multiple sources of information. Consequently, the emphasis on reliable and valid historical data is of paramount importance in competency evaluations; and in contrast to therapeutic settings, the response style of the defendant is not assumed to be reliable (Heilbrun, 2001).

Although only limited information exists regarding the base rates of malingering in competency evaluations, studies have shown that clinicians diagnose malingering in pre-trial evaluations between 8% and 15% of the time (Cornell & Hawk, 1989; Rogers, Sewell, & Goldstein, 1994). Moreover, it does not appear that evaluators routinely rule out malingering as part of their assessments. For example, one study found that 88% of the reports in their sample

failed to articulate that they ruled out malingering as part of their assessments (Skeem, Golding, Cohn, & Berge, 1998). In addition, researchers report a dearth of systematized studies on malingering in competency evaluations within the past 30 years despite the acknowledged problem of defendants' motivation to feign mental illness to delay their trials, mitigate their sentences, and divert their commitments from jails to forensic hospitals (Cornell & Hawk, 1989; Cruise & Rogers, 1998; Jaffe & Sharma, 1998; Rogers et al., 2002).

Coaching in Competency Evaluations

Experts assert that motivated malingerers likely prepare their dissimulations to evade detection by clinicians (Rogers, 1997). Clearly, the stakes are high in competency evaluations, and those determined to malinger incompetency may seek out coaching to maximize their chances for success. Victor and Abeles (2004) define coaching as "any attempt to alter the results of psychological or neuropsychological tests in such a way that distorts the true representation of the examinee's cognitive, emotional, or behavioral status or hinders an accurate assessment of such attributes" (p. 374). Experts agree that the effectiveness of psychological tests depends upon the naiveté of the examinee to the instruments and how they work (Ruiz, Drake, Glass, Marctotte, & van Gorp, 2002; Youngjohn, 1995). Consequently, the phenomenon of coaching raises substantial concern in the context of competency evaluations. Coaching may render a malingerer's distortion difficult to detect by a clinician during a competency evaluation, thus jeopardizing the validity of the clinician's conclusions and recommendations. Given the significant influence that mental health professionals have on judicial decisions about competency, invalid clinical conclusions due to undetected malingering during an evaluation have serious implications on the outcome of competency hearings and subsequent legal proceedings.

Despite efforts to safeguard psychological test materials from the general public, motivated malingerers can obtain a significant amount of information about tests and procedures prior to evaluations, particularly from the Internet and their attorneys. This information includes sample test items, symptom details, diagnostic criteria for specific disorders, and test-taking strategies (Nichols & Greene, 1997; Rogers, 1997; Rogers et al., 1993; Ruiz et al., 2002). Given the lack of monitoring and control over the information found on the Internet, the readily available details about psychological testing renders it vulnerable for misuse by motivated malingerers (Ruiz et al., 2002). One study evaluated the degree of threat various Web sites pose to psychological test security by instructing three psychology graduate students and two non-psychologists to perform Internet searches for information that may help them malinger depression for a psychological evaluation (Ruiz et al., 2002). Alarmingly, 20 to 25 percent of the Web sites accessed posed an indirect threat (e.g., contained information about goals of evaluations, signs of symptom malingering, and names of instruments used in evaluations), and approximately 2 to 5 percent of the Web sites accessed posed a direct threat to test security (e.g., contained detailed information about psychological tests and explicit instructions about how to malinger on certain tests). The dissemination of this type of information to individuals motivated to malinger - - both directly and indirectly -- undermines the validity of psychological testing (Ruiz et al., 2002). Moreover, this study demonstrates that the speed and ease by which these threats can be accessed on the Internet limits the likelihood that malingerers will be naïve to the nature and purpose of psychological testing in the context of competency evaluations.

In addition to the information available on the Internet, attorney coaching also contributes to the problem of malingering in competency evaluations. While the American Psychological Association's (APA) ethical guidelines state that psychologists must make efforts to maintain

test security (APA, 2002), no such explicit guidelines exist for attorneys. The distinction between valid advice and unethical coaching remains unclear in the legal community (Gutheil, 2003). In fact, scholars posit that some attorneys believe failure to coach their clients prior to a psychological evaluation represents legal malpractice (Youngjohn, 1995). One survey revealed that 42% of practicing attorneys reason that they should provide clients with "as much specific information as possible about psychological testing" (Wetter & Corrigan, 1995, p. 475). Furthermore, nearly 50% of the practicing attorneys in this study believe it is their responsibility to inform their clients about validity scales on psychological tests. Victor and Abeles (2004) noted another survey mailed to members of the National Academy of Neuropsychology and the Association of Trial Lawyers that revealed that 75% of attorneys acknowledged spending an average of 25-60 minutes providing preparatory information to their clients prior to an evaluation. The existence of manuals designed to assist attorneys in preparing their clients for evaluations in cases of mild brain injury also underscores the prevalence of coaching by attorneys (Taylor, Harp, & Elliott, 1992).

Regardless of whether this information constitutes valid advice or unethical coaching, one issue remains certain: research demonstrates that warning potential malingerers about the presence of validity scales produces more sophisticated malingerers that are more likely to elude detection by clinicians on psychological tests like the MMPI-2 (Youngjohn, Lees-Haley, & Binder, 1999). That is, malingerers aware of techniques used to detect faking and symptom exaggeration tend to feign deficits in a more believable manner, allowing them to appear more like patients with actual disorders (e.g., Lamb et al., 1994; Rogers et al., 1993; Youngsjohn et al., 1999). Consequently, the prevalence of coaching, coupled with the lack of routine assessment of

malingering by mental health professionals, results in the increased risk of malingerers escaping detection in competency evaluations.

Malingering and Competency Measures

The evaluation of competency lacks a clear standard of practice, and no standardized protocol for its assessment exists. Examiners often rely upon traditional psychological instruments, including intelligence, personality, and neuropsychological tests in competency evaluations (Borum & Grisso, 1995; Skeem & Golding, 1998). Although some have argued that traditional psychological testing may be useful in ruling out malingering in suspected cases (e.g., Lewis, Simcox, & Berry, 20002; Skeem & Golding, 1998), it remains unclear whether or not clinicians select these measures for the purpose of detecting malingering. In fact, one study found that only 21% of reports relying upon traditional personality and cognitive instruments described using these instruments to rule out malingering (Skeem et al., 1998).

Despite their prevalence in the evaluation process, clinical constructs (e.g., intelligence, personality, and psychopathology) differ from the competency construct (e.g., factual and rational understanding of the legal proceedings and ability to consult with counsel); therefore, forensic researchers recognize the limitations of using traditional psychological instruments in competency evaluations and caution against making inferences about a defendant's competency based on one's performance on a test not designed to measure competency domains (Skeem & Golding, 1998). Consequently, clinicians are encouraged to utilize specific competency measures that evaluate a defendant's psycho-legal abilities. Research about the ability of these specific competency measures to detect malingering, although increasingly called upon, remains somewhat limited.

Overview of Competency Measures

Prior to *Dusky v. United States* (1960), no formal psycho-legal assessment instruments were available for use in competency evaluations. Since then, however, a number of instruments have emerged and tend to focus on either legal abilities or both legal abilities and mental state/psychological abilities of the defendant (Zapf & Viljoen, 2003). Initial assessment instruments focused on providing a checklist of content areas to assess without clear scoring procedures or standardized administration guidelines. Moreover, these instruments neglected to provide any screen for malingered incompetency. In recent years, the psycho-legal instruments have evolved to include standardized administration and scoring procedures and range from checklists and self-report questionnaires to interview-based measures (Zapf & Viljoen, 2003). In addition, a limited number of these instruments include malingering screens.

As specific competency measures have evolved and improved, the field has yet to reach consensus with regard to the propriety of these measures for use in competency evaluations. A recent survey of forensic diplomates from the American Board of Forensic Psychology asked psychologists to rate the acceptability of specific measures for use in a number of forensic evaluations, including competency to stand trial evaluations (Lally, 2003). The competency measures deemed most acceptable by the diplomates included the MacArthur Competence Assessment Tool – Criminal Adjudication (Mac-CAT-CA; Poythress et al., 1999) and the Georgia Court Competence Test (GCCT; Nicholson, Briggs, & Robertson, 1988; Wildman et al., 1978). In addition, the more recently developed Evaluation of Competency to Stand Trial – Revised has garnered popularity due to its congruence with the three competence domains delineated by the *Dusky* standard -- factual understanding of the legal proceedings, rational

understanding of the legal proceeding, and one's ability to consult with counsel (ECST-R; Rogers, Tillbrook, & Sewell, 2004).

Overall, standardized psycho-legal instruments may be useful to varying degrees, but no instrument appears to address all three components of the competency standard delineated in *Dusky* (factual understanding of the proceedings, rational understanding of the proceedings, and ability to consult with counsel). Numerous studies have examined the underlying competency dimensions tapped by these various psycho-legal instruments, and each measure contains assets and limitations. For example, research on the MacArthur Competence Assessment Tool – Criminal Adjudication (Mac-CAT-CA) supports the usefulness of the individualized "Appreciation" subscale in assessing a defendant's rational understanding of the proceedings, but the hypothetical nature of its other two subscales ("Understanding" and "Reasoning") limits its utility in generalizing to defendants' factual understanding of their own cases and abilities to consult with counsel (Rogers et al., 2001). The Georgia Court Competence Test (GCCT) reveals an unstable factor structure in several investigations (e.g., Grisso, 1986; Nicholson et al., 1988; Rogers, Ustad, Sewell, & Reinhart, 1996; Ustad, Rogers, Sewell, & Guarnaccia, 1996), and only appears to reliably relate to the factual understanding competency dimension (Rogers et al., 2001). Development of the interview-based Evaluation of Competency to Stand Trial – Revised (ECST-R) sought to provide a method to assess a defendant's rational understanding and ability to consult with one's attorney. Although the ECST-R reliably assesses a defendant's factual and rational abilities, the ability to consult with counsel was not supported as a separate dimension using factor analysis (Rogers et al., 2001).

Previous Methods of Malingering Detection with Competency Measures

Researchers have long discussed the use of detection strategies to identify malingerers on intelligence and personality tests (e.g., Schretlen, 1988). For example, research suggests that the F and F(b) scales on the MMPI-2 may be useful to screen for feigned psychiatric symptoms (e.g., Lewis, Simcox, & Berry, 2002). Detection strategies for identifying malingerers on competency measures, however, remain in its early stages, and the face validity of most competency measures suggests that "defendants are able to discern easily the purpose or intent of specific questions and modify their responses accordingly" (Gothard, Rogers, & Sewell, 1995, p. 365).

One of the few studies investigating the ability of competency measures to detect feigned incompetency demonstrates that these measures are vulnerable to feigning. Rogers et al. (2002) examined whether patients feigning mental disorders would appear markedly impaired on the MacArthur Competence Assessment Tool – Criminal Adjudication (MacCAT-CA), the Georgia Court Competency Test (GCCT), and the Evaluation of Competency to Stand Trial – Revised (ECST-R). Using a known-groups research design in a jail setting, 65 mentally disordered offenders and 22 suspected malingerers (independently classified as malingerers based upon scores on the Structured Interview of Reported Symptoms) were administered the competency measures. Suspected malingerers demonstrated an ability to produce scores indicative of incompetency, leading the researchers to conclude that these measures are vulnerable to feigning. In fact, depending upon the cut score used, 26% to 40% of feigners would be viewed as having questionable competence to stand trial (Rogers et al., 2002). These results augment earlier research on the vulnerability of the Georgia Court Competence Test (GCCT) to feigning, in which inmates who were instructed to feign incompetency appeared grossly impaired on the GCCT compared to an inmate control group, a group of competent pre-trial defendants, and a

small sample of probable malingerers (independently classified as malingerers based upon the clinical judgment of an experienced forensic clinician or scores on a screening measure for feigned psychosis called the M Test; Gothard et al., 1995). Although malingering and incompetency are not mutually exclusive (e.g., one could potentially feign psychiatric symptoms *and* have questionable competence to stand trial), these results caution clinicians from simply drawing conclusions about an individual's competence based on overall scores on competency measures without using additional strategies to evaluate malingering.

Researchers have also employed other detection strategies to identify malingering on competency measures. Examining floor effects (making errors on easy items that even genuine patients answer correctly) and performance curves (failing to account for item difficulty) does not appear to help reliably distinguish probable malingerers from clinical comparison groups (Gothard et al., 1995; Rogers et al., 2002). In fact, the lack of clinically meaningful differences between probable malingerers and clinical comparisons held up across the MacArthur Competence Assessment Tool – Criminal Adjudication, the Georgia Court Competency Test, and the Evaluation of Competency to Stand Trial – Revised when floor effects and performance curves were examined (Rogers et al., 2002).

In contrast to the examination of overall scores, floor effects, and performance curves on competency measures, the Georgia Court Competence Test (GCCT) and the Evaluation of Competency to Stand Trial – Revised (ECST-R) contain specialized malingering scales that show promise in accurately screening for feigned incompetency. The GCCT Atypical Presentation Scale (AP) serves as the first attempt to combat the shortcomings of existing competency measures by screening for feigned incompetency. Although not included in the original measure, Gothard et al. (1995) developed a malingering scale addendum that sought to

address the "untenable assumption . . . that defendants faced with criminal trials will respond to the GCCT and similar measures in an honest and forthright manner" (p. 365). Comprised of eight items scored on a scale from 0 to 2 (0 = "no" or "does not apply"; 1 = "qualified yes" or "sometimes"; 2 = "definite yes"), this study used a simulation design augmented by a small sample of known malingerers and determined that a malingering cut score of 6 or higher on the AP scale accurately classified 90% of their clinical sample (Gothard et al., 1995). Inmates instructed to feign incompetency, as well as probable malingerers, scored significantly higher on this scale (*M's* = 9.80 and 10.86, respectively) than the inmate control group (*M* = 2.00) and pre-trial defendants who had been evaluated as incompetent (*M* = 2.74) or competent (*M* = 1.96). Still, subsequent research has questioned the effectiveness of the GCCT AP scale, as a cut score of 6 or higher only correctly identified 31.8% of the probable fake group in a sample of mentally disordered offenders (Rogers et al., 2002).

In response, researchers continue to investigate the effectiveness of psycho-legal instruments for detecting feigned incompetency, and the Atypical Presentation (ATP) scale of the ECST-R has shown even more promise for detecting malingering in competency evaluations (Rogers et al., 2002; Rogers et al., 2004). To evaluate the effectiveness of the ATP scale in detecting malingering, Rogers et al. (2004) used a simulation design comprised of 43 jail inmate simulators, 87 jail inmate controls, and a clinical comparison sample from an inpatient competency restoration program that included 42 incompetent defendants and 8 suspected malingerers (classified as malingerers based upon their scores on the Structured Interview of Reported Symptoms). Comparisons of ATP scales revealed very large effect sizes for feigners when compared to inmate controls (*d* = 2.5) and genuine inpatient competency cases (*d* = 1.83). Large effect sizes were observed between feigners (both simulators and suspected malingerers)

and genuine inpatient competency cases for the Psychotic, Nonpsychotic, Both Psychotic and Nonpsychotic, and Impairment subscales of the ATP scale (*d*'s ranging from 1.37 to 2.07). These results were comparable to the effect sizes between feigners and inmate controls (*d*'s ranging from 1.87 to 3.14). Only the "filler" subscale that consisted of realistic concerns received similarly high levels of endorsement across all conditions (*d*'s ranging from .11 to .68), leading the researchers to conclude that the subscale appears to function as intended.

Rogers et al. (2004) also developed cut scores on the ATP scale that maximized sensitivity (percentage of the malingering group that were accurately classified) and negative predictive power (percentage of individuals that the model classifies as honest responders that are actually honest responders) in an effort to minimize the proportion of unidentified malingerers; however, this strategy resulted in concerns with positive predictive power (the percentage of individuals that the model classifies as malingerers that are actually malingerers) and specificity (the percentage of honest responders group that were accurately classified). For example, using a cut score of >1 on the ATP-Psychotic subscale, sensitivity (.90) and negative predictive power (.95) were high, but positive predictive power (.56) and specificity (.72) were only moderate. To increase positive predictive power, the authors recommended summing the ATP Psychotic, Nonpsychotic, and Impairment subscales. A cut score of >5 increased positive predictive power (.70) and specificity (.86), while sensitivity (.86) and negative predictive power (.94) remained high. While the authors caution clinicians from using the ATP scales as a "determination of feigning," they argue that the cut scores "can be used in certain cases with marked elevations to corroborate attempts at feigned incompetency to stand trial" (Rogers et al., 2004, p. 144). In conclusion, this critical research has emphasized the importance of screening

for malingering in competency evaluations; however, studies have yet to examine the effects of coaching on these specific competency measures.

Effects of Coached Malingering on Psychological Testing

Coaching and the MMPI-2

Within the past 15 years, research has begun to investigate the effects of coaching on psychological testing. The Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKindley, 1983) and the MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) are counted among the first psychological inventories to attempt to detect individuals' responses biases by including validity scales (Baer & Miller, 2002). MMPI validity scales used to assess malingering include "fake-bad" indices such as the Infrequency (F) scale, the Obvious Minus Subtle (O – S) scale, and the Infrequency Minus Correction (F – K) index. Moreover, meta-analyses reveal that these scales serve as strong detectors of malingering (Berry, Baer, & Harris, 1991; Rogers, Sewell, & Salekin, 1994; Storm & Graham, 2000). The inclusion of validity scales likely elevated the MMPI's popularity among forensic clinicians, as evidenced by a 1995 survey of forensic psychologists and psychiatrists that cited the MMPI as the most frequently used measure in competency evaluations, surpassing even specific competency measures in its utilization (Borum & Grisso, 1995).

Research examining the effects of coaching on MMPI validity and clinical scales has emerged within the last 15 years. The existing literature primarily focuses on the impact of symptom-coaching and test-strategy coaching. Symptom coaching generally involves providing individuals with specific information about a psychiatric disorder and instructing them to feign believable symptom-related deficits. Test-strategy coaching, on the other hand, typically includes

providing participants with information about the existence, nature, and purpose of the test's validity scales (Victor & Abeles, 2004).

Overall, coaching an individual on symptoms alone does not appear effective in helping malingerers avoid detection on the MMPI (e.g., Lamb et al., 1994; Rogers et al., 1993; Wetter & Deitsch, 1996). That is, possessing knowledge of a specific disorder that one seeks to feign may successfully allow a malingerer to elevate the clinical scales of the MMPI-2; however, these symptom-coached malingerers tend to be detected upon examination of the validity scales.

In contrast to symptom-coaching, research consistently demonstrates that coaching about test-taking strategies on the MMPI-2 results in a more sophisticated malingerer who is better able to elude detection (Bury & Bagby, 2002; Lamb et al., 1994; Rogers et al., 2003; Storm & Graham, 2000). Rogers et al. (1993) initiated the first study investigating coached malingerers taking the MMPI-2. Utilizing a between-subjects simulation design of 72 community participants, a clinical comparison group of 37 schizophrenic inpatient participants, and 13 non-patient control participants, the researchers examined group differences on MMPI-2 validity indices. The researchers assigned community participants to feign schizophrenia under one of four conditions: no coaching, coaching on schizophrenic symptoms, coaching on test-taking strategies, and coaching on both symptoms and strategies. The community sample received written background information about symptoms (e.g., DSM criteria with definitions of technical jargon like delusions, hallucinations, catatonic behavior, etc.) and test-taking strategies (e.g., informing participants that the test contains "built-in strategies" that provide clues to the psychologist that one is faking, avoid endorsement of too many obvious symptoms, be mindful of all of the symptoms of mental illness rather than just the stereotypical ones, limit the number of severe problems endorsed, and avoid endorsing extremely bizarre items) as it pertained to

their assigned experimental condition. A $50 cash lottery incentive was included to enhance compliance with the study's instructions.

Upon examining the MMPI-2 validity indices, Rogers et al. (1993) found that simulators coached on test-taking strategies alone scored significantly lower on the *F* scale, the *F – K* scale, and the Lachar and Wrobel critical items score compared to uncoached malingerers and symptom-coached malingerers. Whereas symptom-coached malingerers evidenced high clinical scale elevations and high validity scale elevations, test-strategy coached malingerers were able to achieve clinically significant elevations on Scales 6 (Paranoia) and 8 (Schizophrenia) while obtaining validity scale scores comparable to a group of schizophrenic inpatients. In fact, Rogers et al. (1993) posit that the "lower scores on the validity indices resulted in simulators in the strategies-only condition to be relatively indistinguishable from schizophrenic inpatients" (p. 219). In addition, the researchers argue that traditional cut scores (e.g., elevations on the *F* scale) appeared ineffective for distinguishing test-strategy coached malingerers from honest responders, noting that test-strategy coaching alone allowed approximately one third of these malingerers to elude detection.

Overall, subsequent "coached malingering" studies with the MMPI-2 offer similar results. One study utilizing a simulation design with undergraduates (179 simulators and 91 controls) investigated the effects of providing symptom coaching and test-strategy coaching on scores on MMPI-2 clinical and validity scales (Lamb et al., 1994). Whereas symptom-coaching involved a two-page handout on common symptoms of closed head injuries from professional and layperson publications, test-strategy coaching consisted of a two-page summary that provided "information on the *L, K, F, Fb, and VRIN* scales, gave examples of questions similar to those on each scale, and recommended strategies to avoid elevating these scales in answering

test questions." Consistent with Rogers et al. (1993), this study found that symptom-coached malingerers obtained elevated clinical and validity scales; whereas test-strategy coaching "served to deflate scores on both validity and clinical scales," leading the researchers to conclude that "individuals who have been given extensive and explicit information on MMPI-2 validity scales will be more successful at malingering [closed head injury] symptoms on the test" (Lamb et al., 1994, p. 12).

In a more recent study examining the effects of test-strategy coached malingering on MMPI-2 validity scale scores, Storm and Graham (2000) adapted their coaching instructions from the original Rogers et al. (1993) study. Utilizing a large sample of undergraduate simulators instructed to feign general maladjustment (final sample included 191 uncoached malingerers and 249 coached malingerers), along with a clinical comparison group (352 psychiatric inpatients), the researchers found that the test-strategy coached malingerers appeared more like psychiatric inpatients than the uncoached malingerers on all five validity scales used to detect malingering on the MMPI-2 (F, Fp, DsR_2, F – K, and Lachar Wrobel Critical Item List). Moreover, positive predictive power for the test-strategy coached malingerers ranged from .54 to .86 depending upon the validity scale cut score used, in contrast to .83 to .96 for uncoached malingerers using the same cut scores. Similarly, Bury and Bagby (2002) also found that test-strategy coaching helped a sample of undergraduate simulators instructed to malinger PTSD avoid detection on the MMPI-2. Although one significant exception to these findings exists (Bagby, Nicholson, Bacchiochi, Ryder, & Bury, 2002), inadequate power, differences in incentives, and the instructional sets may help explain why differences between coached and uncoached malingerers were not detected on validity indicators. Overall, studies investigating the effects of coaching on the MMPI-2 highlight the difficulty of detecting test-coached malingerers attempting to produce

"fake bad" profiles. In addition, research shows that test-strategy coaching also helps malingerers avoid detection of under-reporting ("fake good") on the MMPI-2 (Baer & Miller, 2002; Baer & Sekirnjak, 1997).

Coaching and Neuropsychological Tests

In addition to the negative effects of test-strategy coaching on the ability to detect malingering on the MMPI-2, research demonstrates that even minimal coaching on test-taking strategies reduces the effectiveness of malingering measures in the context of neuropsychological evaluations. Specifically, the prevalence of litigation involving head injured patients highlights the need to evaluate for symptom exaggeration and malingering in neuropsychological assessment. In recent years, research demonstrates that coaching on test-taking strategies has been associated with simulators' more realistic performances that render them more likely to elude detection on several neuropsychological tests, including the Test of Memory Malingering (TOMM), the Auditory Verbal Learning Test (AVLT), and the Category Test (CT) when compared to uncoached malingerers (DiCarlo, Gfeller, & Oliveri, 2000; Powell, Gfeller, Hendricks, & Sharland, 2004; Suhr & Gunstad, 2000). Consistent with coached malingering research on the MMPI-2, test-strategy coaching appears to surpass symptom coaching and the combination of symptom-and test-coaching in helping malingerers elude detection on neuropsychological tests. In fact, some researchers posit that "test coaching provides more practical and tangible strategies relative to symptom-and test-coaching for simulators to adopt during evaluations to help avoid detection" (Powell et al., 2004, p. 695).

Implications of Coached Malingering Research

While some instruments (e.g., the Structured Interview of Reported Symptoms) appear to be less susceptible to the effects of test-strategy coaching than others, most psychological tests

"are susceptible, at least to some degree, to the effects of well-informed coaching" (Ruiz et al., 2002, p. 295). In addition, the effects of test-strategy coaching are simply unknown with many psychological tests. Although little empirical data regarding the base rates of coached malingering exists, survey data pointing to the prevalence of attorney coaching coupled with the proliferation of information about psychological tests and strategies on the Internet suggests that defendants who seek out information about psychological testing are likely to receive it. Adding to this dilemma, the sophistication that coached malingerers can achieve when provided with information about test-taking strategies limits the clinicians' ability to detect malingering even when they are ostensibly assessing for it.

Goals and Rationale for the Present Study

Given that research has demonstrated that coaching on test-strategies helps malingerers avoid detection on a variety of measures, including a commonly used measure in competency to stand trial evaluations (e.g., the MMPI-2), it stands to reason that an investigation of the effects of this type of coaching on specific competency measures is warranted. This study focuses on the detection of coached malingering on two competency measures: the Georgia Court Competency Test (GCCT) and the Evaluation of Competency to Stand Trial – Revised (ECST-R). The GCCT and ECST-R were selected because of their accepted use in competency evaluations (e.g., Lally, 2003) and because they serve as the only two competency measures that contain scales for the screening of feigned incompetency.

Experts have considered the ethical dilemma associated with coached malingering research, noting the tension between the ethical responsibility for psychologists to maintain test integrity and the necessity of research that investigates the extent to which psychological testing is vulnerable to the coaching that unquestionably occurs (Ben-Porath, 1994; Berry, Lamb,

Wetter, Baer, & Widiger, 1994). Most experts agree that the importance of coached malingering research and the findings that have emerged within the past 15 years underscore the need to continue this line of research, albeit in a responsible manner. In light of the present study's focus on coached malingering, a review of the instructions utilized in previous coached malingering research was conducted, paying particular attention to the coaching instructions provided in studies using the MMPI-2 (Bury & Bagby, 2002; Lamb et al., 1994; Rogers et al., 2003; Storm & Graham, 2000). Numerous studies have been published in academic journals with similar instructions, including detailed instructions published by Rogers et al. (1993) and subsequent studies that adapted their instructions from Rogers et al. (1993) without publishing their instructions verbatim to protect test integrity (Bury & Bagby, 2002; Lamb et al., 1994; Storm & Graham, 2000). In addition, the coaching instructions selected for this study could also be found when culling results from an Internet search on faking psychological testing. Ostensibly, a defendant with Internet access and motivation to malinger incompetency would be privy to this information in the public domain. Finally, no specific information about the competency measures is included in the coaching instructions.

To increase ecological validity, it was decided that test-strategy coaching similar to that provided in MMPI coached malingering research would be used in this study. Because no standardized protocol for assessment of competency evaluations exists, defendants lack knowledge of which tests they will be given prior to their evaluation. One could argue that defendants motivated to malinger would more likely be privy to general information about how to successfully malinger maladjustment during a psychological evaluation than to information specifically related to faking on specific competency measures. Consequently, general psychological test-strategy coaching (e.g., the presence of validity scales, endorsing bizarre

items, and answering too many easy items wrong helps detect faking) is thought to better represent real-world information that defendants would use when malingering.

Although researchers have employed several research designs in malingering studies (e.g., case study, known groups comparisons), the simulation or analogue design serves as the most common (Rogers, 1997). The simulation design consists of random assignment of participants (often non-clinical) into control and experimental conditions; participants in the control condition are instructed to respond to measures honestly, and participants in the experimental conditions are instructed to malinger. As in much of the simulation literature, this study will utilize undergraduate research participants given the difficulty of studying the effects of coached malingering on competency measures in the real world (as well as the potential ethical concerns of providing actual defendants with tips on how to successfully elude detection when malingering). In this study, the simulation research design allows for random assignment into one of three conditions: Control (participants are instructed to respond honestly), Uncoached Malingerer (participants are instructed to feign incompetency but do not receive any tips to elude detection), and Coached Malingerer (participants are instructed to feign incompetency and receive tips to elude detection).

While the simulation research design allows for experimental rigor, concerns about generalizability to real-world settings prompted the inclusion of a number of methodological considerations recommended by Rogers (1997) to increase this study's clinical relevance. Rogers (1997) contends that participants need to be able to identify with the scenarios provided in simulation research. Consequently, a scenario was selected to approximate a real-world criminal charge (vehicular homicide) that would be more likely to occur to a college student than a less realistic scenario (e.g., first degree murder). Rogers (1997) also emphasizes the importance of

the manipulation check in malingering research, including an assessment of the participants' recall, comprehension, and compliance with the study's instructions. In this study, recall and comprehensibility of the scenario and instructions will be assessed with a Recall Assessment during the first phase of the study; and participants must answer the questions correctly before proceeding to the second phase during which they will be administered the competency measures. Data will also be collected on the participants' compliance with the instructions of their experimental condition at the conclusion of the study, and recall and comprehensibility will be assessed again to obtain data about how well each participant remembered and understood their "role" in the study. Finally, consistent with prior malingering research using a simulation design, an opportunity to win a cash prize will be offered as an incentive to all participants who successfully comply with the instructions of each their respective experimental conditions.

Despite the proliferation of research demonstrating that coaching on test-taking strategies negatively impacts the ability to detect malingering on numerous psychological tests, no known studies exist that investigate the effects of coached malingering on measures of competency to stand trial. The high stakes involved in evaluations of competency to stand trial provide an external incentive for defendants to feign incompetency. When considered along with the estimated prevalence of attorney coaching and the abundance of information about psychological testing on the Internet, clinicians can no longer assume that defendants are naïve to the nature and purpose of the psychological testing they encounter during competency evaluations (Rogers, 1997). Experts agree that mental health professionals need to provide accurate and credible information to the courts (e.g., Melton et al., 1997), and failing to diagnose or rule out malingering in a competency evaluation can have significant repercussions to the judicial decision-making process. To that end, this study seeks to address the gap in the coached

malingering literature through an examination of the effects of test-strategy coaching on specific measures of competency to stand trial.

Hypotheses

Hypothesis I

A. It is hypothesized that participants in the Uncoached and Coached groups will appear markedly impaired on competency measures in comparison to participants in the Control group, as evidenced by lower scores on the GCCT (total score) and ECST-R (Factual Understanding scale score).
B. It is further hypothesized that among those participants instructed to feign incompetency, the Uncoached group will appear more impaired than the Coached group as evidenced by lower scores on the GCCT (total score) and the ECST-R (Factual Understanding scale score).

Hypothesis II

A. It is hypothesized that participants in the Uncoached and Coached groups will evidence greater malingering in comparison to participants in the Control group, as demonstrated by higher scores on the GCCT Atypical Presentation (AP) Scale and the ECST-R Atypical Presentation (ATP) Scale.
B. It is further hypothesized that participants in the Uncoached group will have a greater elevation on the GCCT AP scale and the ECST-R ATP scale (indicating greater malingering) compared to participants in the Coached group.

Hypothesis III

A. It is expected that the ECST-R ATP Scale is better at detecting malingering than the GCCT AP Scale.

B. It is further hypothesized that there will be a significant interaction between group and type of malingering screen such that scores on the ECST-R ATP scale will reflect greater malingering for Coached (but not Uncoached or Control participants) participants than scores on the GCCT AP scale.

Method

Participants

Participants were recruited from the University of Missouri – St. Louis Psychology Department subject pool and consisted of 101 students enrolled in undergraduate psychology courses. Extra credit and an opportunity to win one of three $50 gift cards were offered as incentives for participation. Only participants achieving greater than 75% accuracy on the Debriefing Questionnaire Recall Assessment were retained for this study to ensure that all retained participants understood and remembered their "roles" throughout the study. Of the initial 101 participants, 92 were retained based on this exclusion criterion.

The initial sample consisted of 73 females and 28 males with an average age of 23.41 and 13.98 years of education. The retained sample consisted of 65 females and 27 males with an average age of 23.50 and 13.92 years of education. In terms of ethnicity, the initial sample consisted of 10 Asian or Pacific Islanders (9.9%), 29 African Americans (28.7%), 58 White/Caucasians (57.4%), and 4 participants identified as Bi/Multi-racial (4.0%). The retained sample consisted of 8 Asian or Pacific Islanders (8.7%), 24 African Americans (26.1%), 56 White/Caucasians (60.9%), and 4 participants identified as Bi/Multi-racial (4.3%). According to responses on the Demographic Questionnaire, 12 participants in the initial sample reported previous involvement with the criminal justice system (11.9%). In the retained sample, 11 participants reported previous involvement with the criminal justice system (12.0%).

Using random assignment, the initial sample included 34 participants in the Control group, 34 participants in the Uncoached Malingerer group, and 33 participants in the Coached Malingerer group. Of the retained sample, 30 were assigned to the Control group, 33 were assigned to the Uncoached Malingerer group, and 29 were assigned to the Coached Malingerer group.

Measures

Demographic questionnaire. Participants completed a brief demographic questionnaire that requested descriptive information concerning age, ethnicity, gender, level of education, and any previous experience with the criminal justice system.

Criminal case scenarios and malingering instructional sets. Participants were provided with written case scenarios and instructional sets based upon their group assignment. These instructions were adapted from prior malingering studies (e.g., Rogers et al., 1993; Storm & Graham, 2000; Rogers et al., 2004). Participants in the Control condition were presented with the following written scenario:

> Imagine that you were the driver in a motor vehicle accident in which a passenger in another car was killed. The authorities believe you are at fault and have charged you with vehicular manslaughter, a Class C felony in the state of Missouri. Your attorney's name is **Attorney Jackson.** Potential penalties should you be found guilty include a maximum sentence of **up to 7 years in prison**.
>
> The case is going to trial, and you will be taking a series of tests to assess your competency to stand trial. **Your goal is to respond honestly and give your best effort on all of the tests.** In appreciation of your efforts, you will be entered into a lottery to win $50.

In the Uncoached Malingerer condition, participants were presented with the following written scenario:

> Imagine that you were the driver in a motor vehicle accident in which a passenger in another car was killed. The authorities believe you are at fault and have charged you with vehicular manslaughter, a Class C felony in the state of Missouri. Your attorney's

> name is **Attorney Jackson.** Potential penalties should you be found guilty include a maximum sentence of **up to 7 years in prison**.
>
> The case is going to trial, and you will be taking a series of tests to assess your competency to stand trial. In this scenario, you have decided that you want to avoid criminal prosecution by believably convincing the interviewer that you are not competent to stand trial. That is, **your goal on these tests is to appear incompetent without the interviewer knowing that you are faking.** Fifty dollars will be awarded to the person who does the best job at faking incompetency to avoid going to trial.

In the Coached Malingerer condition, participants were presented with the following scenario:

> Imagine that you were the driver in a motor vehicle accident in which a passenger in another car was killed. The authorities believe you are at fault and have charged you with vehicular manslaughter, a Class C felony in the state of Missouri. Your attorney's name is **Attorney Jackson.** Potential penalties should you be found guilty include a maximum sentence of **up to 7 years in prison**.
>
> The case is going to trial, and you will be taking a series of tests to assess your competency to stand trial. **Your goal is to respond in the way that you think one would answer if he or she wanted to give the impression of being a person who has very serious psychological or emotional problems that prevents them from going to trial.** You have some choices. The mental illness could cause you major problems working with your attorney. The mental illness could make you unable to think through or understand what is going on in court. To be successful, you have to convince the interviewer that you are too mentally ill to go to trial. Remember, a mental disorder is not enough. It has to greatly affect your ability to go to court and work with your attorney.
>
> Here are some tips to avoid detection:
> 1. Try not to get too many easy items wrong.
> 2. Many tests have lie scales that help determine whether a person is faking, so be careful.
> 3. When asked about symptoms, keep the following things in mind:
>   a. Keep in mind all aspects of a mental illness and not just the stereotypical ones.
>   b. Limit the number of severe problems reported.
>   c. Avoid endorsing items that are extremely bizarre.
>
> Fifty dollars will be awarded to the person who does the best job faking a mental illness that prevents him/her from going to trial.

Recall assessment. A Recall Assessment was administered after participants read the scenarios and prior to the completion of the competency measures. The Recall Assessment was administered by a research assistant to all participants and consisted of four items based upon

information included in the scenarios (e.g., "What criminal charge are you facing in this scenario?"; "What is your attorney's name?"; "What is the maximum sentence you could face if you are found guilty?"; and "What is your goal when you take the competency tests?"). If a participant provided an incorrect answer to any of these items, a research assistant provided the correct answer and instructed the participant to re-read the scenario. This process was repeated until the participant correctly answered all four items. In addition, participants in the Coached condition were required to list each of the coaching tips before they were allowed to progress to the next phase of the study. If the participant was unable to recall all of the coaching tips, a research assistant provided the correct answers and instructed the participant to re-read the coaching instructions. This process was repeated until the participant correctly listed each of the coaching tips.

Georgia Court Competence Test – Mississippi State Hospital. The Georgia Court Competence Test – Mississippi State Hospital (GCCT; Wildman et al., 1978; Nicholson et al., 1988) is a competency screening instrument administered in a structured interview format. The GCCT is a revision of the original Georgia Court Competence Test developed in 1978 and differs in only two ways: the addition of four questions aimed at providing additional information about a defendant's knowledge of court procedures and ability to assist counsel and some minor changes in scoring and scoring criteria to improve the test's clarity. The GCCT focuses on familiarity with the courtroom layout, the role of courtroom participants, and knowledge of pending legal charges and potential outcomes and consists of 20 items, an optional item that asks the defendant to recount the events that led to the arrest, and an 8-item Atypical Presentation (AP) scale designed to screen for malingering (Gothard et al., 1995; Nicholson et al., 1988; Wildman et al., 1978). Clearly defined scoring criteria is provided for the competency

items, and scores of <70 on all 21 items signify likely incompetence. The GCCT competency items have demonstrated good inter-rater reliability (*r*'s ranging from .82 to .95), but only modest correspondence to *Dusky* based upon studies of its underlying factor structure (Johnson & Mullett, 1988; Nicholson & Kugler, 1991; Rogers et al., 2001). Moderate convergent validity has been observed across studies (mean $r = .42$) with independent expert opinions (Melton et al., 1997). In this study, the optional question asking defendants to describe the events that led to the arrest was not given because it relies on case-specific information that would have been difficult for participants to answer. The measure demonstrated good internal consistency (Chronbach's alpha of .90).

The 8-item AP scale (Gothard et al., 1995) was designed to screen for feigned incompetency and is scored on a range from 0 to 2 (0 = "no" or "does not apply"; 1 = "qualified yes" or "sometimes"; 2 = "definite yes"). The scale's authors recommend a cutoff score of 6 or higher to accurately classify feigning (Gothard et al., 1995), but only limited research has examined the effectiveness of optimal cutoff scores (e.g. Rogers et al., 2002). The AP scale demonstrated adequate internal consistency in this study (Chronbach's alpha of .77) and has been shown to effectively discriminate probable malingerers from incompetent and competent pre-trial defendants and mentally disordered but competent inmates (Gothard et al., 1995; Rogers et al., 2002).

Evaluation of Competency to Stand Trial – Revised. The ECST-R (Rogers et al., 2004) is a semi-structured interview designed to assess dimensions of competency to stand trial as identified in *Dusky v. United States* (1960) with individuals 18 and above. The ECST-R consists of three competency scales consisting of 6 items each (factual understanding, rational understanding, and ability to consult with counsel), as well as the 28-item Atypical Presentation

(ATP) Scale. For the present study, only the Factual Understanding Scale and ATP Scale were administered. The Factual Understanding Scale is related to the factual understanding domain of the *Dusky* standard, and the ATP scale serves as a screen for feigned incompetency. The Consult with Counsel Scale and Rational Appreciation Scale were not administered because the items that comprise these scales rely on case-specific information that would be difficult for participants to answer (e.g., questions about specific aspects of defendants' interactions with counsel). The ECST-R has evidenced good concurrent validity, and factor analysis has found support for two factors related to the *Dusky* standard for competence (factual and rational understanding; Rogers et al., 2001).

Items on the Factual Understanding Scale are scored from 0 (correct) to 4 (grossly psychotic and totally unrelated to the question even with follow-up questions). The items for this scale are summed and converted to a T-score, and four levels of impairment are delineated based upon the T-score: Moderate (T-score of 60 to 69), Severe (T-score of 70 to 79), Extreme (T-score of 80 to 89), and Very Extreme (T-score of 90 or higher). The Factual Understanding Scale has demonstrated good internal consistency (alpha coefficient of .87) and excellent inter-rater reliability, with a mean correlation of .96 across three studies (Rogers et al., 2004). The Factual Understanding Scale has evidenced good convergent validity with the Factual Proceedings Scale of the MacCAT-CA (*r* of .45). In the present study, the Factual Understanding Scale demonstrated good internal consistency (Chronbach's alpha = .85).

The ATP scale consists of four subscales (Realistic, Psychotic, Nonpsychotic, and Impairment). Scores on the ATP scale range from 0 (no) to 2 (yes). Affirmative responses on all ATP items are followed by an impairment rating (1 = yes; 0 = no) that reflects whether the participant believes the symptom makes it difficult to go to court and help oneself. Items on

each subscale are summed and converted into T-scores. The ATP scale has demonstrated good inter-rater reliability (*r*s ranging from .99 to 1.00; Rogers et al., 2001) and has been shown to reliably distinguish feigners from jail controls (mean $d = 2.50$) and genuine inpatient competency cases (mean $d = 1.83$; Rogers et al., 2004). A cut score of > 5 after summing the ATP Psychotic, Nonpsychotic, and Impairment subscales has demonstrated good sensitivity (.86), negative predictive power (.94), and sensitivity (.86), but positive predictive power was moderate (.70; Rogers et al., 2004). The ATP demonstrated good internal consistency in this study (Chronbach's alpha = .85).

Debriefing questionnaire. All participants completed a debriefing questionnaire that assessed their recall, comprehension, compliance with various study directions, and confidence in the quality of their performances. The participants were re-administered the items on the Recall Assessment to assess whether they understood and remembered their role throughout the experiment, and only those who achieved greater than 75% accuracy on the assessment were retained for the study. The Control and Uncoached Malingerer group Recall Assessment consisted of four questions that participants were required to answer correctly. This criterion excluded three participants from the Control group and one participant from the Uncoached Malingerer group. The Coached Malingerer group consisted of nine questions that participants were required to answer with greater than 75% accuracy, meaning that participants in this group were required to answer at least seven out of the nine questions correctly to ensure that they understood and remembered the study instructions as well as the majority of the coaching tips. This criterion excluded four participants from the Coached Malingerer group.

The participants were also asked to rate how well they understood the instructions to the experiment on a scale of 1 (*not at all*) to 10 (*extremely well*). To assess self-reported compliance,

participants in the two malingering groups were asked to indicate how well they complied with the instruction to give the impression of having serious psychological problems that interfere with their ability to go to trial by rating their efforts on a scale ranging from 1 (*not at all*) to 10 (*extremely well*; Storm & Graham, 2000), and participants in the Control group were asked to rate how well they complied with the instruction to give their best effort on the tests on a scale ranging from 1 (*not at all*) to 10 (*extremely well*). Finally, participants' confidence about the quality of their performances was also assessed. Participants in the two malingering groups were asked to indicate how well they think they faked incompetency on a scale of 1 (*not at all*) to 10 (*extremely well*), while participants in the Control group were asked to rate how well they think they performed on the competency assessments on a scale of 1 (*not at all*) to 10 (*extremely well*).

Procedures

Students from several undergraduate psychology courses were given the option of participating in studies in the Psychology Department for extra credit. Each participant completed the study individually. During the verbal and written review of the consent form, participants were informed that they were being asked to participate in a study on how undergraduates who are asked to imagine their involvement in a legal proceeding would respond to measures of competency to stand trial.

Using a between-groups simulation design, participants were randomly assigned into one of three conditions: Control, Uncoached Malingerer, or Coached Malingerer. Participants in each condition first completed the Demographic Questionnaire and then were given the criminal case scenario and instructional set for their assigned group. Each participant was required to complete a Recall Assessment to ensure that they understood and recalled the important details of the scenarios and instructions. Participants in the control and uncoached conditions were given filler

material (e.g., reading about job opportunities in psychology) to ensure that each participant spent approximately the same amount of time in Phase I of the experiment (approximately 15 minutes). Upon completion of the Recall Assessment with 100% accuracy and prior to proceeding to Phase II, all participants were reminded to answer the competency measures according to their grouping instructions (honest, uncoached malingering, and coached malingering).

An examiner blind to group assignment individually administered the GCCT-MSH and ECST-R (Factual Scale and ATP scale) in a counterbalanced order. Upon completion of the measures, all participants completed a Debriefing Questionnaire to assess their recall, understanding, compliance with instructions, and confidence about the quality of their performance. Participants were asked to place the Debriefing Questionnaire in a sealed envelope upon completion with the hope that such anonymous responding would encourage reports of any deviations from the provided instructions. Participation in the study ended with a thorough debriefing.

Results

Preliminary Analyses

This study's approach to data analysis required some initial transformations. The main analyses of this study employ multivariate analysis of variance and profile analysis, a multivariate approach to repeated measures. Because profile analysis requires that all dependent variables have the same range of possible scores, the dependent variables were converted to *z*-scores to produce commensurability among measures. Secondly, because the ECST-R Factual Scale scores are inversely related to the GCCT Total scores, the ECST-R Factual Scale scores were reflected so that higher scores indicate greater competency on both measures.

Preliminary analyses indicated moderate negative skewness for competency scores and slight positive skewness for malingering scores. Square root and log-linear transformations were examined but failed to improve skewness and kurtosis statistics. Given that profile analysis is robust to violations of normality when there are more cases than dependent variables in the smallest group and sample sizes are relatively equal, data analysis proceeded without these transformations (Tabachnick & Fidell, 2001).

The assumption of homogeneity of covariance implies that the variability in the dependent variables is similar for each group. Although roughly equivalent sample sizes renders an evaluation of homogeneity of variance-covariance matrices unnecessary, an examination of the Box's *M* test was not significant ($p = .18$) and indicates that the variability in the dependent variables is not notably discrepant among groups (Tabachnick & Fidell, 2001).

The sensitivity of profile analysis to outliers required inspection of the data for both univariate and multivariate outliers. When inspecting each group separately, one univariate outlier was found in the Control group using a criterion of $z = |3.29|$, ($p < .001$, two-tailed test). Further investigation revealed that the univariate outlier obtained a *z*-score of -3.93 on the GCCT Total score. In addition, SPSS Regression found one multivariate outlier in the Coached Malingerer group when examining Mahalanobis distance at $p < .001$ with four degrees of freedom (Mahalanobis $D^2 = 20.08$, $p < .01$). Because profile analysis is extremely sensitive to outliers, these two cases were deleted from the sample (Tabachnick & Fidell, 2001).

Multicollinearity refers to problems with a correlation matrix when variables are too highly correlated (e.g., .90 and above). Competency scores ($r = .78$, $p < .01$) and malingering scores ($r = .74$, $p < .01$) were significantly correlated as expected. Given that the correlations did

not exceed .90, multicollinearity does not pose a problem in this study (Tabachnick & Fidell, 2001).

Several tests were performed in order to check for the influence of nuisance variables on the results. As mentioned previously, the administration order of the competency measures was counterbalanced to control for potential order effects. To determine whether order exerted a significant impact on the results, a 2 (Order) X 3 (Group) MANOVA was performed and yielded no significant effect for order on competency scores F (2,83) = 1.23, p = .30 or malingering scores F (2,83) = .09, p = .91. It was therefore determined that the order of the administration of the competency measures did not significantly impact the results of this study, and order was not used as a covariate.

To investigate whether gender exerted a significant impact on the results, a 2 (Gender) X 3 (Group) MANOVA was performed and yielded no significant effect for gender on the set of competency scores F (2,83) = .79, p = .46, or malingering scores F (2,83) = 1.46, p = .24. Therefore, gender was not included as a covariate.

In order to ascertain whether ethnicity exerted a significant impact on the results, a 4 (Ethnicity) X 3 (Group) MANOVA was performed and yielded a significant effect on the set of competency scores F (6,154) = 2.55, p = .02 and malingering scores F (6,154) = 2.65, p = .02. In terms of competency scores, the univariate tests yielded a significant effect for ethnicity on the ECST-R Factual Scale score F (3,78) = 3.16, p = .03, but pairwise comparisons (Bonferroni) yielded no significant mean differences among ethnic groups. Further, the univariate test yielded no significant effect for ethnicity on the GCCT Total score F (3,78) = 2.29, p = .09. In terms of malingering scores, the univariate tests yielded significant effects for ethnicity on the GCCT AP Scale F (3,78) = 3.67, p = .02, and the ECST-R ATP Scale F (3,78) = 3.75, p = .01. Pairwise

comparisons (Bonferroni) found only one significant mean difference between the Asian American/Pacific Islander group and the Bi/Multi-racial group with respect to the GCCT AP Scale (1.35, p =.02). No significant mean differences among ethnic groups were found with respect to the ECST-R ATP Scale. Given the overall lack of significant mean differences among ethnic groups on the dependent variables, ethnicity was not used as a covariate.

Lastly, participants were asked to indicate whether they had previous involvement with the criminal justice system. To investigate whether previous involvement exerted a significant impact on the results, a 2 (Previous Involvement – yes/no) X 3 (Group) MANOVA was performed and yielded no significant effect for previous involvement with the criminal justice system on the set of competency scores F (2,83) = .61, p = .55 or the set of malingering scores F (2,83) = 1.48, p = .24. Therefore, previous involvement with the criminal justice system was not used as a covariate.

Power Analysis

Sample size requirements for the present study were estimated using Cohen's (1992) recommendations for a three group ANOVA. Cohen recommends an N of 21 in each cell for an anticipated large effect size, and an N of 52 for an anticipated medium effect size. As a previous related study investigating malingering and competency measures (Rogers, Sewell, Grandjean, & Vitacco, 2002) found large effects, this study aspired to obtain approximately 35 participants for each cell (a relative midpoint between large and medium effect sizes). The final average cell size was 30.

Main Analyses

Hypothesis I consisted of two predictions. The first prediction (Hypothesis I, Prediction A), that participants in the Uncoached and Coached groups will appear markedly impaired on

competency measures in comparison to participants in the Control group as evidenced by lower scores on the GCCT Total and ECST-R Factual Understanding Scale, was tested using SPSS MANOVA. A one-way MANOVA yielded a significant main effect for Group F (4,172) = 11.33, $p < .01$, effect size = .21 partial eta squared. The univariate test was significant for the GCCT Total score F (2,87) = 21.04, $p < .01$, effect size = .33 partial eta squared. Pairwise comparisons (Bonferroni) yielded significant mean differences between the Control group and the Uncoached Malingerer group (1.30, $p < .01$, Cohen's $d = 1.63$) and between the Control group and the Coached Malingerer group (1.08, $p < .01$, Cohen's $d = 1.69$; see Table 1; Figure 1). The univariate tests was also significant for the ECST-R Factual Understanding Scale score F (2,87) = 20.84, $p < .01$, effect size = .32 partial eta squared. Pairwise comparisons (Bonferroni) yielded significant mean differences between the Control group and Uncoached Malingerer group (1.22, $p < .01$, Cohen's $d = 1.41$) and between the Control group and the Coached Malingerer group (1.21, $p < .01$, Cohen's $d = 1.89$). Participants in the malingering groups appeared significantly more impaired on competency measures than participants in the Control group; therefore, Hypothesis I, Prediction A was confirmed (see Table 1; Figure 1).

The second prediction (Hypothesis I, Prediction B) hypothesized that among those participants instructed to feign incompetency, the Uncoached Malingerer group will appear more impaired than the Coached Malingerer group as evidenced by lower scores on the GCCT Total and the ECST-R Factual Understanding Scale score. Pairwise comparisons (Bonferroni) failed to show significant mean differences between the Uncoached Malingerer group and the Coached Malingerer group on the GCCT Total (.22, p - .94, Cohen's $d = .22$). Similarly, pairwise comparisons (Bonferroni) also failed to show significant mean differences between the Uncoached Malingerer group and the Coached Malingerer group (.01, $p = 1.00$, Cohen's $d = .01$)

on the ECST-R Factual Scale. Although the Coached simulators achieved slightly higher competency scores than the Uncoached simulators, these minor differences were not significant; therefore, Hypothesis I, Prediction B was not confirmed (see Table 1; Figure 1).

Hypothesis II and Hypothesis III utilized profile analysis, a multivariate approach to repeated measures. Hypothesis II consisted of two predictions. The first (Hypothesis II, Prediction A) predicted that participants in the Uncoached Malingerer and Coached Malingerer groups will evidence greater malingering in comparison to participants in the Control group, as demonstrated by higher scores on the GCCT Atypical Presentation (AP) Scale and the ECST-R Atypical Presentation (ATP) Scale. The "levels hypothesis" in profile analysis – like the between-subjects main effect in repeated measures ANOVA – tests whether there is a significant difference among the means of the three groups on the set of malingering scale scores (Tabachnick & Fidell, 2001). Using one independent variable (Group) and two within-subject dependent variables (GCCT AP Scale score and ECST-R ATP Scale score), a test of the levels hypothesis revealed a significant difference among the groups on the collected set of malingering scale scores F (2,87) = 39.52, $p < .01$, effect size = .48 partial eta squared. Pairwise comparisons (Bonferroni) yielded a significant mean difference between the Control group and the Uncoached Malingerer group (1.41, $p < .01$) and between the Control group and the Coached Malingerer group (1.31, $p < .01$) on the collected set of malingering scale scores.

Moreover, when the univariate tests were examined, very large effect sizes were observed between the Uncoached and Control groups for the GCCT AP Scale (Cohen's d = 1.98) and the ECST-R ATP Scale (Cohen's d = 1.62). Similarly, very large effect sizes were observed between the Coached and Control groups for the GCCT AP Scale (Cohen's d = 2.00) and the ECST-R ATP Scale (Cohen's d = 1.76; see Table 1; Figure 2). These results demonstrate that participants

in the Uncoached Malingerer and Coached Malingerer groups evidenced significantly greater malingering scores compared to participants in the Control group; therefore, Hypothesis II, Prediction A was confirmed.

The second prediction (Hypothesis II, Prediction B) hypothesized that participants in the Uncoached Malingerer group will have a greater elevation on the GCCT AP scale and the ECST-R ATP scale (indicating greater malingering) compared to participants in the Coached Malingerer group. Pairwise comparisons (Bonferroni) did not yield a significant mean difference between the Uncoached Malingerer group and the Coached Malingerer group on the collected set of malingering scores (.10, p = 1.00). Further, only small effect sizes were observed between the Uncoached Malingerer group and the Coached Malingerer group for the GCCT AP Scale (Cohen's *d* = .04) and for the ECST-R ATP Scale (Cohen's *d* = .20). Coaching did not significantly impact malingering scale scores; therefore, Hypothesis II, Prediction B was not confirmed (see Table 1; Figure 2).

Hypothesis III also consisted of two predictions. The first prediction (Hypothesis III, Prediction A) hypothesized that the ECST-R ATP Scale better detects malingering than the GCCT AP Scale. The "flatness test" in profile analysis addresses whether, independent of groups, the dependent variables elicit different average responses (Tabachnick & Fidell, 2001). That is, when groups are combined, do the difference scores (segments) between the GCCT AP Scale and the ECST-R ATP Scale deviate significantly from zero? The flatness test revealed that there was not a significant effect for malingering scale *F* (1,87) = .00, p = .96, effect size = .00 partial eta squared; therefore, Hypothesis III, Prediction A was not confirmed (see Table 1; Figure 2).

The second prediction (Hypothesis III, Prediction B) hypothesized that there would be a significant interaction between group and type of malingering screen such that scores on the ECST-R ATP Scale reflect greater malingering for Coached Malingerers (but not Uncoached Malingerers or Control participants) than scores on the GCCT AP Scale. The "parallelism test" in profile analysis – like the test of interaction in repeated measures ANOVA – asks whether different groups have intersecting profiles (Tabachnick & Fidell, 2001). That is, are the difference scores between the GCCT AP Scale and the ECST-R ATP Scale different for the Control, Uncoached Malingerer, and Coached Malingerer groups? The parallelism test revealed that there was not a significant interaction between group and type of malingering scale F (2,87) = .79, p = .46, effect size = .02 partial eta squared; therefore, Hypothesis III, Prediction B was not confirmed (see Table 1; Figure 2).

Post Hoc Validity Assessments

Manipulation check. During debriefing, participants were asked to rate on a Likert scale (1 to 10) their understanding of the study's instructions, their compliance with the study's instructions, and their confidence in how well they performed their assigned task. Using group as the independent variable and understanding instructions, compliance with instructions, and confidence in performance ratings as dependent variables, a one-way MANOVA yielded a significant main effect F (6,170) = 4.26, $p < .01$, effect size = .13 partial eta squared. Although the groups did not significantly differ on their ratings of understanding instructions for the study F (2,87) = .84, p = .44, the univariate tests were significant for compliance with instructions F (2,87) = 8.93, $p < .01$ and confidence in performance F (2,87) = 8.49, $p < .01$.

With respect to compliance, pairwise comparisons (Bonferroni) revealed that the Control group reported significantly higher ratings than the Uncoached Malingerer group (1.10, $p < .05$,

Cohen's *d* = .71) and the Coached Malingerer group (1.89, p < .01, Cohen's *d* = 1.10). Mean differences between the Uncoached Malingerer group and Coached Malingerer group were not significant (.79, p = .22, Cohen's *d* = .43). The Control group rated their compliance with instructions significantly higher than the Uncoached and Coached Malingerer groups; however, the Uncoached and Coached Malingerer groups did not significantly differ from each other in their ratings of compliance.

With respect to confidence in performance, pairwise comparisons (Bonferroni) revealed significant mean differences between the Control group and the Uncoached Malingerer group (1.61, p < .01, Cohen's *d* = .85) and between the Control group and Coached Malingerer group (1.89, p < .01, Cohen's *d* = 1.04). Mean differences between the Uncoached Malingerer and Coached Malingerer groups were not significant (.29, p = 1.00, Cohen's *d* = .14). The Control group rated their confidence in their performance significantly higher than the Uncoached and Coached Malingerer groups; however, the Uncoached and Coached Malingerer groups did not significantly differ from each other in their ratings of confidence.

To explore whether confidence ratings account for the lack of significant differences between the Uncoached and Coached Malingerer group competency and malingering scores, additional analyses were initiated. For the Uncoached Malingerer group, confidence was significantly related to the GCCT Total competency score (r = -.37, p < .05) but not to the ECST-R Factual competency score (r = -.21). Confidence was not significantly related to either competency score for the Coached Malingerer group (r = .11 for GCCT Total; r = .32 for ECST-R Factual). With respect to malingering, confidence was not significantly related to either malingering scale score for the Uncoached group (r = .23 for GCCT AP malingering scale; r = .13 for ECST-R ATP malingering scale). For the Coached group, confidence was not

significantly related to the GCCT AP malingering scale (r = .24); and though confidence was significantly related to ECST-R ATP malingering scale (r = .50, p < .01), it was not in the expected direction (greater confidence was associated with worse faking ability). Given the overall lack of consistency in the relationship between confidence and actual performance for the Uncoached and Coached groups, further analyses were not warranted.

ECST-R ATP subscales. Exploring the scores on the ECST-R ATP subscales serves as an indirect manipulation check and examines whether participants were responding to this malingering scale according to their assigned instructional set. The ECST-R ATP Scale consists of four subscales that incorporate atypical psychotic content (ATP-Psychotic), atypical affective symptoms without psychotic content (ATP-Nonpsychotic), "filler" items that assess common concerns facing defendants (ATP-Realistic), and items that assess the level of impairment for psychotic and nonpsychotic items endorsed (ATP-Impairment). It was expected that participants who were instructed to feign incompetency would score significantly higher than honest responders on the ATP-Psychotic, ATP-Nonpsychotic, and ATP-Impairment subscales. To examine this, a one-way MANOVA was performed and yielded a significant effect for group on the set of ATP subscales F (8,168) = 7.52, p < .01, effect size = .26 partial eta squared. The univariate tests were significant for the ATP Psychotic, ATP Nonpsychotic, and ATP Impairment subscales. For each subscale, the malingering groups (Coached and Uncoached) endorsed significantly more atypical psychotic, nonpsychotic, and impairment items than the Control group. There were no significant differences, however, among the groups on the ATP Realistic subscale. Thus, the results indicate that participants endorsed common concerns facing defendants (e.g., "I wish I had more money to aid in my defense") regardless of their instructional set.

Item analysis. Individual malingering scale items on the GCCT AP Scale and ECST-R ATP Scale were examined to determine whether responses to individual items reliably distinguished between the Uncoached and Coached Malingering groups. None of the Pearson chi-squares was significant for the eight GCCT AP Scale items or the 28 ECST-R ATP Scale items, indicating that no particular malingering scale item could be relied upon to differentiate Coached and Uncoached participants in this study.

Cut score comparisons. Examining the utility of malingering cut scores deemed effective in other clinical research samples serves as an indirect assessment of the generalizability of the results found in the present study. Prior research suggested that a raw score of ≥ 6 reliably distinguishes between honest responders and malingerers on the GCCT AP Scale (Gothard et al., 1995). The Gothard et al. (1995) sample used simulators and controls from the San Diego Detention Center and a clinical comparison group recruited from the San Diego Forensic Evaluation Unit. In the present sample, using a GCCT AP Scale cut score of ≥ 6 correctly classified 89.7% of honest responders as honest and misclassified 10.3% of honest responders as malingerers. Further, this cut score correctly classified 86.9% of malingerers as malingerers and misclassified 13.1% of malingerers as honest responders (see Table 2). The present study obtained very similar levels of sensitivity (.87 versus .89) and specificity (.90 versus .91) to the Gothard et al. (1995) study. These findings demonstrate that despite using a sample comprised of college undergraduates, the present study was able to achieve comparable malingering classification rates using the GCCT AP cut scores deemed most effective in a forensic sample (Gothard et al., 1995).

With respect to the ECST-R ATP Scale, prior research using simulators and controls from a county jail and a clinical comparison group from an inpatient competency restoration

program deemed a cut score of > 5 on the summation of the ATP Psychotic, Nonpsychotic, and Impairment subscales as most effective at screening for malingering (Rogers et al., 2004). In the present study, this cut score demonstrated greater effectiveness at classifying malingerers as evidenced by its high sensitivity rate (.97 versus .86) compared to the Rogers et al. (2004) sample; however, the lower specificity rate (.55 versus .86) compared to the Rogers et al. (2004) sample indicates that it also misclassified many more honest responders as malingerers (see Table 2).

Additional cut scores identified by Rogers et al. (2004) were also evaluated with respect to the present study. Cut scores of ATP-Psychotic > 1, ATP-Nonpsychotic > 0, ATP-Both Psychotic and Nonpsychotic > 2, and ATP-Impairment > 1 all generated sensitivity rates that exceeded .90 in the present sample; however, lower specificity rates (ranging from .59 to .73) indicate that these cut scores misclassified many honest responders as malingerers. While a cut score of > 14 on the summation of the ATP Psychotic, Nonpsychotic, and Impairment subscales improved specificity (.90), it still did not correctly identify honest responders as well as in the Rogers et al. (2004) sample (1.00). However, this cut score was more effective in correctly classifying malingerers as compared to the Rogers et al. (2004) sample (.77 versus .50; see Table 2).

Discussion

Previous research has demonstrated that coaching on test-taking strategies helps malingerers elude detection on some psychological tests. Whereas prior coached malingering studies have focused upon personality and neuropsychological tests, this is thought to be the first study to investigate the impact of test-strategy coaching on measures of competency to stand trial. Using a sample of undergraduate simulators (coached and uncoached) and controls who

were presented with a hypothetical criminal case scenario, this study sought to address the gap in the coached malingering literature by examining the effect of test-strategy coaching on measures of competency to stand trial.

Coaching and Competency Scales

With respect to overall competency, it was anticipated that coached and uncoached malingerers would appear significantly more impaired on competency measures than honest responders. The results supported this hypothesis, indicating that the participants in this study who were instructed to feign incompetency appeared markedly impaired compared to individuals instructed to respond honestly and give their best efforts. That is, as expected, individuals motivated to fake incompetency scored lower on competency measures. This finding converges with past research that has demonstrated the susceptibility of competency measures to feigning (e.g., Rogers et al., 2002; Gothard et al., 1995) and underscores the obligation of clinicians to consistently rule out malingering as a standard part of the competency inquiry.

Given the high face validity of the competency items, past researchers have alluded to the notion that malingerers may "overplay" their impairment and appear more incompetent than even truly impaired individuals (Gothard et al., 1995, p. 370). Accordingly, it was expected that malingerers who received test-strategy coaching, while still appearing incompetent, would not look as impaired as their uncoached counterparts. Notably, however, test-strategy coaching exerted negligible impact on the competency scores of participants instructed to feign incompetency in this study. Coached participants appeared just as impaired as uncoached participants on the competency scales. This unexpected result could be attributed to the participants' unfamiliarity with the court system. For example, one of the coaching tips -- "try not to get too many easy items wrong" -- may have been difficult for the participants to apply if

they felt uncertain as to which competency items were supposed to be considered easy versus difficult. It is possible that a court-savvy sample would have been able to employ the test-strategy tips in a more effective manner.

Coaching and Malingering Scales

The detection of coached and uncoached malingering on measures of competency to stand trial was of particular interest in this study. The results supported the hypothesis that individuals instructed to feign incompetency would evidence greater malingering than honest responders. That is, participants in the malingering groups (both uncoached and coached) demonstrated significantly greater elevations on the GCCT AP Scale and the ECST-R ATP Scale than honest responders, with very large effect sizes ranging from $d = 1.62$ to $d = 2.00$. This finding corresponds with prior research that found these scales to reliably distinguish malingerers from honest responders (Gothard et al., 1995; Rogers et al., 2002; Rogers et al., 2004).

Despite the expectation that test-strategy coaching would help malingerers elude detection, coached participants did not significantly differ from their uncoached counterparts on malingering scale scores in this study. That is, participants who received tips on how to successfully malinger incompetency responded similarly to those whose only instruction was to try to believably fake incompetency. Being warned about lie scales and instructed to avoid endorsing bizarre items did not affect how the coached malingerers responded to questions about atypical psychological symptoms. Consistent with prior research, participants' confidence in their performance was largely unrelated to their feigning abilities (Rogers et al., 2004). Furthermore, despite the expectation that the ECST-R ATP Scale would be better at detecting malingering than the GCCT AP Scale, both scales performed similarly. Although it was predicted that coached malingerers would be better detected by the ECST-R ATP Scale than the

GCCT AP Scale, this was not the case. In fact, both malingering scales effectively discriminated between the malingering groups and the honest responders.

Test-strategy coaching failed to help malingerers elude detection on the GCCT AP Scale and the ECST-R ATP Scale in this study. This diverges from the majority of previous MMPI-2 coached malingering research that demonstrates the effectiveness of test-strategy coaching for helping malingerers escape identification on validity scale indicators (Bury & Bagby, 2002; Lamb et al., 1994; Rogers et al., 2003; Storm & Graham, 2000). The majority of the samples in the MMPI-2 coached malingering research resembled the undergraduate simulation research design used in the present study (e.g., Bury & Bagby, 2002; Lamb et al., 1994; Storm & Graham, 2000) and utilized similar test-strategy tips and incentives.

Despite these similarities, differences in study instructions and in the composition of the measures may contribute to the disparity in results between the present study and the MMPI-2 coached malingering research. Whereas the MMPI-2 coached malingering studies asked participants to fake a psychological illness, participants in the present study were asked to fake a psychological illness that interferes with their ability to understand the court proceedings and/or work with an attorney. In addition, the GCCT and ECST-R competency measures contain face valid competency questions that are administered first, followed by a separate malingering screen distinct from the rest of the measure. This differs from the MMPI-2, in which validity items are interspersed throughout the test.

Although the present study's findings diverge from the MMPI-2 coached malingering literature, an examination of recent research suggests that measures specifically designed to detect malingering may be less susceptible to test-strategy coaching. For example, one coached malingering study that used the Computerized Assessment of Response Bias-97 (CARB-97) and

the Word Memory Test (WMT), two neuropsychological malingering measures, found little difference between uncoached and coached malingerers in a sample of undergraduate simulators (Dunn, Shear, Howe, & Ris, 2001). That is, the CARB-97 and WMT identified malingerers even when participants receive coaching about how to successfully elude detection. Furthermore, the CARB-97 and WMT effectively discriminated between the malingering groups (uncoached and coached) and the honest responders. Similarly, recent studies have found that test-strategy and symptom coaching failed to help undergraduate simulators elude detection on other psychological tests designed to detect malingering like the Miller Forensic Assessment of Symptoms Test (M-FAST) and the Structured Inventory of Malingered Symptomatology (SIMS; Guriel, Yanez, Fremouw, Shreve-Neiger, Ware, Filcheck, & Farr, 2004; Jelicic, Hessels, & Merckelbach, 2006). The findings of these studies mirror the current results with the GCCT AP Scale and the ECST-R ATP Scale and suggest that measures specifically designed to detect malingering may successfully guard against the effects of general test-strategy coaching.

Despite the optimistic finding that the GCCT AP Scale and ECST-R ATP Scale detected both coached and uncoached malingerers in this study, concerns about the effects of coached malingering on competency measures still exist. Attorney coaching and the availability of information about psychological tests on the internet prevent mental health professionals from being able to dismiss the potential impact that familiarity with competency measures has on a defendant's approach to a competency evaluation. Although some research has addressed the phenomenon of attorney coaching (e.g., Taylor, Harp, & Elliott, 1992; Victor & Abeles, 2004; Wetter & Corrigan, 1995), additional research investigating the prevalence and nature of attorney coaching is warranted to help guide future coached malingering studies in this area. Even though general test-strategy coaching failed to help malingerers elude detection in this study, perhaps a

more specific type of coaching that instructs individuals to look impaired on the competency questions while avoiding the endorsement of atypical psychological symptoms on the malingering scales may diminish the efficacy of these competency measures. One way to test this hypothesis in an ethical manner would be to ask experts in the field of competency evaluation to serve as a highly sophisticated "coached" simulation group and compare their competency and malingering scale scores to a naïve group of simulated malingerers.

The findings in the present study caution clinicians against drawing conclusions based upon overall competency scores alone and emphasize the importance of a careful malingering assessment in the context of competency to stand trial evaluations. As an alternative to relying solely upon clinical judgment, the administration of a malingering screen as a standard element of a competency evaluation serves as a way to increase the validity of clinicians' findings and provide the courts with accurate and credible information. The ability of the GCCT AP Scale and ECST-R ATP Scale to effectively discriminate between malingerers and honest responders in this study, even when the malingerers received test-strategy coaching, underscores the benefit of administering a brief screen to flag potential malingerers for a more in-depth evaluation. The current study's findings emphasize the propriety of utilizing a measure or scale designed specifically for detecting malingering (e.g., the ECST-R ATP Scale) over a measure designed for some other purpose (e.g., the MMPI-2) in the assessment of malingering.

Limitations

The simulation design employed in this study, while allowing for experimental control and maximizing internal validity, places some boundaries on the generalizability of the findings. Although the present study utilized incentive strategies (e.g., $50 prizes for participants who did the best job feigning incompetency), this fails to approximate the real-life motivations of

defendants seeking to evade criminal prosecution. Using a cut score of ≥ 6 on the GCCT AP scale, the present study obtained very similar levels of sensitivity (.87 versus .89) and specificity (.90 versus .91) to the forensic sample of simulators and controls from the San Diego Detention Center and a clinical comparison group recruited from the San Diego Forensic Evaluation Unit in Gothard et al. (1995), thereby suggesting that the present simulation has some real-world generalizability. A cut score of > 5 on the summation of the ECST-R ATP Psychotic, Nonpsychotic, and Impairment subscales generated a high sensitivity rate in the present study (.97 versus .86) compared to the Rogers et al. (2004) sample; however, the lower specificity rate (.55 versus .86) suggests less fidelity with that study's norm population of simulator and control inmates in a county jail and a clinical comparison group from an inpatient competency restoration program. In light of these comparisons, additional research could elucidate whether the present findings apply to real-world forensic settings, although researchers must continue to balance the ethical responsibility of maintaining test security and safeguarding psychological test information from the public with the need for diligently conducting studies that address the problem of malingering in competency evaluations.

Another concern brought to light by this study involves the generalizability of its findings to individuals from other cultures. Information gathered during debriefing suggests that a small percentage of participants in this study were non-native English speakers who reported that they originally lived in Asian countries with judicial systems that differ from the United States. Although language and country of origin were not systematically screened in all participants, anecdotal evidence suggests that some non-native English speaking participants in the Honest group appeared incompetent on the competency scales and also obtained elevated scores on the malingering scales. Although the small number of these participants did not ultimately impact

the overall results, the implications of this anecdotal finding are quite powerful, particularly in light of the fact that U.S. Department of Justice asserts that non-U.S. citizens account for approximately 25% of the Federal, 5% of State, and 12% of private correctional populations (Stephan & Karberg, 2003). If students who ostensibly speak English well enough to enroll in college-level courses experience difficulty completing competency measures, this raises serious questions about the validity of using these measures with non-native English speaking defendants. Future research could help shed light on this important question.

The measures selected for this study focus on the factual understanding domain of the competency construct. That is, the GCCT appears to reliably relate only to the factual understanding competency dimension (Rogers et al., 2001), and only the ECST-R Factual and ATP scales were administered because it was thought that the undergraduate simulators would not be able to answer the case-specific items contained on the ECST-R Consult with Counsel and Rational Appreciation scales. As a result, the measures used in this study failed to incorporate the other two components of the competency standard delineated in *Dusky* (rational understanding of the proceedings and ability to consult with counsel). Finally, the study instructions emphasized faking psychological or emotional problems and neglected the problem of malingering cognitive deficits in competency evaluations. It is possible that individuals faking cognitive deficits would have been more successful in eluding detection on the malingering screens, and future research could explore this possibility.

Despite these limitations, the present study offered an initial examination of the impact of test-strategy coaching on measures of competency to stand trial. The findings allow for cautious optimism in the ability of these measures' malingering screens to detect feigned incompetency, even when individuals receive coaching on how to defeat the measures. Moreover, this study

adds to the growing body of literature that underscores the importance of the assessment of malingering as a routine component of competency evaluations.

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Table 1

Means and Standard Deviations of Competency and Malingering Scale Scores by Group

	Control (n = 29)		Uncoached (n = 33)		Coached (n = 28)	
	M	SD	M	SD	M	SD
Competency Scales						
GCCT Total	0.82^{a}	0.36	-0.48^{b}	1.07	-0.27^{b}	0.84
ECST-R Factual Scale	0.84^{a}	0.56	-0.39^{b}	1.10	-0.38^{b}	0.72
Malingering Scales						
GCCT AP Scale	-0.96^{a}	0.68	0.50^{b}	0.79	0.47^{b}	0.75
ECST-R ATP Scale	-0.84^{a}	0.67	0.52^{b}	0.98	0.35^{b}	0.68

Note. Means and standard deviations expressed as z-scores. Superscript letters are used to indicate statistically significant group differences in the post hoc comparisons. Reading across each row, any two groups with a different superscript letter differed significantly at $p < .01$.

Table 2

Comparison of Cut Scores in Present Sample to Forensic Samples as Screens for Feigned Incompetency

Measure	Subscale	Cut score	Sensitivity	Specificity
GCCT[a]				
	AP	≥ 6	.87 (.89)	.90 (.91)
ECST-R ATP[b]				
	BI	> 5	.97 (.86)	.55 (.86)
	Psychotic	> 1	.93 (.90)	.59 (.72)
	Nonpsychotic	> 0	.97 (.84)	.31 (.60)
	Both	> 2	.98 (.88)	.45 (.73)
	Impairment	> 1	.97 (.72)	.66 (.91)
	BI	> 14	.77 (.50)	.90 (1.00)

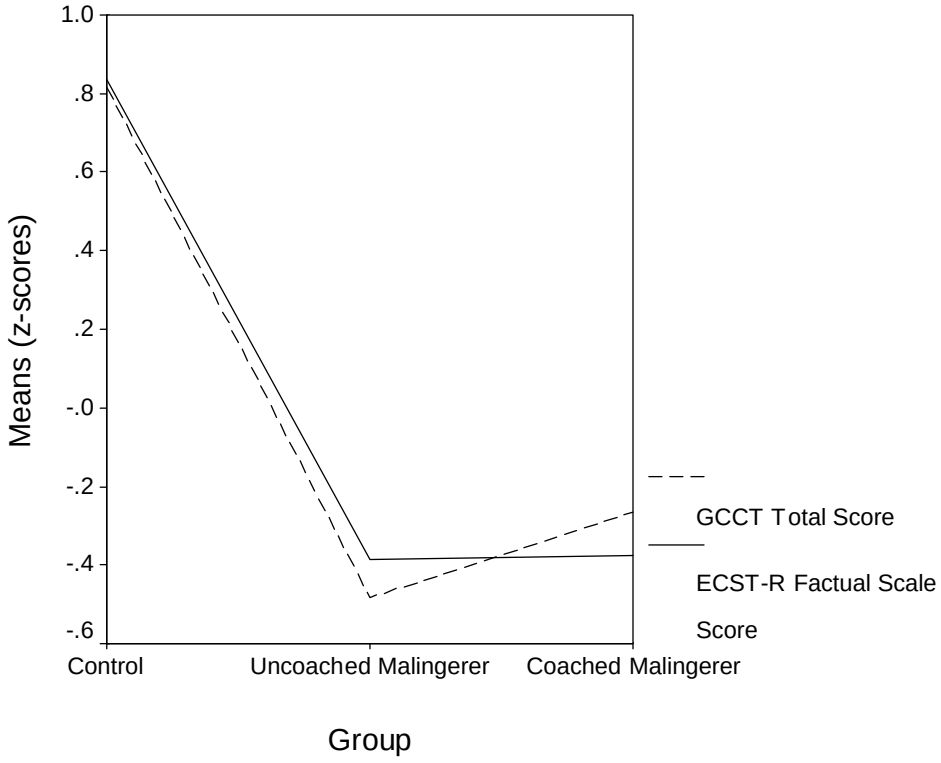
Note: GCCT AP = Georgia Court Competency Test Atypical Presentation Scale; ECST-R ATP = Evaluation of Competency to Stand Trial – Revised Atypical Presentation Scale; BI = Summation of Psychotic, Nonpsychotic, and Impairment subscales; Both = Summation of Psychotic and Nonpsychotic subscales.

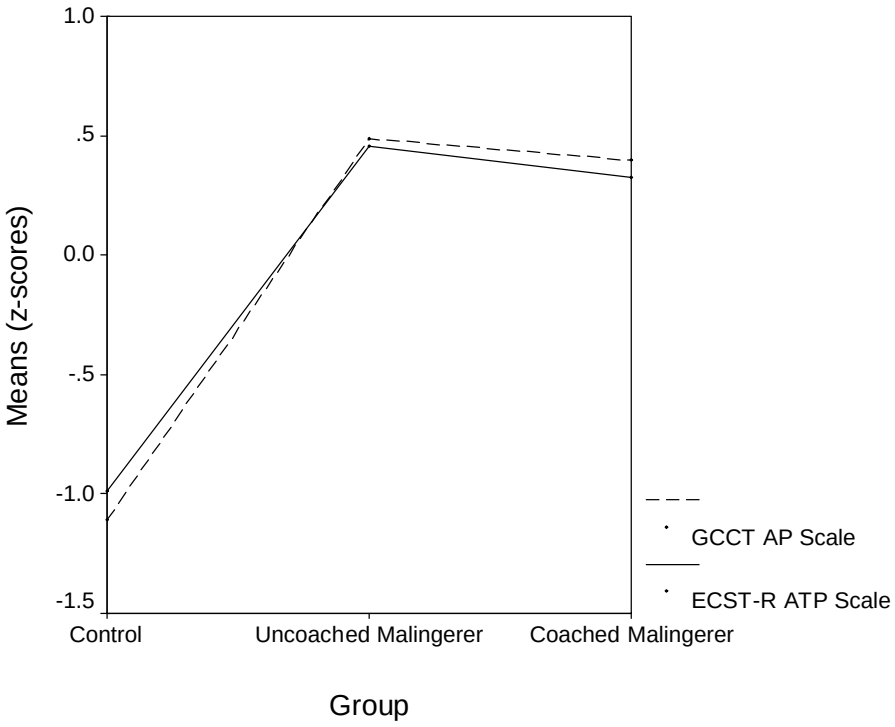
[a]The numbers in parentheses refer to sensitivity and specificity rates for cut scores with Gothard et al. (1995) sample. [b]The numbers in parentheses refer to sensitivity and specificity rates for cut cut scores with Rogers et al. (2004) sample.

Figure Captions

Figure 1. Mean competency z-scores on the GCCT Total and ECST-R Factual Scale as a function of group instructional set.

Figure 2. Mean malingering z-scores on the GCCT AP Scale and ECST-R ATP Scale as a function of group instructional set.


1.0
.8
.6
.4
.2
-.0
-.2
-.4
-.6
Means (z-scores)
Control
Uncoached Malingerer
Coached Malingerer
Group
GCCT Total Score
ECST-R Factual Scale Score


1.0
.5
0.0
-.5
-1.0
-1.5
Means (z-scores)
Control
Uncoached Malingerer
Coached Malingerer
Group
GCCT AP Scale
ECST-R ATP Scale