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# Competency in forensic examinations: what variables predict restoration?

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COMPETENCY IN FORENSIC EXAMINATIONS:  
WHAT VARIABLES PREDICT RESTORATION?

A Thesis

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
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in

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by  
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## ABSTRACT

Competency to Stand Trial (CST), also known as adjudicative competency, remains an important issue for both judicial and mental health systems, and much effort is invested in research designed to define, assess and determine what factors are most relevant for restoring CST. The purpose of this study was to provide information that might improve the ability to predict which individuals would eventually become competent. Archival data were reviewed for 79 inpatient defendants referred for competency restoration treatment. Although information was incomplete, comparisons were made between those who remained incompetent (IST;  $n = 15$ ) and those who were restored to competency (CST;  $n = 43$ ) as determined by scores on the Georgia Court Competency Test (GCCT-MSH) in concert with clinical judgments. There was no difference between these two groups on demographic variables, intellectual capacity, the type of offense (violent vs. nonviolent), clinical diagnosis, substance abuse, or symptomatology, as measured by the Brief Psychiatric Rating Scale (BPRS). However, 1) the CST group performed significantly better on both, the initial and final GCCT and Global Assessment of Functioning (GAF) scale and 2) the severity of psychotic symptoms decreased significantly for the CST group, but not the IST group, including the total score, positive symptoms, negative symptoms, and resistance score. This significant within-group decrease in psychotic symptomatology was presumably the reason that the CST group was discharged significantly sooner ( $7.7 \pm 8.6$  months) than the IST group ( $17.9 \pm 7.0$  months). Although the number of individuals was small, these results are consistent with previous research demonstrating the importance of psychiatric variables in efforts to restore CST. Additionally, the data from this population provides the first evidence to demonstrate what types of specific psychiatric symptomatology and functioning are associated with changes in competency while also providing unique insight as to how clinicians make decisions about a defendant's competency to stand trial.

## INTRODUCTION

The assessment of the competency to stand trial is the most common type of forensic evaluation (Nicholson & Kugler, 1991). In 1997 it was estimated that 60,000 defendants in the United States were referred for competence evaluations by the courts (Bonnie & Grisso, 2000) and on average, about 30% of those defendants were found incompetent to stand trial and were subsequently referred for restoration treatment (Melton, Petrila, Poythress, & Slobogin, 1997).

For the most part, a general competency evaluation consists of the following: A defendant shows qualifying signs of incompetence through past behavior, medical history and/or current behavioral interactions with counsel. The court (judge/prosecutor/defense counsel) then makes a decision to refer the defendant for a pre-trial forensic evaluation. A mental health professional (usually a psychologist or psychiatrist) conducts the evaluation and presents the findings to the court. The judge makes a decision about the defendant's current status based on the expert's findings from the evaluation. If the defendant is determined to be incompetent and there is no question of malingering, then he/she is involuntarily hospitalized for the purpose of providing the appropriate treatment in hopes of restoring competence. The defendant is commonly evaluated at intervals during the treatment period. If restoration is successful, the defendant is returned to court for a trial.

According to Grisso, Borum, Edens, Moye, and Otto (2003), the issue of adjudicative competency is important for two general reasons: 1) If a defendant is not capable of defending him/herself, then, in order to conduct a fair trial under U.S. constitutional law, the defendant deserves a chance to be restored to his/her potential capabilities. 2) If a defendant is capable of standing trial in his/her current status, then the mental health and legal systems should not waste valuable time and money when treatment for restoration of competency will be unnecessary. The goal of adjudicative competency research is to determine how to minimize incorrect decisions

about a defendant's competency status. Therefore, most research in this area has focused on providing lawmakers, judicial officials, and mental health clinicians with data that will help them become proficient in identifying and restoring adjudicative competency for criminal defendants. The first problem is defining competency so that it can be assessed and measured.



## REVIEW OF LITERATURE

### What Is CST: The Legal Standard

In general, competency involves some type of impairment in a defendant's ability to understand and participate in the legal process. In the 1962 ruling of *Dusky v. United States*, the United States Supreme Court established the legal standards to functionally define competency to stand trial, termed "adjudicative competence." The Supreme Court stated that in order for a defendant to be deemed competent, the defendant must have "sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding" and "a rational as well as factual understanding of the proceedings against him" (p. 402). The *Dusky* standard also states that justifiable limits to one's competence must be the result of cognitive defects or mental diseases, but psychological symptoms *alone* are not sufficient barriers to adjudicative competence. Since this trial, the role of competence in forensic evaluation remains an important component in the judicial process, and it has been acknowledged that judges, attorneys, and clinicians need to be adequately informed about the complexities involved in determining whether a defendant is competent (Roesch & Golding, 1987).

The process of deciding whether a defendant is competent to stand trial has been controversial since the *Dusky* standard was put into practice due to the fact that interpretation of the statute often varies by jurisdiction. *Dusky* is viewed by some officials as liberal in that its vague wording allows for many different interpretations of what constitutes a threshold of adjudicative competence. For example, one professional may argue that a rational and factual sufficient appreciation of the charges requires relatively complex cognitive functioning. Therefore, research often consists of conflicting interpretations of the standard and a variety of state statutes by which to classify a defendant as incompetent (Warren, Rosefeld, Fitch & Hawk, 1997; Zapf & Roesch, 2005). In fact, in the 1975 court case of *Drope v. Missouri*, the U.S.

Supreme Court ruled that a “bona fide doubt” must be present in order to refer a defendant for a CST evaluation, and that the threshold for determining someone as CST is low, mainly requiring that the defendant be able to “assist in his defense.” The low threshold for seeking a competency evaluation is two-sided in that it is set low in order to uphold an individual’s constitutional rights but also has the potential to promote exploitation of the legal system (Melton et al., 1997). Most importantly, in a majority of cases, the court sides with the opinion of the mental health professional involved in the case, effectively making the clinician responsible for defining legal competence (Nicholson & Kugler, 1991; Zapf, Hubbard, Cooper, Wheelles & Ronan, 2004). In 1991 the Committee on Ethical Guidelines for Forensic Psychologists established standards of clinical practice in forensic cases. Significant efforts have been made to ensure that professional approaches are taken at each stage of the competency evaluation.

The *Dusky* standard made special effort to differentiate between the insanity plea and a declaration of incompetence to stand trial (IST). That is, a plea of insanity is defined according to the state of the defendant at the time of the crime and is a choice made by the defendant. In contrast, the court, with the help of mental health professionals, determines (at the time of the trial) if a defendant is competent enough to stand trial and this decision is unrelated to the defendant’s status at the time of the crime. In effect, adjudicative competence concerns only the trial, whereas the plea of not guilty by insanity concerns the charges for the crime (Grisso et al., 2003).

A more recent trial set a new precedent that went against the historical legal standard for assessing adjudicative competence. In *Godinez v. Moran* (1993), the U.S. Supreme Court stated that every type of criminal competence must be defined by only one set standard: a deficit in cognitive capacity. Before this decision, the standard held that competence for one set of circumstances did not imply competence for another set of circumstances within the legal system

concerning adjudicative competence. Therefore, competence was defined on a situational basis that was context specific. The new standard implies that although there are various types of situations in which competence may be at issue, they all require the same reasoning ability; therefore, the competence to plead guilty does not require any higher/lower level of functioning than the competence needed to waive counsel or stand trial. This idea sparked many debates in that one could argue that these different competences may in fact tap into distinctly different specific abilities, because it was historically thought that the competence needed to understand one's consequences by waiving counsel or pleading guilty was not comparable to being competent enough for rote participation in a legal trial. This is a continuing difficulty in present day courts due to the simple fact that many state laws are vague and leave room for conflicting interpretations when trying to functionally define adjudicative competence (Mumley, Tillbrook & Grisso, 2003).

Of relevance to this study is Louisiana's *Bennett* criteria, which is a competency-based checklist, derived from *State v. Bennett*, (1997) outlining the 2 main areas to be considered by Louisiana court officials when making determinations of competency. Much in line with the *Dusky* standard, these 2 areas include assessing the defendant's conscious awareness of the legal proceedings at hand and the defendant's ability to consult with counsel in his/her defense. (See Appendix A for a copy of the assessment).

Due to the costs associated with both making a decision on adjudicative competence and the subsequent treatment of a defendant who is incompetent, many states limit the amount of time allowed to do an evaluation and the length of the treatment period for those defendants who are thought to be able to regain competency. The U.S. Supreme Court ruled in *Jackson v. Indiana* (1972) that defendants who are found incompetent could not be held for treatment longer than deemed reasonable based on their diagnosis. For this rule to be applied efficiently, it is

necessary to know the baseline prognoses for recovery of incompetent defendants from their diagnosed disorders. If a defendant is found competent, then the trial proceeds; however, if the defendant is found incompetent, then further evaluations are conducted to determine the likelihood that treatment will ultimately restore the defendant's adjudicative competence. Consequently, there is a need for research to determine outcomes that can be expected according to a defendant's diagnosis and other associated variables (Grisso et al., 2003). If a defendant is determined to be incompetent, then it is important to know how likely it is that treatment will in fact restore adjudicative competency. Such information would presumably increase both the efficiency and effectiveness of mental health professionals' role in the judicial process. Therefore, research has focused on the two most important stages of the process.

1) Historically, the majority of research has looked at the first stage of the competency process. That is, what variables are most useful in determining who will be deemed IST as determined by the initial evaluation requested by the court? 2) More recently, the focus of research has shifted to try and predict who, once deemed IST by the court, is restorable through the treatment process.

### **The Court Evaluation: Who Is Most Likely to Be Referred for Treatment?**

A meta-analysis of 30 articles ( $N = 8,170$ ) by Nicholson and Kugler (1991), showed that the three variables most strongly associated with IST were, low scores on assessments of a defendant's abilities relating to legal comprehension, having a psychotic disorder, and a high severity of psychiatric symptomatology. Additional variables, such as previous psychiatric hospitalization, previous legal involvement, marital resources, and other demographic characteristics showed significant, but weaker, associations with competency status. However, the authors note that some of these relationships may be biased because they are not theoretically related to the legal definition of competence. On the other hand, Hart and Hare (1992)

concluded that clinical variables were the best predictor of CST, in particular, the diagnosis of a psychotic disorder. Furthermore, their results showed no difference among defendants deemed IST or CST on demographic variables, such as age and race, implying that the clinician's decision was unbiased, a general trend in the more recent literature.

In 2003 a group of researchers examined the records of 468 defendants who were referred for competency evaluations at a state mental health facility in Alabama. They collected clinical, criminological, and sociodemographic data. Results indicated that defendants deemed IST were significantly more likely to be single, unemployed, African American, receiving disability, older, and charged with a nonviolent crime. In addition, there was a very strong relationship between competency status and the absence of a psychiatric diagnosis in that 1) 99% of defendants without a diagnosis were determined competent to stand trial, 2) a defendant with a psychotic disorder was five times more likely to be determined IST versus CST, and 3) a defendant with a nonpsychotic major disorder (e.g., major depression, PTSD) was almost six times more likely to be deemed IST compared to those deemed CST. Defendants were less likely to be deemed incompetent if they had a nonpsychotic minor disorder and/or a substance abuse disorder. Variables not significantly predictive of competency status included: previous mental health contact, previous psychiatric hospitalization, current psychotropic medication, criminal history, gender, and education. Using logistic regression, they found the four most useful predictors to determine competency were, a psychotic diagnosis, a nonpsychotic major diagnosis, nonpsychotic minor diagnosis, and employment status. Their results did not appear to be biased because the strongest predictors of competence were those most closely related to the operational definition of adjudicative competency. When using their model, the researchers found an overall 82% success rate in predicting competency status with more false positives occurring for those defendants predicted competent. However, the authors acknowledged that, since the base rate of

competency for those referred for evaluation is around 80%, the correct classification from the model could simply be a product of the high original base rate (Cooper & Zapf, 2003; Hubbard, Zapf, & Ronan, 2003). This is a problem that many clinicians face in forensic contexts (Gouvier, 1999).

In a 2005 paper, Stafford and Wygant discussed the results of unpublished, archival information relevant to the disposition and evaluation of defendants referred for competency examinations. Of the 79 defendants charged with misdemeanor crimes, 53% (33) were found incompetent to stand trial, and, of the defendants referred for evaluations from the felony court (26), 14% were found incompetent. In fact, many studies have concluded that the type of offense can be predictive of competence decisions because defendants charged with misdemeanor offenses are more likely to be determined incompetent than those charged with violent (homicide and sex offenses) crimes or felonies (Cooper & Zapf, 2003; Rosenfeld & Ritchie, 1998; Warren et al, 1997). One explanation for this relationship may be that severe cognitive deficits hinder organization and execution abilities, characteristics often needed to carry out exceptionally violent crimes. Therefore, the relationship between offense type and competency may be mediated by the severity of psychotic symptoms (Robertson, Gupton, McCabe, & Bankier, 1997). Stafford and Wygant also found that, when compared with those determined competent for trial, the incompetent defendants scored lower on antisocial scales (were less violent), had fewer prior probations and incarcerations, displayed more psychopathology (with a higher percentage currently taking antipsychotic medications), were less likely to be employed, had lower IQ's and were, on average, older than their competent counterparts. Furthermore, the defendants found competent to stand trial were more likely to have a diagnosis of drug abuse and dependence and to be prescribed antidepressant medications.

When they replicated the unpublished archival study, Stafford and Wygant (2005) found that, of the 80 pretrial defendants referred for an evaluation, 77.5% (n = 62) were deemed incompetent to stand trial, which they acknowledged was a much higher percentage than found in other research. The incompetent group included significantly more individuals with a psychotic diagnosis, fewer individuals with a personality disorder (almost half of the competent individuals were diagnosed with a personality disorder), and had a greater mean number of past psychiatric hospitalizations. These findings are consistent with a comprehensive review done by Mumley et al. (2003) who concluded that the literature comparing and contrasting competent and incompetent defendants showed that the single most important variable associated with incompetent defendants is that they are more likely to be diagnosed with a psychotic disorder.

This link between psychopathology and incarceration is supported by data showing that, schizophrenia patients with more and/or more severe psychotic symptoms are more likely than a demographically matched comparison group to be convicted of a criminal offense (Wallace, Mullen, & Burgess, 2004). These researchers also reported that such offenses occurred throughout the patient's life, not only at the onset or during active phases of the illness. According to Brugha et al. (2005), the prevalence of psychotic disorders is as much as 10 times greater among criminals than in the normal population. It is not surprising, then, that defendants with a diagnosis of schizophrenia score much lower on competency measures than any other group of defendants diagnosed with a psychiatric disorder (Frierson & Finkenbine, 2004; Hoge & Poythress et al., 1997).

Nestor, Daggett, Haycock, and Price (1999) looked at correlates between specific neuropsychological variables and adjudicative competence. They noted that most of the defendants referred for neuropsychological evaluations were diagnosed with a psychiatric disorder, including psychotic and non-psychotic. Data indicated that defendants deemed

incompetent scored lower on measures of intelligence, attention, and memory. In particular, an association was found in the specific areas of episodic memory and social intelligence. Brain abnormalities revealed through neuroimaging (MRI or CT) were associated with lower IQ's in specific populations of murder defendants referred for pretrial competency evaluations (Frierson & Finkenbine, 2004). Similar results are also found even when looking at sub-groups of defendants, such as those diagnosed with mental retardation (MR). Within the MR population, incompetent defendants were also more likely to be African American and receiving social security disability services (Anderson & Hewitt, 2002). A major concern is that these MR defendants get overlooked for competency evaluation referrals because it is harder for some attorneys to detect a cognitive deficit as opposed to those defendants with severe psychotic symptoms. The response to this problem has been the use of quick screening tools shown to be very efficient in detecting those defendants that are in need of full adjudicative competence evaluations (Mumley et al., 2003). Overall, the research suggests that the more cognitively disabled (i.e., due to mental disease and/or a cognitive deficit in mental processes) a defendant is, the more likely he/she is to be found incompetent and consequently referred for treatment.

### **The Treatment: Who Is Restorable to CST?**

Relative to the amount of literature on competency evaluations, there is less research on the actual treatment given to those defendants who are determined to be incompetent to stand trial and referred to mental health institutions. Most studies of restoration treatment simply provide descriptive statistics of those defendants who eventually become CST through the intervention. This may be a result of the fact that the defendants who are referred for treatment suffer from a wide variety of disorders and may require individualized treatment services.

Research shows that if restoration of competence is to occur, it will happen within 4-6 months of treatment, with competence regained faster with inpatient services than outpatient



services (Warren et al., 1997). Therefore, the majority of states require that an incompetent defendant be re-evaluated for competence at least once every 6 months throughout the intervention process (Grisso et al., 2003). At each evaluation, the examiner must determine whether competence has been attained, is attainable, or is not reasonably attainable in the future. Unfortunately, there is a lack of standardization of these services due to the substantial legal variations across states and the fiscal burdens on many local mental health facilities. State law can vary throughout the process, from the legal standards for making arrests to the length of stay and type of treatment allowed for incompetent defendants (Mumley et al., 2003).

A review of restoration programs by Scott (2003) showed that the single most common type of treatment included group sessions focused on legal education and the trial processes. In general, most institutions used a combination of pharmacological and psychological interventions as part of the treatment plan. Psychotropic medication has consistently been shown to significantly decrease a wide range of psychiatric symptoms, and some researchers believe that this is the only reliable method of treatment for those defendants with psychoses (Carbonell, Heilbrun, & Friedman, 1992). In contrast, other disorders are less likely to be associated with restoration of competence (e.g., traumatic brain damage, unmanageable psychoses, or debilitating developmental disabilities) and for these defendants, charges must either be dropped or they must be committed to a state institution (Skeem, Golding, & Emke-Francis, 2004).

For those diagnoses that are thought to be treatable, many states have ruled that the defendant does not have the right to refuse treatment for the purpose of becoming competent. In fact, declaring a defendant IST has proved to be a legitimate method of committing mentally ill/cognitively disabled individuals to inpatient healthcare rehabilitation they would otherwise not have access to (Grisso et al., 2003; Melton et al., 1997). Mumley et al. (2003), discuss the important idea that some states are utilizing mental health courts as a “back door” for getting the

mentally ill a type of treatment that they would otherwise not receive because the defendant was not considered dangerous enough for commitment prior to the charge of the crime. They found that this hypothesis could be supported from data obtained in particular states where there are few local community mental health services and a high number of defendants deemed incompetent to stand trial and subsequently committed to an institution through the legal process. However, they also noted that this conclusion is based on inferences about the data and cannot be deemed entirely valid as it was not always the primary hypothesis of the studies reviewed. They also have noted the inherent ethical dilemmas that attorneys face in making a decision to refer a defendant for a competence evaluation when they know the client is likely to be declared incompetent, which could lead to the client's being denied his/her legal freedom through the process of involuntary hospitalization.

There is not much research on the actual treatment provided to incompetent defendants. Most of the studies involve predicting the length of time needed for restoration treatment as that issue is most important to state and government officials who fund the facilities. Nicholson and Johnson (1991) combined data from a 4-year period investigating samples from two previous studies, ultimately providing analyses on 161 competency decisions made on defendants 7-8 weeks after being admitted for inpatient treatment. Overall, 11.1% of their sample was determined by a treatment team to be incompetent and they examined variables that best predicted this determination. While demographic variables were not associated with competency decisions when all other variables were controlled, data analysis did reveal that the GCCT (i.e. psycholegal ability) score was the one best predictor of competency status, with psychiatric diagnosis the 2<sup>nd</sup> best predictor. The authors also noted that these two variables showed a low correlation, and therefore stressed the importance of assessing both legal comprehension and mental status when determining a defendant's competency to stand trial subsequent to treatment.

In addition, the data only accounted for a small proportion of variance which implies that many other factors may be individually relevant depending on the specific characteristics of the defendant. A subsequent study by the same research group found that when testing the predictor model, scores on psycholegal ability and psychopathology were the strongest factors, with 89.5% of defendants being restored to competency after an average of 283 days in an inpatient treatment facility (Nicholson, Barnard, Robbins, & Hankins, 1994).

Similarly, Ustad, Rogers, Sewell, and Guarnaccia (1996) did a study in which they investigated the application of a competency assessment measure among an inpatient population having received competency restoration treatment for an average of 57 days. Surprisingly, they did not find any differences between those defendants measured to be competent vs. incompetent (by the GCCT-MSH) on any variables. However, when they ran a prediction analysis, the three best predictors of competency were a psychotic disorder, a nonpsychotic mood disorder, and a low IQ. In addition, clinical variables alone held a 61.3% rate of prediction, with the rate lowered as sociodemographic variables were factored into the model.

Hoge et al. (1996) compared competent and incompetent individuals' performance on assessment measures reporting an average length of treatment as a little more than three months. While they did not discuss the specific course of treatment, they found that defendants restored to competence throughout the treatment showed lower scores of psychopathology, higher verbal IQ's, and had better understanding of the legal system when they were re-evaluated following treatment. In fact, the authors reported that the performance of these "restored" defendants was equal to that of the competent control group on measures evaluating the comprehension of legal information.

In an additional study Hoge & Bonnie et al. (1997) used a more comprehensive analysis while validating a new competency assessment tool, the MacArthur Structured Assessment of

the Competencies of Criminal Defendants (MacSAC-CD). Specifically, the researchers investigated 3 groups: 1) The hospital incompetent group (HI,  $n = 159$ ); defendants who were identified by the courts as IST and subsequently committed to an inpatient facility for restoration treatment and interviewed within a 2 week period from the day they were admitted; 2) The jail group (JT,  $n = 113$ ); competent defendants who were identified as mentally ill and undergoing mental health treatment while incarcerated, and 3) The jail unscreened group (JU,  $n = 94$ ); defendants who were not screened for competency or mental illness by the researchers but were never questioned as IST and not currently involved in any type of mental health treatment program. The researchers assessed each group on a number of demographic, clinical, and forensic measures. Results showed that compared with the other groups, HI defendants (comparable to IST defendants) were more likely to be unemployed and older. The majority of HI defendants were diagnosed with schizophrenia and on antipsychotic medication, while the majority of the JT group (comparable to CST defendants) were diagnosed with an affective disorder and were on an antidepressant. Both HI and JT groups were more likely to be prescribed psychiatric medication, have higher psychiatric symptomatology, have had prior mental health treatment, and be facing a felony charge, than the JU group. More specifically, no difference was found in the total BPRS scores (measuring overall severity of psychiatric symptoms) between the HI ( $M = 37.02, SD = 7.6$ ) and JT group ( $M = 38.95, SD = 8.6$ ). However, the HI group had significantly higher scores on subscales measuring psychoticism and hostility, while the JT group scored significantly higher on the depression and withdrawal scales. In addition, the HI group showed the lowest scores on measures of verbal cognitive functioning (from WAIS subscales) and on the MacSAC-CD subscales measuring the competence to assist counsel and decisional competence when compared to the other 2 groups.

The researchers went a step further to investigate how changes in competence were associated with within-group changes in scores on the assessment measures. They chose a subgroup of defendants from the HI group that were originally IST at the initial evaluation and had undergone treatment for an average of 38.1 days ( $SD = 21.9$ ) at which point they were determined to be CST and were consequently awaiting trial. When comparing pre and post-treatment scores, they found that these defendants showed a significant increase in MacSAC-CD scores (where final evaluation score was equivalent to the initial evaluation score of the JT group) and also a significant improvement on the BPRS total scores ( $M = 37.0$ ,  $SD = 8.3$  at initial;  $M = 29.6$ ,  $SD = 5.5$  at final). Overall, the authors showed that the MacSAC-CD accurately differentiated between IST and CST groups, mirrored changes in competency gained through treatment, showed a positive correlation with clinical determination of competency and a negative correlation with psychopathology and cognitive deficits. They concluded that the MacSAC-CD was superior to other competency tools.

Another study (Nicholson and McNulty, 1992) investigated the effects of inpatient treatment on competence restoration for a forensic facility serving all 77 counties of Oklahoma. They randomly selected the charts of 150 patients from over a four year period who were found IST and committed to the facility in order to examine treatment outcomes; however, specific services provided by the hospital were not discussed. Demographic data showed that the sample was comprised mainly of males (88.2%) with a mean age of 32.2 years ( $SD = 10.3$ ), who were mostly Caucasian (53.1%) and African American (38.1%). The defendants had completed an average of 10.5 years ( $SD = 3.8$ ) of education and only 8.3% were employed. Over 80% of defendants were single and living alone or in an institution. Defendants were interviewed at the time of admission and diagnosed by a psychiatrist. The researchers grouped disorders into three categories: functional psychosis (53.8%), organic disorder or mental retardation (5.7%), and

other (nonpsychotic/nonorganic) (40.6%). To predict restoration, the authors chose to use the admission diagnoses rather than the discharge diagnoses for data analysis. The average Global Assessment Scale (GAS) rating from the psychiatrist was 39.5 indicating significant impairments in overall functioning. This scale was used to assess severity of psychopathology. At the time of admission, two variables were associated with severity of symptoms: county of residence and diagnosis. Restoration findings suggested that only 5.3% of defendants were discharged by the treatment team due to a lack of possible restoration. For the overall sample, the average length of stay was 68.6 days ( $SD = 77.0$ ). Data showed that length of stay significantly varied as a function of county of residence, age, prior psychiatric hospitalizations, and admission diagnosis. In addition, living alone, being unemployed, and having functional psychosis or an organic disorder was associated with a longer length of stay. Overall, the researchers found that the majority of patients were restored to competency by their final evaluation and competent defendants showed a significant increase on global scales measuring the management of psychological symptoms. Although these results support successful treatment outcome, the study suggested that prediction of those defendants unable to be restored to CST is difficult, considering the low base rate of defendants deemed incompetent following most interventions.

More recently, Bertman et al. (2003) conducted a study that examined the outcomes of a specific treatment program for restoration of competency among inpatient defendants. Their population and setting is almost identical to the current study; however their results may not be generalizable to the present study because patients who were severely psychotic or mentally retarded were automatically excluded since they could not validly consent to participate in the research. Consequently, their study only examined the treatment of 16.3% (26) of the patients originally screened. However, these were divided among 3 groups: 1) deficit-focused remediation (DFRT group), 2) legal rights education (LRE group), and 3) standard hospital

treatment (SHT group). The majority of these patients were African American (73%), unemployed (85%), diagnosed with a psychotic disorder or bipolar disorder (77%), had a substance abuse disorder (54%), and had previous criminal charges (99%). Data analyses revealed no initial differences among the three groups in GCCT scores, IQ, BPRS scores, or demographic variables. Within-group analyses revealed significant changes in scores from the initial to final evaluation on the GCCT and the *Bennett* criteria, both of which are assessments measuring psycholegal abilities. Specifically, the increase of the treatment groups (i.e. DFRT and LRE groups) on the GCCT was twice that of the control group (SHT). However, the treatment groups did not significantly differ from one another, implying that the mediating variable for the increased competency was simply more frequent treatment, not necessarily the type of treatment. Interestingly, there was no relationship between change in BPRS scores and measures of competency, even when comparing initial to final BPRS evaluations. Moreover, the authors concluded that focusing treatment on specific individual deficits did not appear to increase scores on competency measures.

Reviews on the topic of treatment for incompetent defendants a variety of programs aimed at awareness training, cognitive rehabilitation, and psychological services. However, these services vary by state, and the research does not appear to provide a consensus on types of treatment supported by empirical data that can be used for the prediction of restoration of competency (Mumley et al., 2003).

Although several studies suggest most incompetent defendants are restorable through treatment, research investigating special populations, such as defendants with mental retardation or severe psychosis disorders, report much lower rates of restoration. Anderson and Hewitt (2002) specifically investigated the probability of competence restoration in defendants who were diagnosed as mentally retarded (MR) and deemed incompetent during their first evaluation.

Results showed that only a third of the sample was restored to competency, with higher IQ score and African American ethnicity predictive of intervention success. These results are consistent with other studies that conclude MR defendants are much less likely to regain competency than those defendants without an intellectual deficit (Daniel & Meninger, 1983; Ellis & Luckasson, 1985). Therefore, the authors propose that competency training may only be useful for those MR defendants with IQs in the upper limits of the mild range. They explain the unexpected race disparity to possibly be the result of examiner biases. In addition, they examined site of treatment (habilitation center vs. state hospital) as a differentiating variable, but there was no significant difference in the number of defendants restored to competency at either treatment facility. However, those defendants with a psychotic diagnosis were more likely to be restored when given more individualized treatment that included antipsychotic medication at the habilitation center. The authors acknowledged that the treatment of MR defendants may not be comparable to other defendants due to the fact that treatment is more focused at “gaining” competency rather than “restoring” competency. An additional study showed that even after a five-month treatment program, the majority of MR defendants were not restored to competency due to the inherent impairments that are characteristic of the very definition of the neurological deficits found in this population (Ho, 1999).

There has also been recent research demonstrating that patients with severe psychotic disorders, such as schizophrenia, who do not adhere to their treatment (i.e., antipsychotic medication) are not likely to be adequately aware of their mental illness. This can lead to poor responses to treatment services, ultimately making interventions less successful for this population (Olfson, Marcus, Wilk, & West, 2006). Their deficits in insight have been shown to include a lack of understanding and reasoning about the legal consequences of their behavior, and researchers suggest that this population may benefit from simple awareness training as an



attempt to prevent future violent acts (Buckley et al., 2004). In particular, researchers have found negative relationships between defendants with schizophrenia and performance on certain tests measuring the specific cognitive abilities (e.g., reasoning and appreciation) needed for competency. In addition, schizophrenia patients score significantly lower on both global and verbal memory tests. These scores have been shown to translate into significant legal impairments, and consequently, there has been a call for research focused on preventions, interventions, and treatments distinctively designed for individuals diagnosed with a psychotic disorder because of the greater probability that they will not regain competency (Mumley, et al., 2003; Verdoux & Liraud, 2000; Viljoen, Zapf, & Roesch, 2003).

### **Recent Research Reviews**

Mumley et al. (2003) have been conducting reviews of the forensic competency literature in 5 year increments for the past 20 years. Their most recent review covered the period of 1996-2000 in which they note that there has been a continual increase in research as well as public acknowledgement of the importance of increased understanding in the area of adjudicative competence. The high costs in money and time associated with forensic competence evaluations are well-known, and many recent studies have assessed the cost-to-benefit ratio of conducting these assessments. While acknowledging the limitations inherent in the evaluations, the reviewers concluded that the benefits outweigh the cost because these assessments provide a model and framework for clinicians to reliably evaluate and refer incompetent defendants to the appropriate court and/or subsequent treatment. They also acknowledged that competence assessments can be “stage-specific” requiring different approaches depending on the level of assessment needed and the deficits being addressed. Their meta-analysis provides information on variables that are associated with both incompetent and competent defendants, while also providing insight into the particular assessments used by the clinician to reach a decision about

the client's competency. In a recently published handbook dealing with forensic psychology, Skeem et al. (2004) called for more research to provide insight as to what tools clinicians use to make decisions about competency, specifically focusing on treatment variables that can be systematically validated, ultimately in an attempt to increase the effectiveness of this legal process.

## MATERIALS

### Comparing Competency Assessment Tools

The two most commonly used and researched competency assessment tools are the Competency Screening Test (CST) and the Georgia Court Competency Test (GCCT, GCCT-MSH). Both assessments show good inter-rater reliability and internal consistency and are appreciated for their efficiency. However, they are often criticized for having low construct validity and predictive utility, ultimately only being suggested for use as a deficiency checklist (Skeem et al., 2004). Recently a new assessment instrument, the MacSAC-CD, has been developed, that attempts to address the limitations of previous competency measures (see above, Hoge & Bonnie et al., 1997). However, in the current study the GCCT-MSH was used as the adjudicative competency assessment.

The original Georgia Court Competency Test (GCCT) was developed as a screening tool to assess legal comprehension and understanding concerning the process involved in a court trial using both verbal and picture questions. It was revised for widespread use as the GCCT – Mississippi Version Revised (GCCT-MSH in the 1980's). The assessment consists of 21 questions divided into sections that ask the defendant about the visual representation of a courtroom, ability to assist counsel, and questions that attempt to assess malingering. The test score, out of a possible 50 points, is multiplied by 2 to give a total score of 100 points with a cutoff maintained at 69 or below (Nicholson, Briggs, & Robertson, 1988). A review provided by Nicholson and Kugler (1991), concluded that scores on the GCCT-MSH showed correlations averaging .42 with other determinations of competence made independently by clinicians. Ustad et al. (1996) found that among inpatient defendants differing in the amount of time they participated in a competency restoration program, the best predictors of incompetence according to the GCCT-MSH were a psychotic or affective disorder and a low IQ. However, it should be

noted that this study found different loading factors from other validation studies for the GCCT-MSH, presumably because the research was using an inpatient population for which the GCCT-MSH had not been previously validated

### **Definition of Assessment Instruments Used in the Current Study**

The BPRS-Expanded Version 4.0 is a quick evaluation that assesses a wide range of psychiatric symptomatology based on Likert ratings (1/not present – 7/extremely severe) of 4 subscales: 1) Positive Symptoms (unusual thought content, conceptual disorganization, hallucinations, suspiciousness, and disorientation) 2) Negative Symptoms (blunted affect, emotional withdrawal, and motor retardation) 3) Resistance (uncooperativeness, hostility, excitement, and grandiosity) and 4) Psychological Discomfort (anxiety, somatic concern, guilt, tension, and depression). The total score is the sum of each of the subscale scores. A conservative threshold for the total score is 35. The assessment is given in interview form during which the clinician assigns a value for each factor based on the manual guidelines (Ventura et al., 1993). James, Duffield, Blizard, and Hamilton (2001) specifically found that among 479 pretrial defendants' BPRS scores, a decision of incompetent to stand trial “was significantly associated with the presence of positive psychotic symptomatology, in particular conceptual disorganization and delusional thinking, but not with symptoms of anxiety, depression or withdrawal,” implying that positive subscale scores were the most predictive of IST while components of the discomfort and negative symptom subscale scores were not. In comparison, Anderson, Crist, and Payne (2004) found that the negative symptom subscale scores of the BPRS were predictive of length of stay across *all* inpatients in a state hospital.

The Global Assessment of Functioning (GAF) is a rating scale used by mental health professionals, to measure the daily life functioning of an individual on a 0 (maximum deficit)-100 (no deficit) point scale divided into 10-point increments representing a deficit continuum.

For each interval, a description of social, occupational, and psychological functioning is given as a guideline of the thresholds that qualify a rating in that particular interval. Deficits stemming from either physical or environmental impairments are not factored into the rating. The Diagnostic and Statistical Manual (DSM-IV-R; American Psychiatric Association, 1987) provides a Multiaxial System used by mental health clinicians, and reserves Axis V for the GAF rating given to individuals receiving diagnoses. The GAF scale has proven to be both reliable and valid when used to assess functioning in mentally ill populations (Jones, Thornicroft, Coffey, & Dunn, 1995). Above a score of 40, there is a general consensus that the individual could be treated as an outpatient.

The Mini-Mental State Examination (MMSE) is a brief assessment used to determine an individual's cognitive capacity. The test consists of questions read aloud by the examiner in areas such as orientation to time and place, attention and memory, comprehension, and basic skills. The maximum score is 30 points with 1 point given for every right answer (Folstein, M., Folstein, S. & McHugh, 1975), with a score of 24 to 30 considered normal.

The Quick Test is an assessment used to estimate IQ which has the advantage of being easily and rapidly administered. It consists of 50 words that are listed in ascending order of difficulty. The examiner says each word aloud and the examinee is asked to point to the one picture, out of 4 choices, that best represents that word. The administration and scoring has been shown to be objective, and the manual provides detailed instructions on how to assess for guessing (Ammons, R. & Ammons, C., 1962). The Quick Test has proven to be a valid measure of IQ when compared to the more comprehensive, commonly used intelligence measures such as the Weschler Adult Intelligence Scale and the Stanford Binet, specifically for the populations described in the current study (Ciula & Cody, 1978; Husband & de Cato, 1982; Gendreau,

Wormith, Kennedy, & Wass, 1975; Lambirth & Panek, 1982; Mednick, 1967; Peteroy, 1980; Traub & Spruill, 1982).

## PURPOSE

The purpose of this study was to assess the relationship of specific demographic, forensic and clinical variables to the restoration of competency in defendants referred by the courts for evaluation of CST. The data analyzed in this study is quite unique for three important reasons: 1) The current sample consists of defendants who were admitted for inpatient restoration treatment and given both an initial (pre-treatment) and final (post-treatment) competency evaluation while hospitalized. By comparing the results of pre and post-treatment assessments, our data provide information on the most relevant variables for differentiating those defendants who benefited the most from the attempt to restore competency. 2) Because there was a competency decision made at *both* evaluations, the data allows us to give insight as to how clinicians make a comprehensive judgment on competency. We can explore what variables factored in the most when making a clinical judgment on a defendant adjudicative competency after restoration treatment has been provided. 3) In particular, this dataset included scores for the total BPRS and for the four subscales, which provided the opportunity to investigate how changes in psychiatric symptoms are related to changes in competency.

At present, only a few studies have included these types of data, but it is difficult to draw firm conclusions because of differences in experimental design. In particular, the past research provides results with little external validity due to strict exclusion criteria, baselines that are not clinically elevated, a lack of pre- to post-test comparison, and competency decisions based solely on a competency assessment score (vs. comprehensive clinical judgments). Therefore, while limited, we hypothesized the following:

1. At the final evaluation, around 20% of the sample would be deemed IST and about 80% would be CST.

2. The IST group would have a significantly longer length of stay, lower psycholegal comprehension (GCCT) scores and GAF ratings at both evaluations, and lower IQs. They would also have a higher number of psychotic diagnoses, including higher BPRS scores (specifically positive symptoms), with no improvement in symptomatology.
3. The CST group would display significant improvement on GAF ratings, GCCT-MSH scores, and BPRS total scores from initial to final evaluation. Specifically, they would improve on positive symptoms, but possibly not subscales representing depression and withdrawal symptoms.



## **METHOD**

### **Patient Population**

This was a retrospective study of inpatients at the Eastern Louisiana Mental Health System (ELMHS) – Forensic Division, which is the only forensic hospital in the state of Louisiana. After approval from the Institutional Review Boards of Louisiana State University, ELMHS, and the Louisiana Department of Health and Hospitals, archival data from hospital charts and medical records were reviewed for 79 consecutive pre-trial patients admitted during the months between June 2002 and August 2003. Data was abstracted from records and the relevant variables were coded onto a spreadsheet. Each participant had been determined IST by a local sanity commission and consequently court ordered for hospitalization for competency restoration treatment. There was no contact needed with the participants to collect the data, and all information was de-identified.

### **Procedure**

After being admitted to the hospital each patient was given an initial evaluation, after which treatment was begun. At some point during treatment the attending psychiatrist made a clinical determination to request a second, final, evaluation for the decision regarding competency. This study used data from patients who were referred for inpatient treatment and were administered both initial and final competency evaluations during their period of hospitalization.

Patients admitted to this unit are routinely given the following assessments during the initial evaluation: Georgia Court Competency Test – Mississippi Version Revised (GCCT-MSH), Quick Test, Brief Psychiatric Rating Scale (BPRS-expanded version 4.0), Mini-Mental State Examination (MMSE), Rapid Estimate of Adult Literacy in Medicine (REALM), Rey Fifteen Item Memory Test, and a clinical interview that includes a Global Assessment of Functioning

(GAF) rating. [Because too few scores were available, the data analysis does not include the results of the REALM or Rey assessments.]

All patients admitted for competency restoration at ELMHS receive individual psychiatric treatment appropriate for their diagnosis, group competency education, and individual sessions with a social worker. When the patient appears to obtain no further benefits from treatment, a final competency evaluation is ordered. At this time, patients are re-administered the GCCT and the BPRS. The results of the pre- and post-evaluations, together with an overall clinical assessment, determine whether the treatment was successful in restoring competency.

### **Statistical Analysis**

Differences between those defendants ultimately deemed CST (competent to stand trial) or IST (incompetent to stand trial) at the final evaluation were analyzed with chi square tests for categorical data. Independent t-tests were conducted to determine differences for quantitative data between groups, and paired t-tests were used to analyze pre and post-scores within each group. In addition, where applicable, correlation coefficients were computed using the Pearson product-moment correlation coefficient ( $r$ ). The alpha level was set not to exceed .05 for all analyses. All statistical analyses were done using the Statistical Package for the Social Sciences (SPSS), version 13.0. It should be noted that both parametric and nonparametric statistical analyses were conducted, but because both types of tests produced identical areas of significance among the results, parametric statistics are presented in the present analysis.

## RESULTS

The total sample consisted of 65 males and 14 females from Orleans Parish, Louisiana, with an average age at the time of evaluation of 36.12 ( $SD = 13.17$ ) years. Most of the defendants were African American (78%), single (82%), either unemployed (41%) or receiving disability (38%), and had less than 12 years of prior education (59%). In addition, the records revealed that most of the patients had a prior criminal charge (77%), and/or prior psychiatric treatment (71%), while (75%) had a record of self-reported juvenile abuse, and 56% had received prior inpatient care.

A majority of the patients had a diagnosis of psychosis (63%) and/or substance abuse (57%), and 37% had an axis 2 diagnosis of borderline to low intelligence.

The defendants represented in this dataset were placed into one of four categories, by the respective evaluators, at both the initial and final evaluations: 1) Competent 2) Incompetent 3) Borderline or 4) Invalid. Because the majority of research in the literature is conducted on populations in the first two categories, most of the statistical analyses in this study excluded those defendants who were ultimately deemed either “borderline competent” ( $n = 2$ ) or “invalid/unknown decision” ( $n = 19$ ). Therefore, the final dataset included a total of 58 individuals, of whom 43 were deemed CST and 15 IST. The demographic, forensic and clinical information for these 58 defendants is summarized in Tables 1 – 3.

### **Between Subjects**

As shown in Table 1, the 2 groups of defendants did not differ on any demographic variable. That is, the IST and CST groups were similar in age (37.5 and 34.9 years respectively); in gender (66.7 and 86% male, respectively); were mostly African American (93.3 and 81.4%, respectively), single (80 and 86%, respectively), and unemployed (46.7 and 41.9%, respectively). About two-thirds of each group had less than 12 years of education.

**Table 1.** Comparison of Incompetent and Competent Defendants on Demographic Variables

Category	Incompetent*	Competent*	<i>p</i>
Age <i>M (SD)</i>	37.5 (14.1)	34.9 (13.2)	ns
Gender			ns
Male	66.7 (10)	86 (37)	
Female	33.3 (5)	14 (6)	
Ethnicity			ns
Caucasian	6.7 (1)	16.3 (7)	
African American	93.3 (14)	81.4 (35)	
Asian	0	2.3 (1)	
Marital Status			ns
Single	80 (12)	86 (37)	
Married	6.7 (1)	7 (3)	
Divorced	13.3 (2)	7 (3)	
Education level			ns
< 12	60 (9)	55.8 (24)	
≥ 12/GED	40 (6)	41.9 (18)	
Unknown	0	2.3 (1)	
Employment Status			ns
Unknown	13.3 (2)	14 (6)	
Unemployed	46.7 (7)	41.9 (18)	
Employed	6.7 (1)	7 (3)	
Disabled	33.3 (5)	37.2 (16)	

\*All values, except age, are percent (*n*).

It should be noted that a majority of the analysis did not meet the minimum expected count of 5 per cell.

Table 2 shows that about half of each group was hospitalized as a result of a violent offense and half for a nonviolent offense, and, that about 30% - 40% of *previous* offenses for each group were nonviolent. Approximately three quarters of each group reported a history of juvenile abuse. Nevertheless, in spite of this similarity in forensic variables, there was a significant difference between the groups in the GCCT score. The score of inpatients ultimately deemed CST was significantly greater than those deemed IST at both the initial  $t(40) = 2.38, p = .02$ , and the final competency evaluation,  $t(54) = 6.47, p < .01$ . Although the performance of each group improved from the pre-treatment to post-treatment evaluation, defendants ultimately deemed IST had consistently lower scores on the GCCT than the CST group.

As shown in the bottom of Table 3, the groups were also similar in regard to clinical characteristics. About two-thirds of each group were diagnosed with a psychotic disorder (schizophrenia, schizoaffective disorder, etc.), rather than an affective disorder (bipolar disorder, depression, etc.), a cognitive disorder (dementia), substance abuse, or malingering/none/deferred. Axis two diagnoses were also comparable with about 30% - 50% given a diagnosis of mental retardation, and very few with a personality disorder, leaving about half with no Axis 2 diagnosis.

Results of clinical assessments are summarized in the top half of Table 3. As shown, there is no difference between the groups in the IQ estimate, with both scoring at a borderline level. Similarly, the groups had comparable but low scores on the MMSE. Severity of psychotic symptoms was in the moderate range, but again, the two groups did not differ at either of the two evaluations. However, GAF ratings of the CST group were greater at both evaluations,  $t(38) = 2.62, p = .01$  (unequal variances) and  $t(33) = 4.36, p < .01$ , respectively; and this group also had a significantly shorter length of stay from admit date to discharge date,  $t(39) = -2.95, p = .01$ , although not in the time of admission to the final evaluation.

**Table 2.** Comparison of Incompetent and Competent Defendants on Forensic Variables

Category	Incompetent*	Competent*	<i>p</i>
GCCT-MSH score <i>M (SD)</i>			
Initial evaluation	42.9 (21.7)	63.2 (17.1)	= .02
Final evaluation	62.4 (21.9)	91.7 (5.9)	< .01
Type of Offense			
Non-violent	46.7 (7)	39.5 (17)	ns
Violent	46.7 (7)	46.5 (20)	
Both	6.7 (1)	14 (6)	
Type of Prior Offense			
Non-violent	40 (6)	32.6 (14)	ns
Violent	13.3 (2)	30.2 (13)	
Both	13.3 (2)	20.9 (9)	
No information	33.3 (5)	16.3 (7)	
Juvenile Abuse			
Yes	73.3 (11)	76.7 (33)	ns
No	20 (3)	16.3 (7)	
Unknown	6.7 (1)	7 (3)	

\*All values, except GCCT, are percent (*n*).

It should be noted that a majority of the analysis did not meet the minimum expected count of 5 per cell.

**Table 3.** Comparison of Incompetent and Competent Defendants on Clinical Variables

<b>Clinical Measures</b>	<b>Incompetent <i>M (SD)</i></b>	<b>Competent <i>M (SD)</i></b>	<b><i>p</i></b>
GAF			
Initial evaluation	33.6 (9.9)	43.2 (14.8)	= .04
Final evaluation	40.7 (9.8)	60.2 (10.5)	< .01
BPRS			
Initial evaluation	47.1 (10.5)	48.1 (13.6)	ns
Final evaluation	40.7 (18.2)	35.0 (7.7)	ns
Quick test	70.5 (22.9)	73.5 (18.8)	ns
MMSE	20.4 (5.3)	22.4 (6.5)	ns
Length of Stay (months)			
Admit – Evaluation	4.3 (3.8)	2.7 (1.5)	ns
Admit – Discharge	17.9 (7.0)	7.7 (8.6)	= .01
<b>Diagnostic Variables</b>	<b>% (n)</b>	<b>% (n)</b>	<b><i>p</i>*</b>
Diagnosis – Axis 1			ns
Psychosis	66.7 (10)	65.1 (28)	
Affective	0	14 (6)	
Cognitive	13.3 (2)	4.7 (2)	
Malingering	6.7 (1)	7 (3)	
No information	13.3 (2)	9.3 (4)	
Diagnosis – Axis 2			ns
Mental Retardation	46.7 (7)	32.6 (14)	
Personality d/o	6.7 (1)	16.3 (7)	
No information/ Deferred/RO	46.7 (7)	51.2 (22)	
Substance Abuse			ns
Yes	40 (6)	60.5 (26)	
No	60 (9)	39.5 (17)	
Treatment History			ns
Inpatient	0	18.6 (8)	
Outpatient	13.3 (2)	18.6 (8)	
Both	60 (9)	37.2 (16)	
Unknown	26.7 (4)	25.6 (11)	

\*It should be noted that a majority of the analysis did not meet the minimum expected count of 5 per cell.

These results showed that the CST group performed better on the GCCT and GAF than the IST group from the beginning, maintained that superiority, and were discharged sooner.

### **Within Subjects**

The results of comparisons between the groups are consistent with the outcome of the within-subject analyses, summarized in Table 4. The CST group showed significant improvements from initial to final scores in: 1) GAF ratings,  $t(27) = -7.05, p < .01$ ; 2) GCCT scores,  $t(29) = -9.11, p < .01$ , and 3) BPRS scores,  $t(29) = 5.36, p < .01$ . In addition, at the initial evaluation, there was a significant negative correlation between GAF score and BPRS score,  $r(27) = -.56, p < .01$ ; however, this was not the case at the final evaluation,  $r(15) = -.04, NS$ .

The CST group also showed significant improvements on three of the four BPRS subscales between the two evaluations, namely, on negative symptoms,  $t(16) = 2.30, p = .04$ , positive symptoms,  $t(16) = 3.64, p < .01$ , and resistance,  $t(16) = 2.99, p < .01$ . They did not show a statistically significant improvement on the discomfort scale,  $t(16) = .67, NS$ .

In contrast, the defendants deemed IST at the final evaluation only showed significant improvement on the GAF,  $t(6) = -3.33, p = .02$ , and GCCT,  $t(10) = -3.47, p = .01$ , while neither the BPRS score, nor any of the subscale values, changed significantly between the two assessments.

Our data set was unique in that each defendant was placed in one of four groups (i.e. competent, incompetent, borderline, invalid) at *both* the initial and final evaluations. Therefore, we were able to determine whether these placements changed through treatment. Table 5 summarizes the group designations at the final evaluation as a function of the respective designations determined by the initial evaluation.



**Table 4.** Comparison of Clinical Measures on Initial and Final Evaluations

<b>Competent at Final Evaluation</b>			
<i>Assessment</i>	Initial evaluation <i>M (SD)</i>	Final evaluation <i>M (SD)</i>	<i>p</i>
GAF	43.2 (14.8)	60.2 (10.5)	< .01
GCCT-MSH	63.2 (17.1)	91.7 (5.9)	< .01
BPRS	48.1 (13.6)	35.0 (7.7)	< .01
BPRS Subscales			
Positive symptoms	13.4 (5.3)	8.8 (3.3)	< .01
Negative symptoms	7.4 (4.2)	5.1 (2.2)	= .04
Resistance	8.8 (4.2)	6.1 (2.1)	= .01
Discomfort	10.2 (4.7)	9.2 (4.8)	ns
<b>Incompetent at Final Evaluation</b>			
<i>Assessment</i>	Initial evaluation <i>M (SD)</i>	Final evaluation <i>M (SD)</i>	<i>p</i>
GAF	33.6 (9.9)	40.7 (9.8)	= .02
GCCT-MSH	42.9 (21.7)	62.4 (21.9)	= .01
BPRS	47.1 (10.5)	40.7 (18.2)	ns
BPRS Subscales			
Positive symptoms	12.4 (4.8)	9.3 (8.0)	ns
Negative symptoms	7.8 (3.8)	4.9 (3.2)	ns
Resistance	6.0 (4.5)	6.0 (4.8)	ns
Discomfort	10.5 (3.6)	8.5 (5.2)	ns

At the initial evaluation, approximately one third of the patients were considered competent, incompetent, or invalid (meaning that a determination was not possible at that time). Only 9 out of 58 were judged to be of borderline competency. However, at the final evaluation, only about half of the individuals in each of these 4 groups maintained their respective status. Of course, it is admirable that about half of those deemed incompetent, borderline, or invalid, ultimately achieved restoration of competency. However, 9 out of the 22 initially deemed competent, were no longer judged to be competent at the post-treatment final evaluation. This was unexpected, especially considering that these individuals presumably underwent treatment for competency restoration. As a result of these shifts, there were still a substantial number of defendants in the Invalid category, 19, only 6 fewer than the initial 25.

**Table 5.** Categorization of Defendants at Final Evaluation as a Function of Initial Evaluation

<b><u>Initial Evaluation</u></b>	<b><u>Final Evaluation</u></b>			
	Competent ( <i>n</i> = 43)	Incompetent ( <i>n</i> = 15)	Borderline ( <i>n</i> = 2)	Invalid ( <i>n</i> = 19)
Competent ( <i>n</i> = 22)	13(59)	2(9)	1(4.5)	6(27)
Incompetent ( <i>n</i> = 23)	12(52)	9(39)	0	2(9)
Borderline ( <i>n</i> = 9)	5(55.6)	1(11)	1(11)	2(22)
Invalid ( <i>n</i> = 25)	13(52)	3(12)	0	9(36)

## DISCUSSION

The goal of this study was to identify those factors, among several demographic, forensic and clinical variables obtained from an inpatient, forensic population, which were associated with the determination of competency to stand trial. Where applicable, the results support previous conclusions in the literature. But these data also provide more specific information that may help to improve the ability to identify those individuals most likely to benefit from efforts at competency restoration.

There is consensus among studies that the 3 main variables that predict incompetence to stand trial (IST) at both the initial evaluation (by the court) and the final evaluation (following restoration treatment) are 1) a diagnosis of a psychotic disorder, 2) severe psychiatric symptomatology, and 3) a deficit in psycholegal abilities, which includes those defendants with below average intelligence (Nicholson and Kugler, 1991). Our results are consistent with these general conclusions, in that, most of our patients were diagnosed with a psychotic disorder, had comparable, moderately severe symptoms, and initially scored below the threshold for psycholegal comprehension.

Unfortunately, these variables are usually insufficient for predicting who will remain incompetent after an attempt to restore competency is made, because of the high base rates of successful treatment outcomes. That is, the majority of defendants become competent through treatment. Consequently, there is a need to refine established predictors of competency and to determine more precisely what is most important among these variables for predicting who will regain competency to stand trial.

While our population was small, it provided data from a homogeneous sample in that the initial evaluation showed no differences in the majority of variables between those ultimately deemed CST and those who remained IST. Specifically, we found no differences in age (36

years), gender (male), race (African American), marital status (single), employment status (unemployed), education level (less than 12 years), IQ (borderline), MMSE status, type of offense or nature of prior offenses. Finally, our results are also consistent with the timeframe reported in the literature. The average time from admission to the final evaluation was significantly shorter for the CST group (Table 3), although both intervals were within the 4 to 6 month period that is considered typical for competency restoration (Hoge et al., 1996; Warren et al., 1997).

Importantly, because the groups did not differ on the total BPRS score, the MMSE, or the Quick Test at the initial evaluation, we can assume that the significant differences found within-groups are not the results of the CST defendants being more “educatable” or starting with less severe psychiatric symptomatology. It may be of interest to note that both MMSE scores were below threshold. It remains to be seen whether the CST group would have scored significantly better on this measure at the final evaluation.

As expected from the literature, there were significant differences between groups on both, the initial and final GAF ratings and GCCT scores. However, the analyses revealed that although both groups significantly improved on these measures, the performance of the IST group still did not reach the level of the CST group. In fact, Table 3 shows that the IST group’s average GAF rating at the final evaluation was not even as high as the CST group’s average GAF rating during the initial evaluation, and would still be considered borderline, whereas, the average of the CST group was well above the threshold value. A similar situation occurred with the GCCT scores (Table 2). At the initial evaluation, the average of both groups was below threshold; by the final evaluation, the IST group’s score was still below threshold, only reaching the value of the CST group’s score from the initial evaluation. In contrast, the CST group performed well above threshold. Consequently, even though the IST defendants improved

significantly on these measures, their final scores still did not qualify them to be deemed competent. While these data support previous research, they are also unique in providing quantitative support of the respective group designations by virtue of the comparisons between pre- and post-treatment evaluations.

Moreover, because the GAF and GCCT are the two assessments that most clearly differentiated the groups, it seems that the clinicians are using the combined results from a competency assessment measure (GCCT) and a more subjective functional rating (GAF) to form the ultimate decision about competency. Therefore, while the GCCT-MHS is criticized for measuring more “current knowledge” than “capacity” (Hoge & Bonnie et al., 1997), clinicians at this facility are employing a battery that assesses both of these constructs. It would be interesting to see if using the MacSAC-CD as the first-line competency measure at this facility could cover both assessments (GAF and GCCT), ultimately eliciting the same information in one sitting. This could increase the efficiency of the overall assessment process, something of vital importance in an inpatient setting such as ELMHS.

Our data also provide new information on the relationship between psychotic symptomatology and competency restoration. As would be expected based on the Ustad et al. (1996) study, our groups did not show significant differences in BPRS scores at either the initial or final evaluations. However, when analyzed more specifically by comparing within-group improvements on the BPRS, we found that the scores of the CST group significantly decreased on the total score, and on the positive symptoms, negative symptoms, and resistance subscales, but not on the discomfort scale. However, the scores of the IST group remained elevated on all of these measures, ultimately showing no significant differences after treatment was implemented. This data is most comparable to the Hoge & Bonnie et al. (1997) study which found that those defendants who were restored, showed significant improvements on total BPRS

scores. Additionally, the HI group (comparable to IST defendants) had a greater number of defendants with a psychotic disorder, consequently scoring higher on the psychotic subscale; while, the JT group (comparable to CST defendants) had a greater number of defendants diagnosed with an affective disorder, consequently scoring higher on the depression subscale. Because, the JT group consists of CST defendants, it could be assumed that they may be competent enough to be fully aware of their circumstances and therefore, have increased depressive symptomatology. This finding suggests a plausible reason as to why our CST group improved on psychotic scales, but did not significantly decrease their depressive symptomatology. However, the BPRS total scores in the Hoge study were very low, and even the initial values (37 and 39) were borderline with respect to the severity of psychotic symptoms. Moreover, although we did not find similar between-group differences, our data still offers indirect support of James, Duffield, Blizard, and Hamilton (2001) who found that incompetency was associated with higher scores on positive symptom scales but not on the symptoms of anxiety, depression etc. that are included in the discomfort subscale. In contrast, Bertman et al. (2003) did not find associations between BPRS scores and measures of competency throughout restoration treatment. However, they specifically excluded those defendants who were severely psychotic. Therefore, our results provide the most relevant data on this point, while also adding a unique dimension to the previous research by showing how improvements in specific symptomatology measured by the BPRS subscales are associated with CST; results that are in agreement with the conclusions of Hoge & Bonnie et al. (1997) and James et al. (2001).

Because our data provided a clinical judgment of competency at both the initial and final evaluation, we were able to appreciate that about one third of the sample was determined competent even before treatment. It is possible that the facility offers a more comprehensive evaluation and therefore, it would not be unusual to find a small proportion of defendants were

CST even though the court previously referred them to treatment due to IST status (see Bertman et al., 2003). This fact implies that we might find differences in the sample even at the pre-treatment stage.

Even more unique to our study is that the data included categories of “invalid” and “borderline” in addition to the common CST and IST designations in the literature. For this reason, we were able to see how competency status changed as a result of the treatment process (Table 5). Surprisingly, while about half of those defendants in the initial invalid and incompetent categories became competent through the treatment process for the final evaluation, the inverse also occurred - about half of those defendants deemed CST at the initial evaluation were *not* CST at the final evaluation, and 6 of them ended up in the Invalid category. For this reason, the total number of Invalid datasets only decreased from 25 to 19. Because we had both, a ‘before’ and ‘after’ view of our population, we were able to reveal this aspect of the data, which, to our knowledge, has never before been described. Future research might usefully include this approach as a possible measure of the reliability of forensic determinations.

Because our dataset was small, our results must be considered preliminary, especially the conclusion that inpatient treatment did not change the BPRS subscale scores of the IST group. This conclusion needs to be verified in a larger dataset due to the fact that exploration of the numerical data revealed that the actual means for the IST group mirror those of the CST group, including the majority of changes representing improvement; therefore a lack of significance may be due to a small  $n$  for these analyses. In addition, both the GAF and BPRS can be subjective in nature and the inter-rater reliability of these assessments could be of question among this data. However, it was understood that the same group of clinicians administered both the initial and final evaluations. Nevertheless, while there was a significant chance for a Type II error in these analyses, where comparable, our results are consistent with the literature



supporting the importance of 1) a diagnosis of psychotic disorder and 2) the ability to comprehend the legal ramifications, in competency determinations. Our data add to the literature in showing the utility of specifying the nature of the psychotic deficits and by raising the issue of examining the reliability of forensic evaluations.

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