

Competency Restoration Treatment: Differences Between Defendants Declared Competent or Incompetent to Stand Trial

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Archival data of inpatient defendants referred for competency restoration were used to make comparisons between those who were restored to competency (CST; $n = 43$) and those who remained incompetent (IST; $n = 15$). The groups did not differ on demographic variables, intellectual capacity, type of offense (violent versus nonviolent), clinical diagnoses, substance abuse, or psychotic symptomatology, as measured by the Brief Psychiatric Rating Scale. However, the CST group performed significantly better than the IST group on both the initial and final Georgia Court Competency Test and Global Assessment of Functioning scale. Psychotic symptom severity decreased significantly only in the CST group, and the CST group was discharged significantly sooner (7.7 ± 8.6 months) than the IST group (17.9 ± 7.0 months). While consistent with prior research, this is the first study to compare both psycholegal comprehension and specific clinical symptoms in defendants before and after competency restoration treatment.

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Determination of competency to stand trial (CST) is the most common procedure involving both the mental health and criminal justice systems. As established by the landmark Supreme Court decision *Dusky v. United States*,¹ the criteria for CST are that a defendant must have the intellectual ability to consult with his lawyer and have both a factual and rational understanding of the legal proceedings regarding his case. Consequently, procedures have been developed in all U.S. jurisdictions to determine if a defendant meets these requirements, and can be deemed CST. If these criteria are not met, the defendant is considered incompetent to stand trial (IST),

and, in most cases, is required by the court to undergo restoration. Restoration is generally effected by providing inpatient mental health treatment and education that allows the defendant to regain competence and proceed to trial.^{2–5}

Until 1972, there was no limit to the amount of time that incompetent defendants could be committed for the purposes of competency restoration. However, in that year the Supreme Court ruled in *Jackson v. Indiana*⁶ that an incompetent defendant may not be held more than a reasonable amount of time to determine if competency will be attainable in the foreseeable future. As a result, mental health professionals who believe that a defendant is IST are now often required to predict whether that defendant will regain competence in a reasonable period of time, if provided a course of treatment.^{2,5}

Unfortunately, several studies have shown that such predictions are extremely difficult,⁴ in part because of the high base rate of successful restorability. Because most defendants are restored to competency, it is difficult to detect those defendants who will not respond to treatment.^{7–9} While Cuneo and Brelje¹⁰

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reported an overall accuracy of 78 percent for such predictions, they also found a high base rate of 74 percent. Carbonell *et al.*¹¹ were accurate in predicting competency restoration in 72.2 percent of their population, but when they attempted a cross-validation in another set of defendants, accuracy dropped to 59.5 percent. In fact, when Cooper and Zapf¹² and Hubbard and colleagues^{13,14} compared characteristics of defendants who were predicted by mental health examiners to be either restorable or not restorable, they found relatively few significant differences to distinguish between the two groups.

Nevertheless, in those few studies that have addressed this question, the results are generally consistent in showing that the two factors most commonly associated with failure to regain competence are impairment in psycholegal ability and the presence of severe psychotic symptoms.^{5,9,15-17}

It should not be surprising that these factors are most frequently associated with failure of restorability, because they are also the two most common variables associated with the initial determination of incompetence. As stated in their comprehensive meta-analytic review, Nicholson and Kugler found that “. . . both legal abilities and psychological or psychiatric functioning are important correlates of competency decisions” (Ref. 2, p 366). Since then, numerous studies have supported this conclusion, while providing additional information on the specific impairments associated with IST. Substantial evidence supports the relationship between impairment of legal comprehension and psychotic disorders¹⁸⁻²³ and, in particular, between legal criteria of unfitness and the presence of the positive psychotic symptoms of conceptual disorganization and delusional thinking (but not depression and withdrawal).^{24,25}

Considering this consistent body of evidence, it is surprising that, in the words of Ustad *et al.*,¹⁷ most studies “. . . have focused on the ‘front end’ determinations (original evaluations of competency) . . . [while] . . . ‘back end’ determinations, namely, the restoration of competency, have gone largely unnoticed” (Ref. 17, p 131). Even those who have investigated restoration have usually determined the effect of treatment on either clinical or legal deficits, but not both. Siegal and Elwork⁹ found that inpatient education that focused on legal incompetence significantly improved scores on the competence assessment instrument, but no information on psychiatric symptoms was provided. Nicholson and McNulty¹⁵

reported that defendants restored to competency showed significant improvement in overall severity of psychopathology, but they did not include a measure of psycholegal ability. In a follow-up study, Nicholson *et al.*,¹⁶ used a single instrument (the Computer-Assisted Determination of Competency to Proceed Scale) to assess both psycholegal comprehension and psychiatric symptomatology. They found that defendants who performed poorly on these specific subscales were less likely to be restored to competency and had a longer duration of hospitalization. Although acknowledging that the high base rate of competency restoration in their study (nearly 90 percent) made predictions difficult, they emphasized the importance of including measures of psycholegal ability in future research. Subsequently, Ustad *et al.*¹⁷ evaluated the predictive accuracy of several competency assessment instruments, including the Georgia Court Competency Test-Mississippi Version Revised (GCCT-MSH), in conjunction with a symptom rating scale, the SCL-90-R, to determine the relationship between symptomatology and psycholegal comprehension. They reconfirmed the importance of both a psychotic disorder and poor cognitive status as the two most significant predictors of IST. However, they did not find a difference in specific psychopathology between the CST and IST groups; although the symptom severity of the two groups was the same, neither was in the clinical range.

In summary, there is substantial and compelling evidence that poor psycholegal comprehension and positive psychotic symptomatology are the two most common characteristics of defendants deemed IST. Studies also suggest that defendants with the most severe deficits on these measures are less likely to be restored to competency, but the information on this point is scarce. Our goal was to gather more evidence on that question. It was possible to collect more data, because our sample was evaluated before and after they received treatment, and we were therefore able to compare the performance of defendants ultimately deemed competent with that of those deemed incompetent at each of two time points and to see how each group changed as a result of their treatment.

Methods

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 consecutive pretrial patients admitted between June 2002 and August 2003. 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.

Patients admitted to this unit are routinely given the following assessments during the initial evaluation: Georgia Court Competency Test-Mississippi Version Revised (GCCT-MSH),^{26,27} Quick Test,²⁸ Brief Psychiatric Rating Scale (BPRS, Expanded Version 4.0),²⁹ Mini Mental State Examination (MMSE),³⁰ Rapid Estimate of Adult Literacy in Medicine (REALM),³¹ Rey Fifteen Item Memory Test,^{32,33} and a clinical interview that includes a Global Assessment of Functioning (GAF) rating.³⁴ (Because too few scores were available, the data analysis does not include the results of the REALM or Rey assessments.)

The Georgia Court Competency Test (GCCT) 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 threshold score of 70 and scores of 69 to 60 considered borderline. The BPRS-Expanded Version 4.0 assesses a wide range of psychiatric symptomatology based on Likert ratings (1, not present, to 7, extremely severe) of 24 individual items. Several symptoms are grouped into one of four subscales: positive symptoms (unusual thought content, conceptual disorganization, hallucinations, suspiciousness, and disorientation); negative symptoms (blunted affect,

emotional withdrawal, and motor retardation); resistance (uncooperativeness, hostility, excitement, and grandiosity); and psychological discomfort (anxiety, somatic concern, guilt, tension, and depression).

All patients admitted for competency restoration at ELMHS receive individual psychiatric treatment, primarily psychotropic medication appropriate for their diagnosis. They are given group competency education, recreational therapy, and individual sessions with a social worker. Medical treatment is administered when necessary, and referrals for dentistry and eye clinic and dietary assessment are provided when needed. When the patient appears to obtain no further benefits from treatment, a final competency evaluation is ordered. At this time, the GCCT-MSH and the BPRS are readministered to the patient. The results of the pre- and postevaluations, together with an overall clinical assessment, determine whether the treatment was successful in restoring competency.

The GAF rating is given by the psychiatrist at the time of admission and competency evaluation. Usually the patient retains the same psychiatrist throughout the stay. At the time these data were obtained, there were two psychiatrists on staff and three who were Fellows. Some patients who have a Fellow as their psychiatrist may get a new psychiatrist before their final competency evaluation if the Fellows finish their rotation before the competency evaluation is completed. The BPRS is always completed by a psychologist. There have never been more than two psychologists at any one time doing competency evaluations at the facility, and so there is a 50/50 chance the same person did both the intake and competency BPRS assessments. However, every psychologist in the department has received BPRS rating training, and they have all been similarly trained in the use of this rating scale.

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 postscores within each group. Although it would have been desirable to perform a repeated-measures ANOVA on the scores of the two main groups, that approach was not taken, because some of the individuals who were

ultimately deemed IST and CST after treatment, were not in those groups at the first evaluation, before treatment. At the same time, some of the subjects did stay in the group they were first placed in. If we took only a subsample of those individuals in both groups, our initially modest sample size would have been even smaller. However, as a more conservative approach, both parametric and nonparametric statistical analyses were conducted; because both types of tests produced identical statistical outcomes, parametric statistics are presented here.

For the statistical analyses, the Statistical Package for the Social Sciences (SPSS), version 13.0 was used. The α level was set not to exceed .05 for all analyses.

Results

The total sample consisted of 65 males and 14 females. These defendants were placed into one of four categories by the respective evaluators, at both the initial and final evaluations: competent, incompetent, borderline, or invalid. Because most research in the literature is conducted on populations in the first two categories, 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. As noted in the Procedure section, the initial evaluation at the hospital is performed at the time of admission. It is not the first evaluation for competency for the patient, but it is the first (initial) evaluation at the hospital, and it is these values that are presented in the tables.

Summaries of the demographic, forensic, and clinical variables for these 58 defendants are shown in Tables 1, 2, and 3. For each of the main variables, subgroups are also indicated. Many of these subgroups contained five or fewer values. No analyses were performed if there were fewer than five subjects.

Comparisons Between CST and IST Groups

As shown in Table 1, the two groups of defendants did not differ on any demographic variable. That is, the IST and CST groups were similar in age (mean, 37.5 and 34.9 years, respectively) and gender (66.7% and 86% male, respectively) and were mostly African American (93.3% and 81.4%, respectively), single (80% and 86%, respectively), and unemployed

Table 1 Comparison of Incompetent and Competent Defendants on Demographic Variables

Category	Incompetent	Competent	<i>p</i>
Age in years, mean (SD)	37.5 (14.1)	34.9 (13.2)	NS
Gender			
Male	66.7 (10)	86.0 (37)	NS
Female	33.3 (5)	14.0 (6)	NS
Ethnicity			
Caucasian	6.7 (1)	16.3 (7)	—
African American	93.3 (14)	81.4 (35)	NS
Asian	0.0	2.3 (1)	—
Marital status			
Single	80 (12)	86 (37)	NS
Married	6.7 (1)	7.0 (3)	—
Divorced	13.3 (2)	7.0 (3)	—
Education level			
<12	60.0 (9)	55.8 (24)	NS
≥12/GED	40.0 (6)	41.9 (18)	NS
Unknown	0.0	2.3 (1)	—
Employment status			
Unknown	13.3 (2)	14.0 (6)	—
Unemployed	46.7 (7)	41.9 (18)	NS
Employed	6.7 (1)	7.0 (3)	—
Disabled	33.3 (5)	37.2 (16)	NS

All values, except age, are percentage (*n*). NS, not statistically significant; —, not analyzed.

(46.7% and 41.9%, respectively). About two-thirds of each group had less than 12 years of education.

Table 2, which summarizes forensic information, 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 to 40 percent of previous offenses for each group were nonviolent. Approximately three-quarters of each group reported a history of abuse during their juvenile years.

Nevertheless, despite this similarity, there was a significant difference between the groups in the GCCT-MSH score. The score of inpatients ultimately deemed CST was significantly greater than the score of those deemed IST at both the initial ($t = 2.38$; $df = 40$, $p = .02$), and the final competency evaluation ($t = 6.47$, $df = 54$, $p < .01$). Although the performance of each group improved from the pretreatment to posttreatment evaluation, defendants ultimately deemed IST had consistently lower scores on the GCCT-MSH than those in the CST group.

As shown in the bottom half of Table 3, the groups were also similar in regard to diagnoses. About two-thirds of each group were diagnosed with a psychotic disorder (e.g., schizophrenia, schizoaffective disorder), rather than an affective disorder (e.g., bipolar disorder, depression), a cognitive disorder (dementia), substance abuse, or malingering/none/deferred. Axis 2 diagnoses were also comparable with about 30

Table 2 Comparison of Incompetent and Competent Defendants on Forensic Variables

Category	Incompetent	Competent	<i>p</i>
GCCT score, M (SD)			
1st evaluation	42.9 (21.7)	63.2 (17.1)	.02
2nd evaluation	62.4 (21.9)	91.7 (5.9)	<.01
Type of offense			
Nonviolent	46.7 (7)	39.5 (17)	NS
Violent	46.7 (7)	46.5 (20)	NS
Both	6.7 (1)	14.0 (6)	—
Type of prior offense			
Nonviolent	40.0 (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	20.0 (3)	16.3 (7)	—
Unknown	6.7 (1)	7.0 (3)	—

All values, except GCCT, are percentage (*n*). NS, not statistically significant; —, not analyzed.

to 50 percent diagnosed with mental retardation, and very few with a personality disorder.

Results of clinical assessments are summarized in the top half of Table 3. As shown, there was no difference between the groups in the IQ estimate (Quick test), with IST and CST defendants scoring at a borderline level (70.5 and 73.5, respectively). Similarly, the groups had comparable but low scores on the MMSE (20.4 and 22.4, respectively). Severity of psychotic symptoms was in the moderate range, but again, the two groups did not differ at either of the two evaluations (the total BPRS score was 47.1 and 48.1 for the IST and CST groups on the first evaluation and 40.7 and 35.0, respectively, on the second evaluation).

However, GAF ratings of the CST group were greater at both evaluations ($t = 2.62$; $df = 38$; $p = .04$ and $t = 4.36$; $df = 33$; $p < .01$, respectively). In addition, the improvement in the CST group was evident in the length of their hospitalization. Although the groups did not differ on the average time between admission and administration of the second evaluation (4.3 months for IST and 2.7 months for CST defendants), the CST group spent significantly less time in the hospital ($t = 2.95$; $df = 39$; $p = .01$). CST defendants were discharged after an average of 7.7 months (in most cases, to stand trial), whereas the IST defendants remained hospitalized for an average of 17.9 months (until they were discharged either to another forensic unit or to a unit for civilly committed patients). These results show that the CST group

performed better on the GCCT-MSH and GAF than the IST group from the beginning, maintained that superiority, and were discharged sooner. As noted earlier, during the period between the initial and final assessment, it is most likely that some defendants, especially those who were not discharged for many months, were evaluated by different psychiatrists. Unfortunately, we do not have this information. Nevertheless, the data were consistent over time, particularly the respective measures of variability for the two groups.

Comparisons Within the CST and IST Groups

As summarized in Table 4, the CST group showed significant improvements from initial to final scores in GAF ratings ($t = 7.05$; $df = 27$; $p < .01$), GCCT-MSH scores ($t = 9.11$; $df = 29$; $p < .01$), and BPRS scores ($t = 5.36$; $df = 29$; $p < .01$).

The CST group also showed significant improvements on three of the four BPRS subscales between

Table 3 Comparison of Incompetent and Competent Defendants on Clinical Variables

Clinical Measures	Incompetent mean (SD)	Competent mean (SD)	<i>p</i>
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 to evaluation	4.3 (3.8)	2.7 (1.5)	NS
Admit to discharge	17.9 (7.0)	7.7 (8.6)	.01
Diagnostic Variables	% (<i>n</i>)	% (<i>n</i>)	<i>p</i>
Diagnosis, Axis 1			
Psychosis	66.7 (10)	65.1 (28)	NS
Affective	0.0	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			
Mental retardation	46.7 (7)	32.6 (14)	NS
Personality disorder	6.7 (1)	16.3 (7)	—
No information/deferred/RO	46.7 (7)	51.2 (22)	NS
Substance abuse			
Yes	40.0 (6)	60.5 (26)	NS
No	60.0 (9)	39.5 (17)	NS
Treatment history			
Inpatient	0.0	18.6 (8)	—
Outpatient	13.3 (2)	18.6 (8)	—
Both	60.0 (9)	37.2 (16)	NS
Unknown	26.7 (4)	25.6 (11)	—

NS, not statistically significant; —, not analyzed; RO, ruled out.

Table 4 Comparison of Clinical Measures on Initial and Final Evaluations

Assessment	Initial Evaluation	Final Evaluation	<i>p</i>
Competent at final evaluation			
GAF	43.2 (14.8)	60.2 (10.5)	<.01
GCCT	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
Incompetent at final evaluation			
GAF	33.6 (9.9)	40.7 (9.8)	.02
GCCT	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

Data are expressed as the mean ± SD.

the two evaluations: positive symptoms (unusual thought content, conceptual disorganization, hallucinations, suspiciousness, and disorientation; $t = 3.64$; $df = 16$; $p < .01$), negative symptoms (blunted affect, emotional withdrawal, and motor retardation; $t = 2.30$; $df = 16$; $p = .04$), and resistance (uncooperativeness, hostility, excitement, and grandiosity; $t = 2.99$; $df = 16$; $p < .01$). They did not show a statistically significant improvement on the discomfort scale, (anxiety, somatic concern, guilt, tension, and depression; $t = 0.67$; $df = 16$; NS).

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

Discussion

The goal of this study was to identify those factors, among several demographic, forensic, and clinical variables obtained from an inpatient forensic sample, which were associated with successful competency restoration. Although many aspects of these results support previous conclusions in the literature,³⁵ the data also provide more specific information that may help to improve the ability to identify individuals most likely to benefit from such treatment. We note that our sample size is small. However, that is not

uncommon in this literature, and, although the absolute number of individuals was modest, the proportion of those not restored was almost 26 percent, which is close to the 20 percent reported across all samples.³⁶ This group is not an insubstantial minority, especially considering the resources that are applied to effect restoration and the fact that IST ratings may be as high as 62 percent.³⁶ Early identification of these individuals might help reduce unnecessary costs and burdens in financially difficult circumstances.

There is a consensus among studies that the main variables associated with incompetence to stand trial (IST) at both the initial evaluation (by the court) and the final evaluation (following restoration treatment) are a diagnosis of a psychotic disorder, severe psychiatric symptomatology, and a deficit in psycholegal abilities.² 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 (<70 on the GCCT) for psycholegal comprehension. The differential improvement of BPRS symptom clusters within the CST group also supports the results of a previous factor analysis.³⁷

Unfortunately, these variables are usually insufficient for predicting who will remain IST after an attempt is made to restore competency, primarily because of the high base rates of successful treatment outcomes. Consequently, there is a need to refine established variables associated with competency and to determine more precisely what is most important among these variables for predicting who will regain competency to stand trial.

Although small, our study provided data from a homogeneous sample, in that the initial evaluation showed no differences in most of the demographic, forensic, and clinical variables between those ultimately deemed CST and those who remained IST. In fact, perhaps because our groups did not differ on such variables as employment, type of offense, IQ/mental retardation, or overall symptom severity, we were able to detect significant differences on the primary psychopathological and psycholegal variables, even with so few subjects. Of note, 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 did not occur because the CST defen-

dants were more educable or had less severe psychiatric symptomatology at baseline. (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. On the other hand, cognitive interventions, *per se*, may not be sufficient to restore competency.^{38,39})

Our results are also consistent with the timeframe reported in the literature. As expected, the average time from admission to discharge was significantly shorter for the CST group. The average number of months was 7.7, which is essentially the same as the mean of 7.3 months reported by Nicholson *et al.*¹⁶ for their group of defendants restored to competency. In that study, there was also a significant difference between the CST and IST groups in length of stay (LOS), with the mean LOS of the IST group of 27.5 months. However, because of the differences among jurisdictions in the disposition of defendants deemed IST, comparisons between studies of this variable would not be valid.

Perhaps more interesting is the fact that there was no difference between the groups on the time from the first to the second evaluation. To our knowledge, this is the first report of such a comparison. From these data alone we do not know what factors were most relevant in the decision to conduct the second evaluation.³⁶ Apparently there is some common criterion for all defendants that is met within a few months of admission and leads to the expectation that an accurate determination can be made.

As might be expected from the literature, there were also significant differences between the groups on both the initial and final GAF ratings and GCCT-MSH 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, while the average of the CST group was well above the threshold value. A similar situation occurred with the GCCT-MSH scores (Table 2). Consequently, even though the IST defendants improved significantly on these measures, their final average score was less than 70 which still did not qualify them to be deemed competent (see Ustad *et al.*¹⁷ for similar re-

sults). 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 posttreatment evaluations.

Our data also provide new information on the relationship between psychotic symptomatology and competency restoration. In particular, this dataset not only included scores for the total BPRS but also for the four subscales, which provided the opportunity to investigate how changes in specific psychiatric symptom clusters might be related to changes in competency. While the groups' BPRS scores did not differ at either the initial or final evaluations, within-group comparisons showed that the CST values significantly decreased, not only for the total score, but also for the positive symptoms, negative symptoms, and resistance subscales. That the discomfort subscale scores did not change is consistent with other reports showing no difference between CST and IST defendants on measures of anxiety and depression, lending additional credibility to our results.

In contrast, none of the IST scores changed after treatment was implemented. However, because there were so few individuals in that group, conclusions based on this result would be premature. Furthermore, as seen in Table 4, the IST scores were more variable than those of the CST group at the final evaluation, which also supports the preliminary nature of this finding. In particular, the fact that the average negative symptom scores of the IST group decreased even more than the negative symptom scores of the CST group means that conclusions based on this variable must be tentative unless replicated in future analyses.

Furthermore, considering that negative symptoms of schizophrenia are generally resistant to treatment, it is perhaps surprising that these scores decreased significantly even in the CST group⁴⁰⁻⁴² especially in such a short time (<3 months). Rather, this decrease may reflect corollary changes resulting from the improvement in positive symptoms, the so-called secondary negative symptoms.⁴⁰ This speculation would be consistent with the common observation that schizophrenic symptoms often decline within 8 to 12 weeks after initiation of treatment, especially pharmacologic treatment. In one sense, it might be very useful if a selective decrease in positive symptoms only, and not negative symptoms, is associated with the likelihood of competency restoration, be-

cause those are the symptoms most responsive to current treatment. As appreciated by Golding¹⁹ 25 years ago, our data illustrate the degree to which the designation of the typical incompetent defendant overlaps with the diagnosis of treatment-resistant schizophrenic patient and which is still an important concern in forensic research.

In fact, as noted by Leong⁴³ the general question of restorability of incompetent pretrial defendants has received only minimal attention in the literature, despite being raised by the United States Supreme Court in *Jackson v. Indiana* more than three decades ago. We hope our investigations will provide some useful insight that would promote an efficient and humane approach to addressing this important question.

References

- Dusky v. United States, 362 U.S. 402 (1960)
- Nicholson RA, Kugler KE: Competent and incompetent criminal defendants: a quantitative review of comparative research. *Psychol Bull* 109:355–70, 1991
- Mumley DL, Tillbrook CE, Grisso T: Five year research update (1996–2000): evaluations for competence to stand trial (adjudicative competence). *Behav Sci Law* 21:329–50, 2003
- Scott CL: Commentary: a road map for research in restoration of competency to stand trial. *J Am Acad Psychiatry Law* 31:36–43, 2003
- Mossman D: Predicting restorability of incompetent criminal defendants. *J Am Acad Psychiatry Law* 35:34–43, 2007
- Jackson v. Indiana*, 406 U.S. 715 (1972)
- Mowbray CT: A study of patients treated as incompetent to stand trial. *Soc Psychiatry* 14:31–9, 1997
- Lamb HR: Incompetency to stand trial: appropriateness and outcome. *Arch Gen Psychiatry* 44:754–8, 1987
- Siegel AM, Elwork A: Treating incompetence to stand trial. *Law Hum Behav* 14:57–65, 1990
- Cuneo DJ, Brelje TB: Predicting probability of attaining fitness to stand trial. *Psychol Rep* 55:35–9, 1984
- Carbonell JL, Heilbrun K, Fiedman FL: Predicting who will regain trial competency: initial promise unfulfilled. Special Issue: psychopathology and crime. *Forensic Rep* 5:67–76, 1992
- Cooper V, Zapf P: Predictor variables in competency to stand trial decisions. *Law Hum Behav* 27:423–36, 2003
- Hubbard KL, Zapf PA: The role of demographic, criminal, and psychiatric variables in examiners' predictions of restorability to competency to stand trial. *Int J Forensic Mental Health* 2:145–55, 2003
- Hubbard KL, Zapf PA, Ronan K: Competency restoration: an examination of the differences between defendants predicted restorable and not restorable to competency. *Law Hum Behav* 27:127–39, 2003
- Nicholson RA, McNulty JL: Outcome of hospitalization for defendants found incompetent to stand trial. *Behav Sci Law* 10:371–83, 1992
- Nicholson R, Barnard G, Robbins L, et al: Predicting treatment outcome for incompetent defendants. *Bull Am Acad Psychiatry Law* 22:367–77, 1994
- Ustad KL, Rogers R, Sewell KW, et al: Restoration of competency to stand trial: assessment with the Georgia Court Competency Test and the Competency Screening Test. *Law Hum Behav* 20:131–46, 1996
- Reich J, Wells J: Psychiatric diagnosis and competency to stand trial. *Comprehens Psychiatry* 26:421–32, 1985
- Golding SL: Studies of incompetent defendants: research and social policy implications. *Forensic Rep* 5:77–83, 1992
- Hart SD, Hare RD: Predicting fitness for trial: the relative power of demographic, criminal and clinical variables. *Forensic Rep* 5:53–65, 1992
- Hoge SK, Poythress N, Bonnie R, et al: Mentally ill and non-mentally ill defendants' abilities to understand information relevant to adjudication: a preliminary study. *Bull Am Acad Psychiatry Law* 24:187–97, 1996
- Hoge SK, Poythress N, Bonnie R, et al: The MacArthur adjudicative competence study: diagnosis, psychopathology, and competence-related abilities. *Behav Sci Law* 15:329–45, 1997
- Stafford KP, Wygant DB: The role of competency to stand trial in mental health courts. *Behav Sci Law* 23:245–58, 2005
- James D, Duffield G, Blizard R: Fitness to plead: a prospective study of the inter-relationships between expert opinion, legal criteria and specific symptomatology. *Psychol Med* 31:139–50, 2001
- Viljoen, JL, Zapf PA, Roesch R: Diagnosis, current symptomatology, and the ability to stand trial. *J Forensic Psychol Pract* 3:23–37, 2003
- Wildman RW, Bachelor E, Thompson L, et al: The Georgia Court Competency Test. *Newsletter of the American Association of Correctional Psychologists* 11:4, 1979
- Wildman RW, Batchelor ES, Thompson L, et al: The Georgia Court Competency Test: an attempt to develop a rapid, quantitative measure of fitness for trial. Unpublished manuscript. Milledgeville GA: Forensic Services Division, Central State Hospital. 1978
- Ammons RB, Ammons CH: The Quick Test (QT): provisional manual. *Psychol Rep* 11:111–61, 1962
- Ventura J, Lukoff D, Nuechterlein KH, et al: Manual for the Brief Psychiatric Rating Scale (BPRS). *Int J Methods Psychiatr Res* 3:227–43, 1993
- Folstein MF, Folstein SE, McHugh PR: Mini-Mental State: a practical method for grading the state of patients for the clinician. *J Psychiatric Res* 12:189–98, 1975
- Davis TC, Long SW, Jackson RH, et al: Rapid Estimate of Adult Literacy in Medicine: a shortened screening instrument. *Fam Med* 25:391–5, 1993
- Rey A: L'examen psychologique dans les cas d'encephalopathie traumatique. *Arch de Psychol* 28:286–340, 1941
- Goldberg JO, Miller HR: Performance of psychiatric inpatients and intellectually deficient individuals on a task that assesses the validity of memory complaints. *J Clin Psychol* 42:792–5, 1986
- Jones S, Thornicroft G, Coffey M, et al: A brief mental health outcome scale: reliability and validity of the Global Assessment of Functioning (GAF). *Br J Psychiatry* 166:654–59, 1995
- Pirelli G, Gottdiener WH, Zapf PA: A meta-analytic review of competency to stand trial research. *Psychol Public Policy Law* 17:1–53, 2011
- Murrie DC, Boccaccini MT, Zapf PA, et al: Clinician variation in findings of competence to stand trial. *Psychol Public Policy Law* 14:177–93, 2008
- Jacobs MS, Ryba NL, Zapf PA: Competence-related abilities and psychiatric symptoms: an analysis of the underlying structure and correlates of the MacCAT-CA and the BPRS. *Law Hum Behav* 32:64–77, 2008

38. Schwalbe E, Medalia A: Cognitive dysfunction and competency restoration: using cognitive remediation to help restore the un-restorable. *J Am Acad Psychiatry Law* 35:518–25, 2007
39. Mueller C, Wylie AM: Examining the effectiveness of an intervention designed for the restoration of competency to stand trial. *Behav Sci Law* 25:891–900, 2007
40. Carpenter WT Jr, Heinrichs DW, Wagman AMI: Deficit and nondeficit forms of schizophrenia: the concept. *Am J Psychiatry* 145:578–3, 1988
41. Fenton WS, McGlashan TH: Antecedents, symptom progression, and long-term outcome of the deficit syndrome in schizophrenia. *Am J Psychiatry* 151:351–6, 1994
42. Kelley ME, van Kammen DP, Allen DN: Empirical validation of primary negative symptoms: independence from effects of medication and psychosis. *Am J Psychiatry* 156:406–11, 1999
43. Leong GB: Commentary: restorability of incompetence to stand trial- implications beyond predictive equations. *J Am Acad Psychiatry Law* 35:44–6, 2007