

Cognitive Dysfunction and Competency Restoration: Using Cognitive Remediation to Help Restore the Unrestorable

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The goal of this article is to present an argument for using cognitive remediation as an adjunctive form of treatment in competency restoration programs. Clinically, it has been generally agreed that the *Dusky* standard requires a functional analysis of the defendant's current capacities in the current legal context; merely having a mental illness does not mean incompetency. Based on the recent literature that describes the neuropsychological deficits associated with major psychiatric illnesses such as schizophrenia, bipolar disorder, and depression, it is believed that many psychiatrically ill patients are hindered from returning to the legal process by their inability to understand and acquire the information necessary to be found competent. We argue that cognitive remediation would serve as a helpful form of treatment for incompetent patients to improve their cognitive functioning and consequently, their likelihood of being found competent.

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The challenge of trying individuals who suffer from mental illness can be traced to the medieval period. Under English common law during that period, the process of *peine forte et dure*, in which increasingly heavy rocks were placed on top of an uncooperative defendant, was the practice reserved for those who were unable or reluctant to voice a plea.¹ During the 18th century, the legal notion that an individual who could not understand his charges, and furthermore could not participate in his defense in a court of law, found its way into English common law.²

Borrowing from English common law, the United States established the federal standard of competency in 1960 after the U.S. Supreme Court issued a decision that laid the foundation for competency decisions. In *Dusky v. U.S.*,³ it was questioned whether the trial court record had sufficiently supported the determination that Milton Dusky was competent to

stand trial. In its reversal, the Court stated that a review of mental status by a judge was not sufficient and concluded that “the test must be whether he has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding—and whether he has a rational as well as factual understanding of the proceedings against him” (Ref. 3, p 780). Clinically, it has been generally agreed that the standard outlined in *Dusky* requires a functional analysis of the defendant's current capacities in the current legal context.⁴

A diagnosis of mental illness alone does not mean incompetence. A defendant must have the capacity to acquire an understanding of the basic processes of the legal system (i.e., different types of pleas and verdicts, his legal situation, and the roles ascribed to participants in the legal process). This type of understanding requires that certain mental faculties be intact, such as verbal comprehension, memory, and various aspects of social cognition. Because of the role that cognition plays in competency, it has been argued by some that competency is ultimately a capacity that is based in part on cognitive processes.⁵

Martell⁶ stated that competency ultimately consists of a “two-pronged” test: interpersonal/behav-

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ioral and cognitive. The interpersonal/behavioral prong consists of several clinical factors, such as mood disturbances and severe behavioral difficulties, that do not directly impair understanding of the legal process, but may instead impinge on the ability to act in the socially appropriate manner required to assist one's attorney and participate effectively in one's defense. The cognitive prong consists of mental faculties such as orientation, understanding, and memory. If an individual has significant cognitive impairment, restoration becomes exceedingly difficult to attain. Often, psychopharmacologic intervention is most helpful in addressing the interpersonal and behavioral disorders that may interfere with an individual's ability to participate in the legal process. Other activities that typically play a role in competency restoration, such as participation in legal education groups, help to teach patients the information needed to participate in the legal process. While there are treatments that focus on the interpersonal/behavioral prong, there are few available treatments that serve the cognitive prong. This article focuses on the cognitive domain of competency and will address what appears to be an increasingly evident relationship between neuropsychological impairment and incompetent defendants. In addition, an alternative form of treatment that has been gaining popularity as a way to ameliorate the problematic effects of cognitive dysfunction will be presented.

Overview of Competency Restoration

Defendants who are committed to psychiatric hospitals for competency restoration after being found incompetent, make up the largest group of psychiatric patients who are hospitalized via the criminal justice system.⁷ Though forensic treatment may vary from one state to another, competency restoration in a forensic psychiatric facility typically comprises a variety of treatments that are similar across most settings.⁸ For example, a survey conducted of selected forensic hospitals (i.e., Atascadero State Hospital, Atascadero, CA; Kirby Forensic Psychiatric Center, New York, NY; Bridgewater State Hospital, Bridgewater, MA; and Taylor Hardin Secure Medical Facility, Tuscaloosa, AL) in the United States in the mid 1990s, showed that competency restoration consists of psychopharmacologic interventions and a variety of activities in group or individual settings intended to improve or restore patients' understanding of legal procedure as well as

their own legal situations.⁸ Specifically, at Atascadero, patients were taught appropriate legal pleas, courtroom procedures, and basic legal concepts. In addition, behavioral rehearsal through role play was employed in a simulated courtroom setting to teach patients how to cooperate with defense counsel and to increase understanding of courtroom procedures. Similarly, at Kirby, patients received written and verbal instruction describing the legal process and also underwent mock trials shown on video equipment to help learn and understand basic legal procedures. Also, the survey conducted at Kirby revealed that patients received short-term psychotherapy or cognitive therapy to address specific psychological problems that appeared to be interfering with their competency restoration.^{9,10} Progress toward fulfilling various criteria for competency are usually evaluated and charted and treatment interventions are adjusted. Normally, a patient who is believed to have attained restoration is returned to a correctional facility to await further legal proceedings.

Though competency restoration programs in forensic psychiatric hospitals are normally quite comprehensive, past research has indicated that a significant percentage of defendants remain incompetent and are unable to be restored.¹¹ With the trend toward criminalization of the mentally ill having been in place for some time,¹² the courts and corrective systems continue to be inundated with mentally disordered offenders, many of whom cannot be restored to competency.¹⁰ It has been estimated that nearly 60,000 competency evaluations are conducted annually in the United States¹³ and that the rate of defendants clinically judged to be incompetent is approximately 20 percent.¹⁴

Treatment of the Nonrestorable Population

Until the early 1970s, incompetent defendants were automatically committed for an indefinite period without ever having been convicted of a crime.¹⁵ In 1972, the U.S. Supreme Court ruled in *Jackson v. Indiana*¹⁶ that incompetent defendants, "cannot be held more than a reasonable period of time to determine whether there is substantial probability that they will attain the capacity in the foreseeable future" (Ref. 16, p 738). However, the Court did not indicate what amount of time is reasonable. Furthermore, it did not provide a standardized guideline describing how the goal of competency restoration

should be attained. As a result, different states have different guidelines and laws that address an incompetent defendant's duration of commitment and resultant legal status after the completion of that period. In general, when an individual's condition is not expected to improve enough to regain competency, a *Jackson* hearing is held to establish that the individual will not regain competency in the foreseeable future. The charges in some jurisdictions can then be dismissed, and the individual is normally retained under civil commitment procedures.

Considering the significant percentage of individuals who do not regain competency, the failure to restore these patients to competency should be addressed. Specifically, does the failure to restore defendants lie within the treatment protocol, or alternatively, are such patients beyond repair? Before we attempt to answer these questions, we will review the differences between competent and incompetent defendants through several studies that have attempted to illustrate the different traits associated with competent and incompetent patients. Although there is no clear consensus as to which variables best predict competency, in general, it appears that competent defendants differ from incompetent defendants in three ways: psychopathology, demographics, and degree of cognitive impairment.

Psychiatric Differences

Nicholson and Kuger¹⁷ quantitatively identified variables associated with judgments about defendants' competency to stand trial in their meta-analytic review of 30 studies comparing competent and incompetent criminal defendants ($n = 8,170$). In the studies included in their review, they discovered that 30 percent of the defendants were found incompetent to stand trial, a statistic consistent with that reported by Roesch and Golding.¹⁸ Incompetent defendants showed evidence of more severe psychopathology than competent defendants. It was found that symptoms including disorientation ($r = .43$), delusions ($r = .36$), hallucinations ($r = .29$), disturbed behavior ($r = .25$), impaired memory ($r = .28$), and impaired thought and communication ($r = .25$), all of which reflect psychosis as well as cognitive dysfunction, were the most strongly associated with incompetency. A disturbance in affect was found to be less related to competency status.

In their retrospective study of 470 patients remanded for fitness to stand trial, Rogers *et al.*¹⁹

found that patients with major mental disorders such as schizophrenia and major affective disorders are more often judged to be incompetent. In addition, compared with fit patients, incompetent patients are less likely to abuse alcohol or nonprescription drugs. They also found that incompetent patients are less likely to have personality disorders than are competent patients.

More recently, Hubbard *et al.*¹¹ examined the characteristics of incompetent and competent defendants as well as those of incompetent defendants predicted to be restorable and not restorable. They analyzed data from 468 files of defendants remanded to a forensic psychiatric hospital in Alabama for competency evaluations from 1994 to 1997. About one-fifth (19%) of the defendants were deemed incompetent. Psychiatrically, incompetent defendants were more often diagnosed with a psychotic disorder and a nonpsychotic major disorder than were competent defendants, who were more likely to have a diagnosis of a nonpsychotic minor disorder. Regarding the psychiatric differences between incompetent defendants predicted to be restorable and nonrestorable, incompetent defendants with a diagnosis of a nonpsychotic minor disorder were more likely to be predicted to be restorable. Incompetent defendants predicted to be restorable were psychiatrically healthier and had more significant criminal backgrounds.

Demographic Differences

The results of research on the relationship between demographics and competency status have been inconsistent. However, in several studies, investigators have found that demographic variables are associated with judgments of competency. In their meta-analytic review, Nicholson and Kuger¹⁷ found several small but significant correlations. Specifically, they found that minority defendants, older defendants, and unmarried defendants were more likely to be found incompetent.

Also, in their study, Hubbard *et al.*¹¹ found that most incompetent defendants were male (84%), African American (67%), single (67%), and unemployed (59%), and many had previous criminal histories (72%) and psychiatric hospitalizations (48%). Several significant differences were found between competent and incompetent defendants. Demographically, more incompetent defendants were single, unemployed, African American, older, and more likely to be receiving disability income. In addition,

it was found that competent defendants were more likely to be charged with a violent crime, whereas incompetent defendants were more likely to be charged with a miscellaneous offense. Competent defendants were also more likely to have a violent offense as their most serious charge. Regarding the demographic differences between incompetent defendants predicted to be restorable and nonrestorable in the study by Hubbard et al.,¹¹ significant differences were found between these two groups only on previous criminal history and current criminal charges.

Other studies such as those conducted by Ashford²⁰ and Rogers and colleagues¹⁹ have found that sociodemographic characteristics were significant in predicting competency status. Ashford²⁰ found that some demographic variables such as marital status and prior arrest history could be used to predict competency as well as treatability. Rogers and colleagues¹⁹ found that nonwhite patients were judged to be questionably incompetent or incompetent at three times the rate of white patients. Older age and female sex were both associated with incompetency.

Cognitive Differences

Hubbard and colleagues¹¹ found a strong link between the ability to understand and both competency and restorability. This relationship appears to underscore the notion that competency is a construct that has a significant cognitive component. The reasons that incompetent and unrestorable defendants are more cognitively impaired remains poorly understood; however, the finding that the groups did not differ on mental retardation but did differ on presence of a more severe psychiatric illness may provide a clue to the etiology of their cognitive deficits. Indeed, cognitive impairment has become recognized as a significant aspect of severe psychiatric disorders.²¹

The following section will focus on the recent literature that illustrates the relationship between neuropsychology and competency and will include several studies that found evidence of cognitive deficits in incompetent populations. These findings support the notion that cognitive rehabilitation might be considered a form of treatment to be used in conjunction with other interventions to help restore cognitively impaired defendants to competency.

Neuropsychology of Competency

Though the literature on the neuropsychology of competency has been minimal, several recent studies have found evidence indicating that incompetent defendants as a group differ from competent defendants on certain types of neuropsychological measures. Underscoring the notion that the *Dusky* standard is, at least in part, a legal construct that is cognitively based, the following studies have found that incompetent defendants possess certain types of neuropsychological deficits that appear to affect their ability to be restored to competency.

The first study²² to present clinical data on incompetent defendants deemed nonrestorable after a *Jackson* hearing, revealed that 70 percent of these defendants had a neuropsychological brain abnormality such as AIDS-related dementia, Pick's disease, Alzheimer's disease, mental retardation, or alcoholic dementia. In a second study, Nestor and colleagues⁵ sought to assess cognitive functioning of 181 incompetent and competent defendants committed to Bridgewater State Hospital. This group of patients had undergone competency evaluations and had also been referred for neuropsychological testing. The authors found that both the competent and incompetent groups scored generally in the low-average range across measures of intelligence and neuropsychological functioning. However, the incompetent group performed significantly lower than did the competent group on all measures of intelligence (i.e., full scale, verbal, and performance), and in the areas of verbal and visual memory and attention. No significant differences were found for academic abilities or executive functioning.

The fact that the groups did not differ on the Wide Range Achievement Test-Revised (WRAT-R) reading test, which is frequently used as a measure of premorbid intelligence, suggests that the inferior performance of the incompetent group on the IQ and memory tests reflected a decline in cognition, perhaps as a consequence of the psychotic disorders so prevalent in that group.

Performance on the WRAT-R reading test can be taken as an indication that both the incompetent and competent groups were born with similar levels of intelligence. This similarity would mean that the obtained neuropsychological test performance reflects a later decline in the cognitive and intellectual skills of the incompetent group. Given that psychotic disorder

ders are more prevalent in the incompetent group and that psychotic disorders are associated with a decline in cognitive functioning, it is possible that the impaired cognition of the incompetent defendants may be a symptom of their psychiatric illness.

Improving Cognitive Functioning

These studies showed findings that reflect a relationship between cognitive deficits and both incompetency and nonrestorability. The results suggest that the process of competency restoration may be aided by improving the level of cognitive functioning in individuals whose return to court is hindered by an inability to comprehend and to express basic legal concepts or their own legal situation. While psychotropic medications succeed in reducing positive symptoms and help to stabilize mood, affect, and behavior, medications have yet to solve the problem of cognitive dysfunction. Currently, there are no drugs approved by the U. S. Food and Drug Administration that specifically help to enhance cognition in the psychiatric disorders, although there is evidence that atypical antipsychotic drugs can provide some cognitive improvement in people with schizophrenia.^{23,24} In addition, most traditional forms of competency restoration (e.g., competency training group and individual sessions, behavioral therapy, psychopharmacological treatments) do not seek directly to improve a defendant's cognitive functioning, but rather rely on intact cognitive functioning to process the material and facilitate compliance.

There is, however, a behavioral treatment that is used to improve cognitive functioning in people with severe psychiatric disorders, and given that incompetent defendants tend to be the most likely to have psychosis, this treatment may benefit the forensic population. Numerous randomized, controlled trials have found that cognitive remediation is effective for treating the cognitive dysfunction associated with schizophrenia.²⁵ Moderate effect sizes are typically reported with outcomes ranging from improved cognition to improved social and functional capacity.²⁶ We therefore advocate that cognitive remediation, which directly targets cognitive dysfunction, be included as part of competency restoration treatment programs.

Cognitive Remediation

Cognitive remediation refers to behavior-based training techniques used to improve cognitive func-

tioning in people with normal-range intelligence, who have suffered a decline in neuropsychological functioning. Clients are given mental exercises with the expectation that there will be improvements in attention, memory, and problem solving, and that these improvements will translate into greater competency at negotiating real world challenges. A variety of behavioral techniques are used, including specific drills and exercises using computerized software, paper and pencil tasks, and group activities. Cognitive remediation specifically targets the processes of thought rather than the content of thought. In contrast to standard education which focuses on domain-specific knowledge such as learning about history or law, cognitive remediation focuses on targeting underlying cognitive skills such as attention, memory, problem solving and reasoning, planning, processing speed, multitasking, organization, and time management—all skills that are required if one is to learn domain-specific knowledge. By improving these cognitive processes, one is more equipped with the necessary underlying skills to find greater success in daily activities which most often require adequate cognitive functioning. For example, if an individual were to improve his or her ability to attend, remember, and reason, he or she might then be more able to improve in math skills and, as a result, succeed in being able to count change correctly or perform other activities that require mathematical reasoning. Recent studies have demonstrated considerable evidence showing that cognitive remediation is effective at improving cognitive skills as well as real-world functioning.^{27,26}

Models of Cognitive Remediation

Cognitive remediation techniques were initially conceived to help improve cognitive functioning in those who had sustained neurological injuries. When research demonstrated that neuropsychological impairments are also present in psychiatric disorders such as schizophrenia, researchers and clinicians began to investigate and apply different types of cognitive remediation methods to psychiatric populations. Many models of cognitive remediation used in psychiatric patients rely on the initial methods developed for brain-injured patients.

The Neuropsychological Educational Approach to Cognitive Remediation (NEAR) model, developed by Medalia and colleagues,²⁸ is a cognitive remediation technique that was specifically designed

for use in psychiatric patients who possess cognitive deficits. In contrast to head-injured patients who experience a sudden, precipitous loss of functioning and are typically highly motivated to recover, psychiatric patients, whose motivational difficulties may stem from the disease itself or from a possible history of repeated failure in learning situations, are usually not as motivated to participate in a cognitive activity that includes repetitive drill exercises. To make such cognitive tasks intrinsically appealing to a psychiatric population, the NEAR model was designed to be more stimulating, dynamic, and enjoyable. Furthermore, the NEAR model appreciates that cognitive remediation is essentially a learning activity and utilizes instructional techniques developed in the field of education that are known to enhance learning. For example, training tasks incorporate several skills at once and are presented in a real-life context. When information is learned in a context (e.g., attention skills are activated in the context of a simulated driving experience, as opposed to an array of flashing, colored circles) learning has been shown to be greater and more lasting.²⁹ Other instructional techniques used in the NEAR model are designed to enhance the motivation to learn; for example, the structure of the sessions provides multiple opportunities for the participant to control the learning process and to interact with others who are perceived as role models.

Implementing a Model of Cognitive Remediation

In general, NEAR is conducted in groups consisting of 6 to 10 clients. Although NEAR has been adapted for use in the individual training of special populations (attention deficit hyperactivity disorder [ADHD]; Alzheimer's disease), a group format is preferred for people with psychotic and affective disorders. In a group, there is often a sense of community that develops among clients who occupy the same space and are engaged in the same, highly valued activity. The sense of relatedness established among group members satisfies an important psychological need and promotes increased intrinsic motivation and task engagement.³⁰ Furthermore, in a group, there are also opportunities for peer leadership. Ideally, cognitive remediation sessions should be conducted two to three days a week in 45-minute to 1-hour sessions. When sessions are held less frequently, clients are less likely to make significant gains.³¹ For every three sessions of NEAR, two involve having clients perform cognitive activities, usu-

ally on the computer, and a third entails a verbal session in which clients meet as a group, practice social skills, and discuss how the individual computer exercises they are working on relate to real-world activities. The clinicians who lead the groups receive specialized training in cognitive remediation. There are several instructional techniques that must be taught, practiced, and then supervised before clinicians qualify as leaders.

Cognitive Remediation and Competency

How might cognitive remediation serve competency restoration? In his book, *Evaluating Competencies*, Grisso⁴ offers a list of "functional" abilities associated with assisting counsel in a defense, gaining factual understanding of the basic purpose and process of criminal trials, and using rational understanding to apply information to one's own trial circumstances. Cognitive remediation could directly or indirectly benefit functional ability in all of these areas. Take the example of an incompetent defendant with a diagnosis of chronic schizophrenia, who has been treated for five months at a forensic psychiatric facility. While the patient has demonstrated improved behavior and mental status through the use of psychotropic medications and behavioral interventions, his cognitive deficits, stemming at least in part from his mental illness, have prevented him from being found competent. The treatment team is currently debating whether he ought to be declared un-restorable. Problems with attention and memory cause the patient difficulty in learning his charges and remembering other basic legal procedures. Consequently, he is not able to consult with his attorney about his legal situation and verbalize how he wants to proceed with his case. During individual and group competency sessions, he is repeatedly taught his charges and basic legal procedures; however, because of his poor attentional abilities and impaired memory, the patient is having difficulty learning. If his cognitive functioning were to improve through the use of cognitive remediation, the patient might then be better able to learn his charges and other relevant legal information. In addition, with improved attentional and reasoning capacities, the patient would be able to assist his attorney in the preparation of his defense in a much more effective manner. See Figure 1 for an overview of the different ways in which cognitive remediation might benefit

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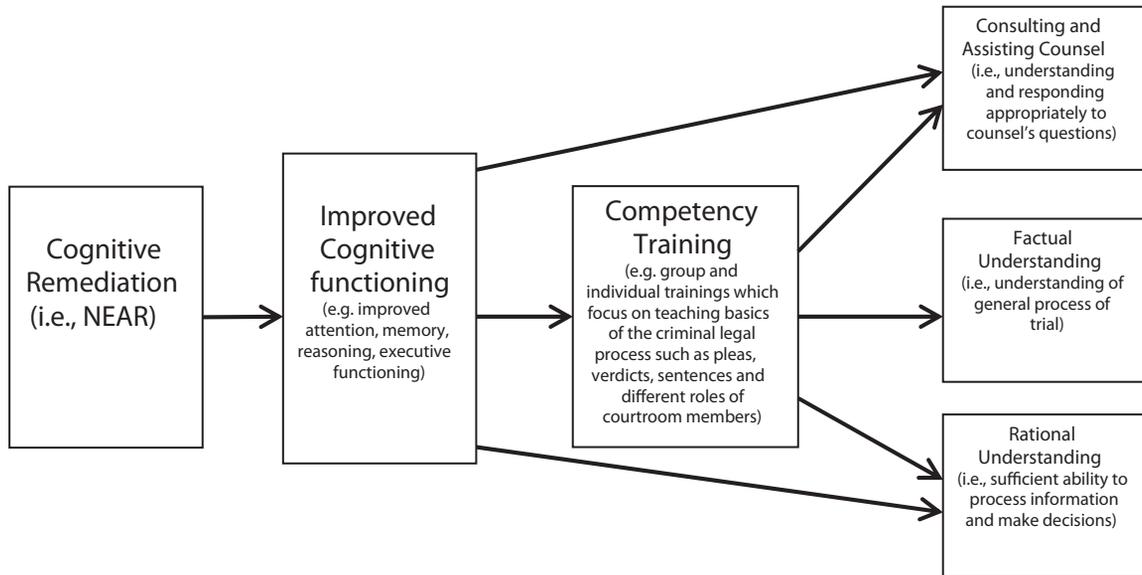


Figure 1. Cognitive remediation competency flow chart.

the functional abilities identified by Grisso⁴ as necessary for competence.

Conclusions

Restoring highly impaired patients to competency is not an easy task. We argue that the symptoms that differentiate restored from unrestorable incompetent defendants should serve as a useful guide for developing treatments and preventative interventions. The literature indicates that demographic factors, psychotic illness, and cognitive deficits differentiate those defendants who eventually are classified as unrestorable from those who eventually become competent. Although the demographic factors serve to identify targets of preventative public policy initiatives, the psychotic and cognitive symptoms can serve to guide treatment initiatives. There is now a body of literature indicating that the cognitive deficits of psychotic patients can be treated with cognitive remediation, yielding not only improvement in cognition but a generalization of improvement to such functional abilities as returning to school or work. This suggests that competency restoration may be aided by the use of cognitive remediation, allowing more patients to return to the legal process. If cognitive impairment does indeed serve as a significant hindrance to restoration, then treatment to restore competency should be more focused on the remediation of those deficits. Furthermore, because there is no available pharmacologic treatment that

directly improves cognition in psychiatric patients and activities related to competency restoration are not normally designed to improve cognition, the use of a cognitive remediation method appears to be a beneficial addition to the currently used treatment strategies. To conclude, forensic clinicians who are involved in competency restoration programs may want to consider seriously the use of cognitive remediation methods to augment current treatment practice.

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