Spring 6-2020

Dementia and Competency in United States Courtrooms: A Case Law Review

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Abstract

The number of older adults in the United States is rising, as is the incidence of dementia. Older adults are coming into contact with the criminal justice system at greater rates than previously encountered. As such, individuals with dementia are likely appearing in courts at an unprecedented rate. While many civil competencies commonly related to older adults are well researched, competency in the criminal legal system has not received the same level of recognition in this population. This is particularly concerning given the growing awareness of the relevance of dementia in some criminal competencies (e.g., *Madison v. Alabama*, 2019). Of particular importance is understanding competency to stand trial evaluations in individuals with dementia, given the regularity and seriousness of this psycholegal question in the United States legal system. This study examines how dementia has been related to determinations of competency to stand trial in United States courts from 2002 through 2019. The results suggest that a diagnosis of dementia is particularly salient when related to findings of incompetency. However, it appears that these individuals pose a significant challenge to experts in terms of determining accurate diagnosis, and evaluating how neurocognitive impairments might affect their functional abilities related to competency to stand trial. In these populations, the evaluation of performance validity and the question of appropriate diagnosis are particularly relevant. The results of this study have clear implications for researchers, clinicians, legal professionals, and policymakers working with older adults involved in the United States criminal justice system.

Introduction

The number of older adults in the United States is rising, as is the incidence of dementia. Older adults are more likely to come in to contact with the criminal justice system at greater rates than previously encountered. As such, individuals with dementia are likely appearing in courts at an unprecedented rate. Competency to stand trial is the most frequently evaluated criminal competency. Understanding how dementia affects the psycholegal abilities related to competency to stand trial is therefore essential. The current study is an important first step in this direction.

Following a general overview of dementia, older adults in the criminal justice are then discussed, with a particular emphasis on their growing prevalence in courts and related implications for pretrial evaluations. Legal capacity and competency will then be reviewed, with particular attention on common referral questions in older adult populations and how competency to stand trial has not received the same level of recognition. Following this, the legal standards for competency to stand trial will be examined, along with a discussion of how research regarding how dementia has been related to competency to stand trial is limited. Finally, a discussion of dementia appearances in court will serve as an introduction to the current study on how dementia has been related to determinations of competency to stand trial. Implications will be discussed related to clinicians, legal, and public policy officials who work with this population.

Overview of Dementia

Dementia is an irreversible neurodegenerative illness characterized by a progressive deterioration in memory and cognitive abilities (Prince et al., 2013). Dementia itself is not a specific disease. Instead, dementia is a syndrome – a constellation of symptoms that are typically of a chronic or progressive nature – in which there is deterioration in cognitive function (World Health Organization [WHO], 2019). The characteristic symptoms of dementia are difficulties with

memory, problem-solving, language, orientation, judgement, and other cognitive skills that affect a person's ability to perform daily activities. Dementia is caused by damage to or loss of neurons and their connections in the brain (Alzheimer's Association, 2018). This damage interferes with the ability of neurons and other brain cells to function and communicate with each other, thereby affecting thinking and behavior (Alzheimer's Association, 2019a).

Dementia results from a variety of diseases and injuries that are associated with distinct brain abnormalities (WHO, 2019). The brain has many regions that are responsible for different functions. When cells in a particular region are damaged, that region is then unable carry out its functions normally (Alzheimer's Association, 2019a). Depending on the damage, dementia can affect people differently and cause different symptoms (Mayo Clinic, 2019a). As a result, dementias are often grouped by what they have in common, such as the proteins deposited in the brain or the part of the brain that is significantly affected. Currently, the most common types of dementia are Alzheimer's disease, vascular dementia, dementia with Lewy bodies, and frontotemporal dementia (WHO, 2019; Alzheimer's Association, 2018, Mayo Clinic, 2019b).

Alzheimer's disease (AD) is the most common cause of dementia, accounting for approximately 60-70% of all dementia cases and affecting an estimated 5.7 million Americans (Alzheimer's Association, 2018). AD is caused by the progressive accumulation of beta-amyloid plaques outside of neurons, and twisted stands of the protein tau that form neurofibrillary tangles inside of neurons. Ultimately, these changes result in the damage and death of neurons. Symptoms associated with AD vary, but commonly include memory loss, confusion, decreased judgement, social withdrawal, and challenges with problem-solving.

Vascular dementia (VaD) is the second most common cause of dementia, accounting for approximately 10-25% of all dementia cases (US Department of Health and Human Services

[DHHS], 2017). VaD is a general term that describes thinking problems caused by conditions that damage the blood vessels in the brain (Mayo Clinic, 2019b). In this way, the brain is not sufficiently supplied with the nutrition and oxygen it needs to survive and perform effectively. The most common conditions that lead to VaD are stroke, and conditions that lead to chronically narrowed or damaged brain blood vessels such as atherosclerosis and small vessel disease (Alzheimer's Society, 2019). The most common symptoms of VaD are slowed thinking, and difficulties with problem-solving, focus, and organization (Mayo Clinic, 2019b).

Dementia with Lewy bodies (DLB) is the third most common cause of dementia overall, accounting for approximately 20-25% of all dementia cases (Mayo Clinic, 2019c). It is also the second most common cause of progressive dementia (after AD). Overall, DLB affects more than 1 million individuals in the US (Lewy Body Dementia Association, 2019). DLB is characterized by an excess of the protein alpha-synuclein in neurons (Mayo Clinic, 2019c). This buildup (called Lewy bodies) deposit in regions of the brain that control aspects of memory and movement. Lewy bodies affect chemicals in these regions that lead to neurons to work less effectively and eventually die (Lewy Body Dementia Association, 2019). This leads to the progressive decline in mental abilities seen in DLB. Symptoms commonly associated with DLB include problems with thinking, movement, memory, and mood (Mayo Clinic, 2019c).

Frontotemporal dementia (FTD; also called frontotemporal lobar degeneration [FLD] or frontotemporal degeneration) is another common cause of dementia, accounting for approximately 10-20% of dementia cases and affecting an estimated 60,000 Americans (The Association for Frontotemporal Degeneration, 2019a). FTD is the most common cause of dementia in people under the age of 60 (Alzheimer's Association, 2018), with about 60% of people with FTD experiencing their first symptoms between the ages of 45 to 65 (DHHS, 2019a). FTD refers to a group of

disorders caused by progressive neuronal damage and death that primarily affect the frontal and temporal lobes of the brain (Alzheimer's Association, 2019b). These brain areas play a significant role in decision-making, behavioral control, emotions, and language (Mayo Clinic, 2019d). As such, this damage causes a variety of symptoms, such as unusual behaviors, emotional problems, trouble communicating, difficulty with work and relationships, and challenges related to movement (DHHS, 2019a).

Many studies have shown that individuals with dementia often have brain abnormalities that are associated with more than one underlying cause (Schneider, Arvanitakis, Bang, & Bennett, 2007; Jellinger & Attems, 2007). When there is evidence of more than one cause of dementia, this is termed mixed dementia (Alzheimer's Association, 2019c). For example, autopsy studies show that about half of the cases of AD involve only this pathology, while many of the remaining cases present evidence of other dementias (Alzheimer's Association, 2018). The most common mixed pathology is AD and VaD, followed by AD and DLB (Alzheimer's Association, 2019c). In fewer cases, an individual may have evidence of mixed dementia due to all three of the most common conditions (i.e., AD, VaD, and DLB; Alzheimer's Association, 2019c). The least common mixed pathology is VaD and DLB (Alzheimer's Association, 2018). Mixed dementia is much more common in older individuals, with the likelihood of having brain changes associated with two or more pathologies being the highest in people age 85 or older.

Currently, there is no single test to determine if someone has dementia. Diagnosing dementia is based on a comprehensive medical assessment, which includes a full medical history, physical exam, neurological and neuropsychological tests, laboratory and genetic tests, psychiatric evaluation, and brain scans (DHHS, 2019b). While clinicians can often determine whether an individual has neurocognitive symptoms and functional impairments generally consistent with

dementia with a high level of certainty, diagnosing the underlying pathology and likely disease progression is more challenging (Alzheimer's Association, 2019a). This is the result of overlapping symptoms and the significant proportion of mixed dementia presentations. To make judgements related to the cause of dementia, the clinician must examine the cognitive abilities that have been lost, along with what the person is still able to do (Mayo Clinic, 2019a). Specifically, looking at changes in thinking, daily functioning, and behaviors associated with each type of dementia is of most importance (Alzheimer's Association, 2019a).

Recently, the *Diagnostic and Statistical Manuel of Mental Disorders, Fifth Edition* (DSM-5; American Psychiatric Association [ApA], 2013) absorbed the term dementia under the newly named entity Major Neurocognitive Disorder (MND). Diagnostic criteria for Major Neurocognitive Disorder have been defined as:

A. Evidence of significant cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory).
    1. Concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
    2. A substantial impairment in cognitive performance, preferably documented by standardized neuropsychological testing or, in its absence, another quantified clinical assessment.
B. The cognitive deficits interfere with independence in everyday activities (i.e., at a minimum, requiring assistance with complex instrumental activities of daily living such as paying bills or managing medications).
C. The cognitive deficits do not occur exclusively in the context of a delirium.
D. The cognitive deficits are not better explained by another mental disorder (e.g., major depressive disorder, schizophrenia). (ApA, 2013, p. 604)

In addition to the above criteria, the DSM-5 also provides the ability to specify the pathological entity that is presumed to be underlying the cognitive impairments, namely AD, VaD, DLB, and FTD (ApA, 2013). The DSM-5 also outlines criteria for the use of "probable" or "possible" specifiers for the various disorders. Using these methods, clinicians can provide

diagnoses with upwards of 90% accuracy (Alzheimer's Association, 2017). However, establishing a definitive diagnosis of underlying etiologies can only be made postmortem via autopsy of the brain (The Association of Frontotemporal Degeneration, 2019b; Lewy Body Dementia Association, 2019; Alzheimer's Association, 2017).

With this foundational understanding of dementia in mind, the impact that dementia has on societal and individual health can be more fully appreciated. The prevalence of dementia (i.e., the number of people in a population who are living with the disorder at a given point in time) is most recently estimated to be 50 million worldwide (WHO, 2019). The incidence of dementia (i.e., the number of new cases per year) is most recently estimated to be around 10 million worldwide (Alzheimer's Disease International, 2015), representing a 30% increase in new dementia cases over the course of just several years (WHO, 2012). The estimated proportion of the general population aged 60 and over with dementia at any given time is between 5-8% (WHO, 2019). Age is the most robust risk factor for the development of dementia. As such, the proportion of people with dementia increases with age. For example, in the US, approximately 3% of people age 65-74 have AD (Hebert, Weuve, Scherr, & Evans, 2013). This percentage increases to 17% in people ages 75-84, and 32% of people age 85 and older. Of people who have AD, 81% are age 75 and older. With rising life expectancies, the prevalence of dementia is also predicted to increase. Overall, the global total number of people with dementia is projected to rise to 82 million in 2030, and 152 million by 2050 (Alzheimer's Disease International, 2015).

Dementia has tremendous consequences for individuals, their families, the healthcare system, and the economy. As the US population ages, the social and economic burden as a result of dementia has been more easily observed (WHO, 2019). For example, dementia is a leading cause of death globally (Alzheimer's Association, 2018). Specifically, deaths due to AD and other

dementias more than doubled between 2000 and 2016, making it the 5th leading cause of global deaths in 2016. In comparison, deaths due to dementias were ranked 14th in 2000 (WHO, 2018). Unlike the other conditions listed, dementia is the only top 10 cause of death that cannot currently be prevented, cured, or slowed (Alzheimer's Association, 2018).

In addition to deaths, dementia also has a significant burden on public health. One of the most commonly referenced measures of disease burden is called disability-adjusted life years (DALYs), which is the number of years of life lost due to premature mortality and the number of years lived with disability (WHO, 2017). Based on this metric, AD rose to the 12th overall most burdensome disease or injury in the US in 2010 (Alzheimer's Association, 2015), up from 25th in 1990 (Murray, 2013). Additionally, over this same timeframe AD rose to the 9th most burdensome disease in terms of years of life lost, compared to 32nd previously (Alzheimer's Association, 2015). Dementia contributes significantly to the increased use of many health services, such as hospital admissions, skilled nursing facility admissions, assisted living, and home healthcare (WHO, 2019). For example, the cost of healthcare services, along with informal costs of unpaid caregiving for individuals with dementia was most recently estimated to be $818 billion in 2015 alone (Alzheimer's Association, 2018).

Older Adults and the Criminal Justice System

Along with increased prevalence and related healthcare costs associated with dementia, another area of growing concern is the increased prevalence of older adults in the criminal justice system. According to data from the Bureau of Justice Statistics (BJS, 2016), the greatest increase in the prison population between 1993 and 2003 was among individuals aged 45 to 49. Between 2003 and 2013, however, individuals 55 or older represented the largest prison population growth. Specifically, in 2003 the number of incarcerated individuals aged 55 or older was 26,000,

accounting for approximately 3% of the total prison population. By 2013, there were over 131,000 incarcerated individuals aged 55 or older, accounting for approximately 10% of the total prison population. Over this entire timeframe, more than four times as many individuals age 55 or older were admitted to state prisons in 2013 than in 1993 (BJS, 2016).

Additional trends in the data during and after this timeframe are also illustrative. From 1996 to 2008, the percentage of incarcerated older individuals increased 278%, compared to a 53% increase in overall incarceration (Beck and Berzofsky 2010; Darrell and Beck 1997). Relatedly, by 2008 the fastest growing demographic age-ranges consisted of middle aged (45-54 years of age) and older adults (55 years and older) (Chiu et al., 2010). Additionally, between the years of 2000 and 2009, the overall US prison population increased by 16.3%, while the number of individuals who were incarcerated who were either middle aged or older increased by 79.0% (Beck, 2000; West et al., 2010). Similar research of trends between 2007 and 2010 shows that the number of individuals in federal and state prisons aged 65 or older increased by 63% (Fellner, 2012). The total prison population only grew by 0.7% over this timeframe, meaning that the number of older adults in prison grew 94 times faster than the total population of sentenced prisoners. Finally, as of 2016 the number of incarcerated individuals aged 55 or older was over 165,000 (McKillop & Boucher, 2018), representing a 280% change from 1999 when only 43,000 adults in this age range were incarcerated.

The increase in older adults in prison populations is the result of many factors. These include stringent mandatory sentences, three-strike laws, underuse of early-release programs, and truth-in-sentencing laws, which have likely resulted in a greater proportion of individuals serving longer prison sentences (Aday, 2003; Osbourne Association, 2014). Prior estimates have shown that the majority of older adults (i.e., upwards of 65%) are incarcerated for crimes committed much

earlier in their lives (Chettier et al., 2012). Further, older adults are also committing more crimes (Aday & Krabill, 2006) and being arrested at a higher frequency than in the past (Chiu, 2010). In 1996, adults aged 65 and older accounted for over 72,000 arrests in the US, representing 0.7 percent of total arrests (Mcguire & Pastore, 1998). In 2014, this number increased to over 89,000, representing approximately 1 percent of total arrests (BJS, 2014).

Given the increase in older adult arrests and incarcerations, service utilization for this demographic has gone up as well (Vegda et al., 2009; Frierson et al., 2002). As the older adult population continues to increase, they are expected to represent a larger proportion of victims of crimes, offenders, prison inmates, and witnesses to crimes (Rothman, Dunlop, and Entzel, 2004). As a result, clinicians with forensic specializations are increasingly likely to encounter older adults in pretrial settings (Frierson et al., 2002). In these instances, older individuals who become involved with the legal system may require a capacity or competency evaluation before even appearing in court (Aday & Krabill, 2005; Fogel et al., 2013). As such, a discussion of legal capacity and competency seems warranted, particularly competency to stand trial.

Overview of Legal Capacity and Competency

Capacity and competency are important constructs to both clinical and legal spheres. Capacity refers to an individual's ability to make a particular decision at a specific time or in a specific situation (ABA Commission on Aging & APA, 2008). A capacity evaluation is concerned with the individual's ability to effectively make decisions based on the appreciation of choices and weighing of subsequent consequences (Grisso & Appelbaum, 1998). Capacity is frequently defined in terms of four dimensions of functional abilities: (1) understanding information required for the decision, (2) appreciating how the information being given pertains to the person's own life

and circumstances, (3) logical reasoning using the information presented, and (4) expression of choice (Grisso & Appelbaum, 1998; Roth et al., 1977).

Issues of capacity most frequently arise when an individual makes a decision that puts his or her health, assets, property, or life at risk, while simultaneously lacking the insight or willingness to accept help from others (Marson et al., 2012). In these instances, family members may raise the question as to whether the individual possesses the capacity to make sound decisions. In recent times, a significant body of research contributing to the understanding and clinical assessment of capacity in older adults has been compiled (Gurrera et al., 2006; Sherod et al., 2009; Bravo et al., 1992; Roenker et al., 2003; Brown et al., 2011; Gold, 2012). In 2003, the American Bar Association (ABA) and American Psychological Association (APA) convened a group of attorneys, judges, and psychologists with capacity expertise to produce a set of three handbooks tailored to each group (ABA Commission on Aging & APA, 2005; 2006; 2008). For instance, the ABA-APA *Handbook for Psychologists* (2008) is tailored to clinicians to improve capacity assessment through collaboration of theory, law, science and practice.

Competency, on the other hand, refers to a legal capacity determined by a judge or other legal professional as to whether the individual has the ability under law to carry out a specific act or series of acts (Marson et al., 2001). The clinician's role in this process is to provide the court with a summary of the individuals' skills, abilities, and deficits that may relate to the patient's overall decisional capacity. A judge would then consider this evidence, along with other relevant information, to determine a ruling concerning the individual's competency (Moberg et al., 2008).

United States law deems adults as competent unless proven otherwise, with clear and convincing evidence of lack of competency needed to support a ruling in that direction (Moberg et al., 2008). Determinations of an individual's competency are issued in both civil and criminal

litigation, with a ruling of incompetence imposing substantial limitations of personal liberties and rights (Moberg et al., 2008). Some of the most common referral questions in older adult populations is the determination of numerous civil capacities, such as competency to live alone (Skelton et al., 2010), maintain driving privileges (Ott et al, 2005), manage medications and finances (Marson et al., 2009), maintain medical and financial decision-making privileges (Moberg et al., 2008), consent or refuse treatment (*Perry v. Louisiana*, 1990), and make a valid will (i.e., testamentary capacity; Shulman et al., 2007).

Determinations of competency are also issued in criminal processes. As with civil proceedings, evaluations of competency in criminal proceeding typically focus on the defendant's cognitive functioning and mental status (Demakis & Mart, 2017), and the referral source is typically an attorney or judge seeking assistance with a specific psycholegal question. Common examples of criminal competencies include competency to waive *Miranda* rights (*Miranda v. Arizona, 1966*), waive the right to counsel (*Faretta v. California*, 1975), plead guilty (*Godinez v. Moran*, 1993), and be executed (*Ford v. Wainright,* 1986; *Panetti v. Quarterman,* 2007*)*. The most common, however, is competency to stand trial.

Competency to Stand Trial

More than 60,000 evaluations of competency to stand trial are estimated to take place each year in the US (Bonnie & Grisso, 2000). The concept of competency to stand trial originated in 17th-century England, in which defendants refused to enter a plea and remained silent (Melton et al., 2017). In these cases, the court had to determine whether the defendant was purposefully withholding information (mute by malice) or if they were unable to understand the proceedings against him (mute by visitation of God). Today, legal standards for competency to stand trial define the central issue as the defendant's current mental status and functional abilities. Specifically,

competency is concerned with how these factors contribute to the defendant's understanding and participation in the trial process (Zapf & Roesch, 2013).

The current legal standard for competency to stand trial was first established in *Dusky v. United States* (1960). In this decision, the court held 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" (p. 402). Since *Dusky*, the US Supreme Court expanded on this standard in *Drope v. Missouri* (1975), stating that the defendant must be able to "assist in preparing his defense" (p.171). The current standard has thus come to incorporate all three of these considerations (commonly referred to as "prongs"). Federal courts use the *Dusky* standard to evaluate competency to stand trial, while states have their own way of operationalizing the standard and may have slight variations in the wording. Still, each of the state's definitions are Constitutionally bound to give defendants at least the minimum specified in *Dusky* (Zapf & Roesch, 2013).

Additionally, in 1966 the Supreme Court held in *Pate v. Robinson* that the issue of competency must be raised by any office of the court if there is *bona fide* doubt as to the defendant's competence. *Bona fide* doubt refers to any indication to perhaps question competency, and the threshold for establishing a *bona fide* doubt has consistently been low (Melton et al., 2017). Reasons for *bona fide* doubt include a variety of considerations, such as irrational behavior, demeanor at trial, or prior medical or psychiatric history (*Drope v. Missouri*, 1975). Once doubt has been raised, the court will order an evaluation to determine the defendant's competency to stand trial (Zapf & Roesch, 2013). In 1996, the Supreme Court held in *Cooper v. Oklahoma* that incompetency to stand trial must be proved by preponderance of the evidence, rather than the higher standard of clear and convincing evidence. Defendants that are deemed competent then

proceed with the trial or disposition of their case. If the defendant is found incompetent, the trial is postponed until competency is restored, or when there is a determination that restoration to competency is unlikely (Melton et al., 2017).

A significant amount of the competency research has examined the characteristics of individuals referred for competency to stand trial evaluations, as well as those individuals who have been found incompetent. In a review of 30 studies, Nicholson and Kugler (1991) found an average rate of 30% for incompetence to stand trial. In this sample, individuals with a qualifying psychotic disorder were the most likely to be found incompetent. Of note, none of these studies focused specifically on older adult defendants, and the authors made no mention of neurocognitive disorders or related syndromes and their relationship to competency to stand trial. However, symptoms of disorientation, impaired memory, poor judgement, and thought and communication disturbances also had a higher association to findings of incompetency. A recent meta-analysis found that individuals with a psychotic disorder were eight times more likely to be found incompetent to stand trial (Pirelli, Gottdiener, & Zapf, 2011). Similarly, other demographic variables such as unemployed status and previous history of hospitalizations also posed a higher risk of incompetency. However, this meta-analysis did not account for older adult defendants specifically, the mean age of the defendants was 33 years, and the authors made no mention dementia or related neurocognitive disorders in their sample.

Dementia in Court

With an increase in older adults' arrests and involvement in the legal system, the proportion of older adults with dementia is also likely to increase in court rooms as well. Recently, the symptoms associated with dementia and the implications it has on an individual's cognition has been increasingly recognized in court. In the past, legal standards regarding competency were set

in a series of Supreme Court decisions. In 1986, the Supreme Court held in *Ford v. Wainright* that the Eighth Amendment prohibits the execution of a prisoner who does not have comprehension of the sentence. In 2007, the Supreme Court extended this ruling in *Panetti v. Quarterman* and provided more specific criteria about the identification of ineligible prisoners for executing. They found that "a prisoner's mental state who is so distorted by a mental illness, such that he lacks a rational understanding of the state's rationale for his execution" is unable to be executed. Very recently, this precedent was explicitly extended to cases of dementia in *Madison vs. Alabama* (2019), in which the Supreme Court specifically reinforced that dementia could be a form of incapacitation sufficient to meet the *Ford* and *Panetti* standards. In other words, defendants with severe dementia can be prohibited from execution.

While approximations for dementia appearances in courts remain unknown, a search of Nexis-Uni yields currently over 11,000 cases that address dementia in some way. Interestingly, the first case that addressed dementia occurred in 1798 (i.e., *Spencer v. Moore*, 1798). However, since 2002, the number of cases related to dementia in some way has significantly increased, accounting for over 8,000 of the total 11,000 cases.

Dementia and Competency to Stand Trial.

While many civil competencies commonly related to older adults are well researched, and there is a growing awareness of the relevance of dementia in some criminal competencies (e.g., *Madison v. Alabama*, 2019), competency to stand trial of older adults has not received the same level of attention. Further, competency to stand trial evaluations in defendants with dementia is even less researched, with relatively few studies investigating this relationship.

Heinik et al. (1994) examined 57 individuals charged with a crime over the age of 60 who were evaluated for competency to stand trial. In this study, 50% of the overall sample was found

incompetent, with the largest proportion of these individuals found incompetent having a primary diagnosis of dementia (30%), followed by personality disorder (28%) and psychosis (25%). More recently, Frierson et al. (2002) reviewed the records of 57 individuals over the age of 65 who underwent competency to stand trial evaluations. In this study, marked deficits in memory and orientation were most predictive of findings of incompetency. Similarly, Lewis, Fields, and Rainey (2006) examined charts of 99 older adult individuals over the age of 60 who underwent competency to stand trial evaluations. Overall, they found that 44% of the sample had dementia and 32% were found incompetent to stand trial. Heck & Herrick (2007) presented two cases highlighting current recommendations for evaluation and restoration of older adult defendants. An example of a recommendation was for forensic clinicians completing the evaluation to consult with specialists in geriatric and psychiatric issues. Morris & Parker (2009) analyzed a sample of older adults referred for evaluations of competency to stand trial, and found that those of more advanced age or with a diagnosis of dementia were least likely to be restored to competency. Finally, Doron, Werner, Spanier, and Lazar (2017) utilized a case law review to describe dementia outcomes in Israeli courts. While this review was not solely focused on competency to stand trial, 38% of individuals in criminal cases were found incompetent to stand trial. This area of research was recently reviewed by Demakis (2018).

Taken together, these preliminary studies have shown that the symptoms of dementia are highly associated with findings of incompetency to stand trial in older adults. These findings significantly differ from most research regarding competency to stand trial and the factors most associated with incompetency. Traditionally, a diagnosis of psychosis and other variables, such as unemployment status and history of hospitalizations, have been consistently found to be most associated with a determination of incompetency to stand trial.

Although it did not explicitly focus on aging and dementia, the aforementioned meta-analysis by Nicholson and Kugler (1991) did suggest that certain related symptoms (e.g., disorientation, memory impairments, and poor judgement) were also highly associated with findings of incompetency. Since these symptoms are common in dementia and neurocognitive disorders, they could be of particular importance when looking at competency in older adults. Again, dementia is most prevalent in older individuals, with age being the most robust risk factor for the development of the disorder (WHO, 2019). As a result, competency to stand trial evaluations of older adults may require greater attention to deficits associated with dementia, cognitive decline, and biological aging (Frierson et al., 2002), as opposed to factors traditionally associated with findings of incompetency in samples of younger defendants (e.g., psychotic symptoms and personality disorders).

Current Study

Dementia is a growing concern in the legal system and is projected to continue increasing over time. Due to the expected increase in aging populations in the criminal justice system and recent case law (e.g., *Madison v. Alabama*, 2019), legal officials and forensic clinicians should expect individuals with dementia to present in courts at an unprecedented rate. It is therefore crucial to learn more about individuals with dementia related to their court involvements and outcomes. Reviewing how defendants with dementia are handled in courts when being evaluated for competency to stand trial appears to be of particular importance.

In summary, the current study builds on three foundations of the current literature. The first consists of competency to stand trial research in general that has identified commonly associated factors related to findings of incompetency, but has not focused on dementia or other related neurocognitive disorders. The second consists of prior research that has shown that older adults

with symptoms consistent with dementia are at an increased risk for determinations of incompetency to stand trial, but were restricted to retrospective clinical reviews from a small number of patients in three inpatient psychiatric settings. The third consists of one case law review that combined clinical and legal data to analyze dementia outcomes in court (Doron et al., 2017), but was conducted outside of the US and not focused on competency to stand trial.

Due to the descriptive and qualitative nature of the current study, no specific hypotheses are introduced. Instead, this manuscript will focus on describing general trends and findings related to competency to stand trial decisions related to dementia in current US case law.

Method

The current study is a case law review of US court cases involving dementia and competency to stand trial from 2002-2019. The study includes a qualitative description of trends along with quantitative analyses. This method has many advantages over prior research. For one, the use of a case law review allows for the identification of a large number of cases that are diverse and representative across US jurisdictions. Second, reviewing each case allows for the comparison of the clinical and legal variables that are considered important to both spheres. Third, the large date range for selection of cases allows for comparisons of decisions over time, beginning in the early 2000s and ending with the most up to date decisions as of summer 2019.

Procedure

Inclusion Criteria

This study included nine inclusion criteria. The primary inclusion criteria for this study were (a) case law included in the Nexis-Uni Database involving individuals with a primary diagnosis of Major Neurocognitive Disorder, defined for the current study as (b) Alzheimer's disease (AD), (c) vascular dementia (VaD), (d) dementia with Lewy bodies (DLB), (e)

frontotemporal dementia (FTD), (f) mixed dementia (two or more of the above etiologies), or (g) dementia, not otherwise specified. Additional inclusion criteria for this study required (h) at least one expert evaluation regarding competency to stand trial of the defendant, and (i) a court-issued determination related to the defendant's competency to stand trial. By definition, all cases included in Nexis-Uni are from federal and state jurisdictions within the US only.

Exclusion Criteria

This study included ten exclusion criteria. Cases were excluded if they involved a primary diagnosis of Major Neurocognitive Disorder that was not related to the disorders of interest, namely (a) Traumatic Brain Injury (TBI), (b) substance/medication use, (c) HIV infection, (d) Prion disease, (e) Parkinson's disease, (f) Huntingdon's disease, or (g) another medical condition. The above disorders were excluded because they are fundamentally dissimilar to the disorders of focus for the current study. Exclusion criteria for this study also included (h) any civil capacity evaluation, and any evaluation of criminal competency not specific to standing trial, namely (i) competency to be sentenced or (j) competency to be executed. These evaluations were excluded due to significant differences in their nature and timing compared to competency to stand trial.

Case Identification

A case law review was conducted on all available legal decisions from the US court system between 2002 and 2019 involving dementia and competency to stand trial. Nexis-Uni was selected as the database of choice due to it being one of the most well-known and commonly used legal research services with extensive coverage of US cases. Nexis-Uni (previously Lexis-Nexis) includes appellate decisions from the US Supreme Court and US Circuit Court of Appeals, as well as all published federal trial court decisions (i.e., by US District Courts). However, it must be noted that not all federal trial courts issue written opinions in all cases they hear, and therefore not all

federal trial cases will be included in the Nexis-Uni database. State-level cases are also included in Nexis-Uni, and typically include published opinions from appellate courts and high courts in all jurisdictions. That is, state-level cases in Nexis-Uni generally do not include cases occurring in lower courts. Lastly, in addition to published cases, Nexis-Uni also includes unpublished opinions. In these cases, the court has either determined that the opinion is not releasable to the public, has rendered an opinion that is not legally citable, or has placed a citation limitation on the opinion. For these cases, Nexis-Uni provides a notice on the case that it is unpublished or not citable.

Although the first documented case related to dementia appears in the database in 1978, the current study focused on cases from 2002 onward due to the significant increase of cases related to dementia beginning at this time. Cases were included through the midpoint of 2019 (i.e., July 2, 2019) to ensure the inclusion of the most up-to-date decisions in the current study.

Cases in the study were selected from searches of the Nexis-Uni database using the following clinical terms: "dementia," "Alzheimer's disease," "AD," "Alzheimer's dementia," "Alzheimer dementia," "Alzheimer*," "frontotemporal dementia," "FTD," "frontotemporal lobar degeneration," "frontotemporal degeneration," "vascular dementia," "VAD," "vascular cognitive impairment," "Lewy body dementia," "dementia with Lewy bodies," "DLB," "major neurocognitive disorder," "neurodegenerative disorder," "neurodegen*." These terms were selected due to their representation of the disorders of interest for the current study. In addition, cases were selected using the following legal search terms: "competency," "CST," "competency to stand trial," "competenc*," "adjudicative competence," "competence to proceed with adjudication," "fitness to stand trial," "trial competence," "incompetence," "incompetent to stand trial," and "incompetenc*." These legal terms were chosen due to their specificity to the psycholegal question that is of focus to the current study. The extender option ("*") was utilized

for select search terms so that the search engine would generate the root word in addition to all words containing the entirety of the root word. Use of both the extender option and additional search terms was used to ensure the identification of all relevant cases.

An initial sample of 2,360 cases were identified. Each of these cases was analyzed to confirm that it met all inclusion/exclusion criteria for this study. Of this initial sample, 183 cases were not related to the disorders of interest, 1,594 represented a civil capacity evaluation, and 493 detailed a criminal case not related to competency to stand trial. Out of these 493 cases, four defendants were detailed in both trial and appeal (for a total of eight cases). In these instances, the two separate cases detailing the same defendant were merged, resulting in four cases. Specifically, the case that detailed the earliest competency to stand trial evaluation and determination were included in the analyses, to allow for the examination of trends in competency to stand trial determinations according to time. Overall, a total of 90 cases remained after excluding those that did not fulfill study criteria, all of which were included in data collection for the current study (see Appendix A for a listing of all included cases). Hereafter, the term "defendant" will be used to refer to the individual accused of a crime and undergoing court proceedings in the included cases.

Case Coding

The authors developed a code book to quantify the variables of interest to be extracted from each included case. Each variable was detailed in the coding book to ensure accurate and uniform coding of each item (see Appendix B). Coded variables include relevant information about the case (e.g., name of case, level of hearing, and index offense) and defendant demographic data (e.g., date of birth, sex/gender, race/ethnicity, marital status, and educational attainment). Of note, index offense was coded into seven main categories: violent, personal, property, inchoate, statutory, drug-related, and financial/white collar crimes. Specifically, all crimes were coded as violent if

they met the descriptions of a violent crime as defined by the FBI Uniform Crime Report (2017). Otherwise, the remaining crimes were coded into the broad and commonly referenced categories of personal, property, inchoate, statutory, drug-related, and financial/white collar crimes (see Justia, 2018). In cases with more than one charge, index offense was coded according to the most severe of the available charges. Additional case-specific information and demographic data variables were selected due to their noted importance in prior research examining factors related to either overall competency to stand trial (Pirelli, Gottdiener, & Zapf, 2011) or variables specific to competency to stand trial in older populations (Frierson et al., 2002; Morris & Parker, 2009). Taken together, the above information was important to obtain from each case in order to accurately describe the sample and examine potential factors that may explain trends in decisions.

Clinical variables coded in the current study include the number of competency evaluations conducted with the defendant, the date when the evaluation(s) occurred, the diagnosis given by each expert (e.g., dementia, AD, FTD, mixed), and major cognitive impairments demonstrated by the defendant. Noting the date that evaluations occurred allows for calculations of the defendant's age at the time of evaluation. This variable was of particular importance, due to prior research implicating age as the most robust predictor in both greater severity of clinical symptoms of dementia (Alzheimer's Disease International, 2015) and findings of incompetence to stand trial in preliminary examinations of older adult populations (Frierson et al., 2002; Morris & Parker, 2009). Investigating the total number of evaluations conducted, along with the retaining party for each evaluator, is important when considering the overall context of evaluations. Determining whether the independent evaluators tended to reach similar interpretations of their results, leading to similar ultimate conclusions following their assessment, is of particular importance in the current study.

Coding what each evaluator noted as the defendant's significant impairments is crucial to understand the interpretation of the results. Dementia is a general term that includes multiple underlying pathologies, each with distinct clinical presentations (WHO, 2019). As a result, recognizing the various symptoms and ultimate diagnoses can provide beneficial associations related to dementia and competency to stand trial. Specifically, uncovering a pattern of symptoms, impairments, and cognitive abilities that are most associated with findings of either competency or incompetency are of particular importance in the current study.

Legal variables were also examined in the current study, including which party initiated the competency evaluation. Competency can and must be raised by any member of the court when there is *bona fide* doubt as to the defendant's competency (*Pate v. Robinson*, 1966). The defense attorney is most often the party initiating a competency evaluation (Melton et al., 2017) due to their obligation to raise this issue when there is reason of doubt (*State v. Johnson,* 1986). This variable can be interesting when examining trends related to who is most often raising the question of competency in these cases. Additional variables that were coded included the recommendations from the evaluators (i.e., competent or incompetent), each evaluator's opinion regarding the defendant's restorability (i.e., likely or not likely), and the ultimate court determination related to defendant's competency to stand trial along with justification for determination. This information is important since a competency is ultimately a legal determination made by a judge. While judges appear to rely heavily on the evaluation from the expert witness (i.e., upwards of 90% agreement; Zapf, Hubbard, Cooper, Wheeles & Ronan, 2004), the recommendation from the expert is not necessarily indicative of the final court-issued determination related to competency. As such, capturing both the expert recommendation and the ultimate court decision related to competency is crucial to the current study. See **Table 1** for a summary of the data collected for each case.

Table 1

Summary of Information Extracted from Each Case

Case	Demographic	Clinical	Legal
Case name	Date of birth	Total number of evaluations	Who initiated competency evaluation (defense, prosecution, and/or court)
Date of adjudication	Sex/gender	Number of evaluators retained on each side (defense, prosecution, and/or court appointed expert)	Recommendation of evaluator(s) (i.e., competent or incompetent)
Federal or state	Race/ethnicity	Dates of evaluations	Likelihood of restorability (e.g., likely or not likely)
Circuit level (if applicable)	Educational attainment	Diagnosis given by defense, prosecution, and/or court Expert (if applicable)	Evaluator justification of recommendation
State (if applicable)	Marital status	Types of impairments noted by each evaluator	Court determination of competency to stand trial (i.e., competent or incompetent)
Index offense		Onset of symptoms noted by each evaluator	Court justification of competency decision

One Master's level research assistant was recruited to help code the cases, who was trained in detail on the meaning of each variable and how to accurately extract and code the data appropriately. Training was completed through an in-person training sessions with the first author, under the supervision of their faculty advisor. After an initial training, both coders individually code six randomly selected practice cases, followed by another in-person training session to review discrepancies between the raters. Training continued with these six practice cases until agreement in coding reached 100%. Once this agreement level was obtained, coders then completed an additional 10 randomly selected cases, which were again followed by another in-person training session to review discrepancies and review coding protocols. The subsequent 85 cases were then randomly assigned to four additional waves (i.e., 20-25 cases each) and coded individually by the two raters within each wave. Inter-rater reliability between the two coders averaged 92% for all 94 cases, ranging from 91% to 93% across the coding waves. In cases of discrepancies, the first author reviewed the case more closely and made ultimate coding decisions.

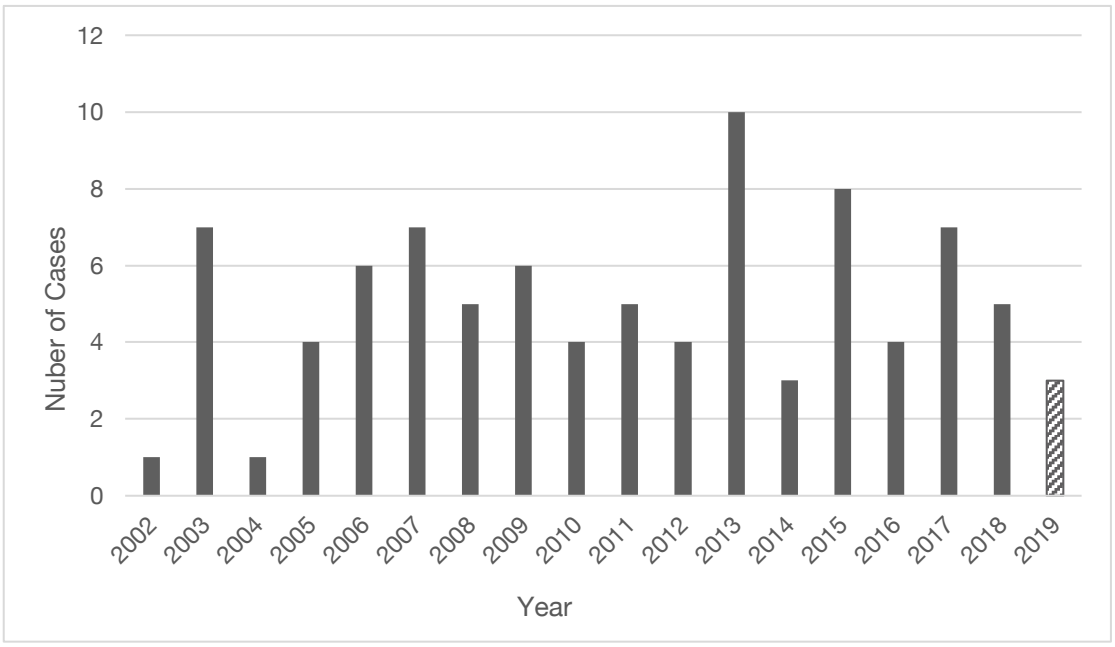
Results

Sample Characteristics

From 2002 through mid-2019, there were 90 published legal decisions involving dementia and competency to stand trial determinations. **Figure 1** summarizes the number of cases occurring each year. The 90 cases had a similar distribution between jurisdiction levels, with 41 state level cases (46%) across 19 different states, and 49 federal cases (54%) across 11 federal circuits and the DC Circuit. See **Table 2** and **Table 3** for a summary of cases by state and federal jurisdictions, respectively. No clear trends emerged in these cases based on time or jurisdiction, although geographic differences are observed when comparing states (e.g., California most common) versus federal jurisdictions (e.g., 11th Circuit most common, including Alabama, Florida, and Georgia).

Figure 1

Dementia and Competency to Stand Trial cases, by Year



NOTE: Data from 2019 represents only half of the year (i.e., January-July 2, 2019)

Table 2

Dementia and Competency to Stand Trial Cases, by State Jurisdiction

State	Number of cases
California	12
Florida	4
Illinois	3
Kentucky	3
Alaska	2
Indiana	2
Kansas	2
New York	2
Arkansas	1
Connecticut	1
Delaware	1
Iowa	1
Massachusetts	1
Michigan	1
Nebraska	1
New Mexico	1
North Carolina	1
Pennsylvania	1
Washington D.C.	1

NOTE: Organized by number of cases, then alphabetically by state.

Table 3

Dementia and Competency to Stand Trial Cases, by Federal Jurisdiction

Circuit level	Number of cases
1st	3
2nd	4
3rd	2
4th	1
5th	4
6th	1
7th	1
8th	8
9th	7
10th	4
11th	13
DC Circuit	1

NOTE: Organized by circuit number.

The recorded sex/gender of defendants was almost exclusively male (n = 84, 93%), with only 6 cases involving a female defendant (7%). Age at the time of the evaluation was recorded either by direct documentation in the case file, or calculated using other age-related information. Age at time of evaluation was only able to be calculated in a minority of cases (n = 33; 37%). Based on the available information, the average age of the defendant at the time of the evaluation was 69.30 years old (*SD* = 13.63, range = 33 - 83).

Race/ethnicity information was limited to what was reported in each case. In total, only 15 cases (17%) detailed information related to the defendant's race/ethnicity, leaving 75 cases (83%) with an undetermined race/ethnicity. In the 15 cases that did report race/ethnicity information, 5 (33%) were Hispanic, 4 (27%) were Middle Eastern, 3 (20%) were African American, 2 (13%) were Caucasian, and 1 (7%) was Asian. Educational level was similarly limited, with only 17 cases (19%) either directly reporting the defendant's educational level or being able to infer this information via occupational status. This left educational attainment unknown in the majority of cases (n = 73; 81%). Among these 17 cases, this variable was reported to indicate educational attainment lower than high school graduate/GED completion (n = 7; 41%), or to highlight a serious decline in cognitive functioning evidenced by previously held cognitive abilities and college or post-graduate education (n = 8; 50%).

Information about marital status was also limited. Specifically, This this variable was detailed in 22 cases (24%), leaving 68 cases (76%) with an unknown marital status. In the 22 cases that did report this variable, the majority of defendants were married at the time of evaluation (n = 14; 64%), followed by divorced/separated/widowed (n = 7; 32%) and single (n = 1; 4%). Since these demographic variables were only defined in the minority of cases, it is unclear whether these findings related to sex/gender, race/ethnicity, and marital status generalize beyond the sample.

Index offense ranged considerable between jurisdiction levels. The most frequently occurring type of crime was violent crimes (n = 25; 28%), followed by statutory crimes (n = 18; 20%) and financial/white collar crimes (n = 15; 17%). with Drug-related, personal, property, and inchoate crimes represented a smaller portion of cases. A number of cases did not clearly state the index offense (n = 11; 12%). See **Table 4** for a summary of index offenses by jurisdiction level.

Competency Findings

Among the 90 cases, the issue of competency was raised by the defense in the majority of cases (n = 67; 74%). Competency was raised by the prosecution in 3 cases (3%) and the court in 14 cases (16%), with 6 cases unclear about who raised the issue (7%). Defendants were involved in a varying number of evaluations. In one-third of cases, the defendant only underwent one expert evaluation (n = 30; 33%). In these 30 instances, the majority of evaluations were carried out by a court-appointed expert (n = 17; 57%), followed by an expert retained by the defense (n = 11; 37%) or prosecution (n = 2; 6%). Similarly, in approximately one-third of cases defendant underwent two separate evaluations (n = 32; 36%), most often involving one defense expert and one prosecution or court-appointed expert (n= 26; 81%). Further, a portion of defendants were involved in a greater number of evaluations (n = 28; 31%). Specifically, a handful of defendants underwent three (n = 19; 21%), four (n = 6; 7%), five (n = 1; 1%), or six (n = 2; 2%) distinct evaluations.

Court determinations generally held a high level of agreement with expert's regarding their recommendations of competency. In instances where there was only one expert witness (n = 30), courts agreed with the expert's recommendation regarding the defendant's competency to stand trial in 86% of cases (n = 24), with disagreement evident in only in four cases (14%). In the remaining two cases, the expert did not comment on their recommendations of competency.

Table 4

Types of Crime, by Jurisdiction Level

Type of crime	State cases	Federal cases	Total cases
Violent	18	7	25
Statutory	13	5	18
Financial/white collar	1	14	15
Unknown	1	10	11
Drug related	2	7	9
Property	3	3	6
Personal	3	0	3
Inchoate	0	3	3
Total	41	49	90

NOTE: Organized by number of total cases.

In cases where there were two evaluations, agreement between the two experts varied significantly. Out of 32 cases with two separate evaluations, both experts reached the same conclusion regarding the defendant's diagnosis 55% of the time (n = 18). Agreement between experts on recommendation for competency to stand trial (i.e., competent or incompetent) was only 45% (n = 14). When there was disagreement between the experts regarding *diagnosis*, the court's opinion aligned with either the prosecution or court-appointed expert in the majority of cases (72%; n = 23), compared to the defense-retained expert (28%; n = 9). Similarly, in cases where there was disagreement between the experts regarding *competency to stand trial*, the court's opinion again tended to align with the prosecution or court-appointed expert (n = 28; 88%).

Cases with three evaluations had greater discrepancies between experts (n = 19). Specifically, agreement between all three experts regarding the defendant's diagnosis was only present in 26% (n = 5), and total agreement among the experts regarding recommendations for competency to stand trial was only present in 11% (n = 2). In the majority of cases, the court's opinion tended to align with the prosecution and court-appointed expert(s) (n = 11; 58%). In contrast, the court was aligned with the defense expert's recommendations when it matched another expert in four cases (20%), and only in two cases (11%) when it did not match the court and/or prosecution expert(s).

Agreement between experts regarding diagnosis and competency recommendations continued to decline with the increasing number of evaluations. In cases with four or more evaluations (n = 9), agreement between all experts did not occur regarding either diagnosis or recommendations of competency. In these instances, the court's opinion tended to align with the prosecution and court-appointed experts in most cases (n = 8; 89%). In the remaining case (11%),

the court agreed with a competency recommendation from a defense expert, but it is important to note that this expert aligned with a prosecution-retained expert as well.

The level of clinical detail present in each case varied considerably. In the majority of cases (n = 62; 69%), clinical symptoms were cited, along with how these impairments interfered with the prongs of *Dusky.* Incorporating both clinical and legal information provided a stronger understanding of impairments the defendant exhibited, and how these deficits affected their competency. However, some cases did not mention clinical symptoms and instead only reported the defendant's abilities in terms of the *Dusky* prongs (n = 8; 9%). Finally, some cases did not report any of this information, leaving only the court determined diagnosis and competency determination (n = 20; 22%).

Overall, cases with only one evaluation (n = 30) were less likely to report clinical symptoms (n = 12; 40%), the expert's determinations in terms of the *Dusky* prongs (n = 5; 16%), or diagnosis and ultimate determination with no further description of symptoms or psycholegal abilities (n = 13; 43%). In contrast, cases that involved two evaluations were more likely to report clinical information (n = 24; 75%), as were cases with more than two evaluations (n = 24; 86%).

When courts provided justification about their decision related to the defendant's competency to stand trial (n = 90), dementia NOS was the most frequently cited diagnosis (n = 42; 47%), followed by Alzheimer's disease (n = 9; 10%) and vascular dementia (n = 7; 8%). In 13 cases (14%), the courts determined that the defendants were deliberately malingering neurocognitive symptoms of dementia. In these instances, the courts tended to cite information the defendant's functional abilities (e.g., real-world functioning) as evidence of their ability to proceed. In an additional 14 cases (16%), the court ruled that despite some cognitive impairments, the defendants did not meet the criteria for diagnosis. In these cases, the courts tended to state that

the defendant's cognitive symptoms did not interfere with their ability to understand the proceedings and assist in their defense, or a similar line of reasoning. Overall, state and federal cases had a similar level of cited diagnoses by the courts (see **Table 5**).

Out of the total 90 cases, 48 defendants (53%) were found competent to stand trial, and 42 defendants (47%) were found incompetent. A chi-square test of independence compared the frequency of competency determinations by federal and state-level cases. Despite both federal and state level jurisdictions tending to rely on the same prongs related to the *Dusky* standard while evaluating competency to stand trial, significant differences emerged in determinations of competency between the two jurisdictions, X^2 (1, N = 90) = 6.20, $p < 0.01$. More specifically, federal cases found defendants competent more often (65%), while state cases found defendants incompetent more often (59%). See **Figure 2** for a comparison of competency determinations between federal and state jurisdictions.

Determinations of competency were examined in the context of a variety of demographic and sample characteristics. The meaningfulness of any trends based on demographics is unclear, given the limited data on these variables in the sample. However, a descriptive analysis of potential group differences may nonetheless prove illustrative. In the 33 cases that age at evaluation was known, no significant differences were observed in age between competent (n = 15, *M* = 69.27, *SD* = 12.86) and incompetent (n = 18, *M* = 69.33, *SD* = 14.62) defendants; *t*(31) = -0.014, p = 0.99, *d* = 0.004 (small effect). After removing defendants that the court determined did not qualify for a diagnosis of dementia or were malingering, a total of 25 cases remained with an age variable. Age was still not significantly different between defendants found competent (n = 8, M = 65.75, SD = 16.02) and incompetent (n = 17, M = 69.29, *SD* = 15.07); *t*(23) = -0.538, p = 0.60; *d* = 0.23 (small effect).

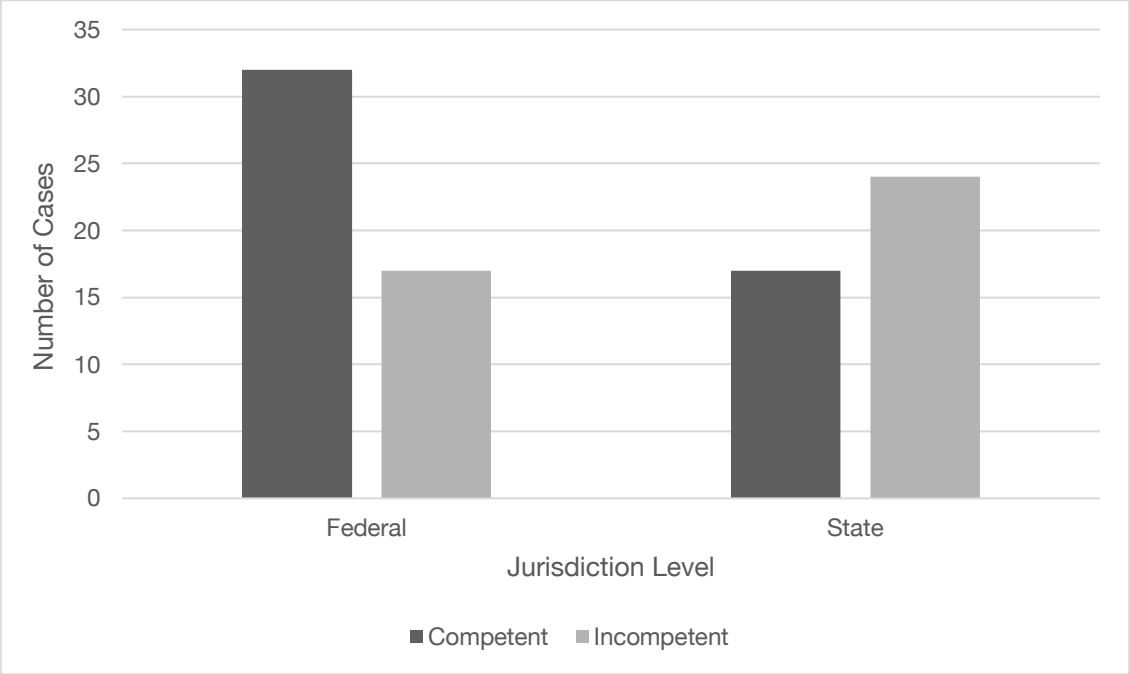
Table 5

Court Determined Diagnosis, by Jurisdiction Level

Diagnosis	Total cases	State cases	Federal cases
Dementia NOS	42	26	16
Alzheimer's disease	9	4	5
Vascular dementia	7	5	2
Frontotemporal dementia	3	0	3
Mixed dementia	2	1	1
Lewy body dementia	0	0	0
Did not meet diagnostic criteria for dementia	14	2	12
Symptoms of malingering	13	3	10
Total cases	90	41	49

Figure 2

Competency Determinations, by Jurisdiction Level



In the 15 cases that detailed race/ethnicity, defendants from Hispanic and Middle Eastern cultural groups may be less likely to be found incompetent (20% and 25%, respectively), and defendants from African American cultural groups may be more likely to be found incompetent (66%). Trends among defendants from Caucasian and Asian cultural groups were not analyzed further due to their limited sample size (n = 2 and 1, respectively). See **Figure 3** for a comparison of competency determinations by race/ethnicity.

In the 17 cases that reported educational attainment, defendants with lower educational attainment (i.e., less than high school graduate/GED equivalent) were found incompetent in 0% of the reported cases, whereas those with higher educational attainment (i.e., college graduate or post graduate) were found incompetent in 50% of the reported cases. Trends among defendants with high school/GED equivalent were not analyzed further due to their limited sample size (n = 1). See **Table 6** for a summary of competency determinations based on education attainment.

Index offense was also considered in relation to competency status. Overall, crimes of a personal, statutory, and violent nature appear to have more findings of incompetency in this sample (100%, 56%, and 56%, respectively), while financial and drug-related crimes appear to have less findings of incompetency (67% and 78%). No clear differences appeared for property crime (50% incompetent). No quantitative analyses were completed due to the limited number of cases in each of these subgroups. See **Table 7**, **Table 8**, and **Table 9** for more details regarding index offense and competency determinations overall, at the federal level, and at the state level, respectively.

In terms of clinical information, impairments in memory and executive functioning were noted by experts the most frequently. Out of the 42 cases where defendants were ruled incompetent to stand trial (47%), 50% (n = 21) did not note specific impairments but would detail statements

Figure 3

Competency Determinations, by Race/ethnicity

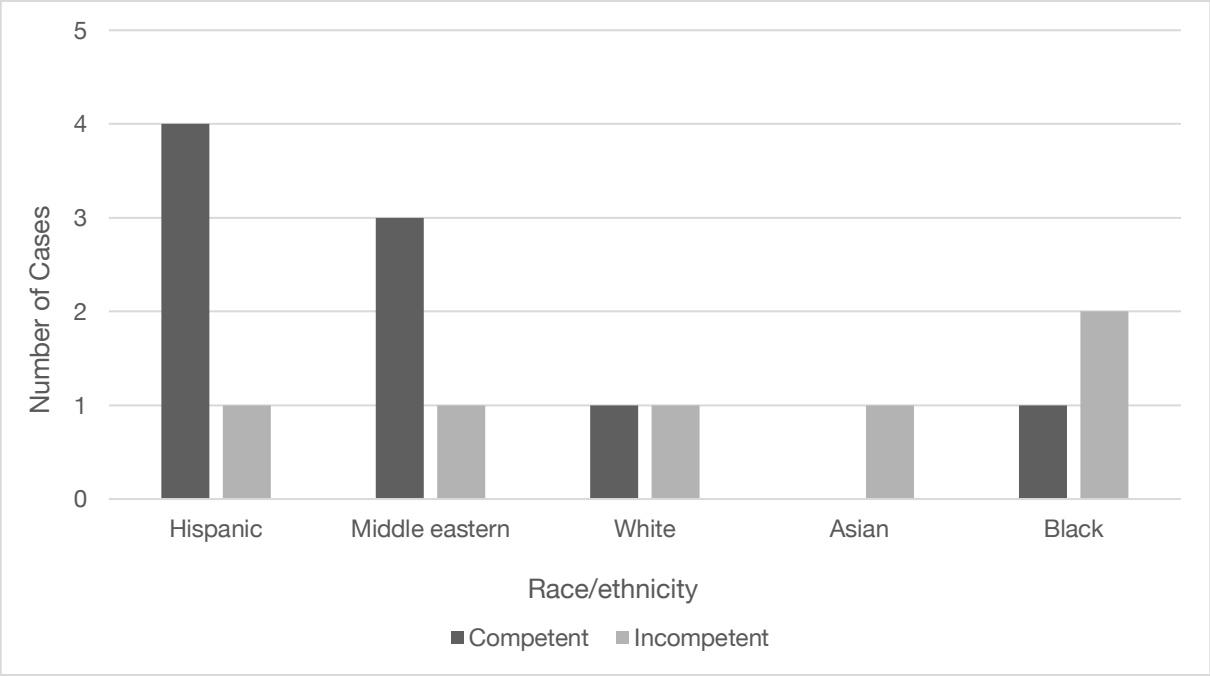


Table 6

Competency Determinations, by Educational Attainment

Educational attainment	Total cases	Competent	Incompetent
Less than high school	7	7 (100%)	0 (0%)
High school/GED	1	0 (0%)	1 (100%)
College graduate or higher	8	4 (50%)	4 (50%)
Total cases	16	11 (69%)	5 (31%)

Table 7

Competency Determinations Across all Jurisdictions, by Index Offense

Index offense	Total cases	Competent	Incompetent
Violent	25	14 (56%)	11 (44%)
Statutory	18	8 (44%)	10 (56%)
Financial	15	10 (67%)	5 (33%)
Drug related	9	7 (78%)	2 (22%)
Property	6	3 (50%)	3 (50%)
Personal	3	0 (0%)	3 (100%)
Inchoate	3	3 (100%)	0 (0%)
Unknown	11	4 (36%)	7 (64%)
Total cases	90	48 (53%)	42 (47%)

NOTE: Organized by number of total cases.

Table 8

Competency Determinations at the Federal Level, by Index Offense

Index offense	Total cases	Competent	Incompetent
Financial	14	9 (64%)	5 (36%)
Violent	7	5 (71%)	2 (29%)
Drug related	7	5 (71%)	2 (29%)
Statutory	5	2 (40%)	3 (60%)
Property	3	3 (100%)	0 (0%)
Inchoate	3	3 (100%)	0 (0%)
Personal	0	0	0
Unknown	10	4 (40%)	6 (60%)
Total cases	49	31 (63%)	18 (37%)

NOTE: Organized by number of total cases.

Table 9

Competency Determinations at the State Level, by Index Offense

Index offense	Total cases	Competent	Incompetent
Violent	18	9 (50%)	9 (50%)
Statutory	13	6 (46%)	7 (54%)
Property	3	0 (0%)	3 (100%)
Personal	3	0 (0%)	3 (100%)
Financial	1	1 (100%)	0 (0%)
Drug related	2	2 (100%)	0 (0%)
Inchoate	0	0	0
Unknown	1	0 (0%)	1 (100%)
Total cases	41	18 (44%)	23 (56%)

NOTE: Organized by number of total cases.

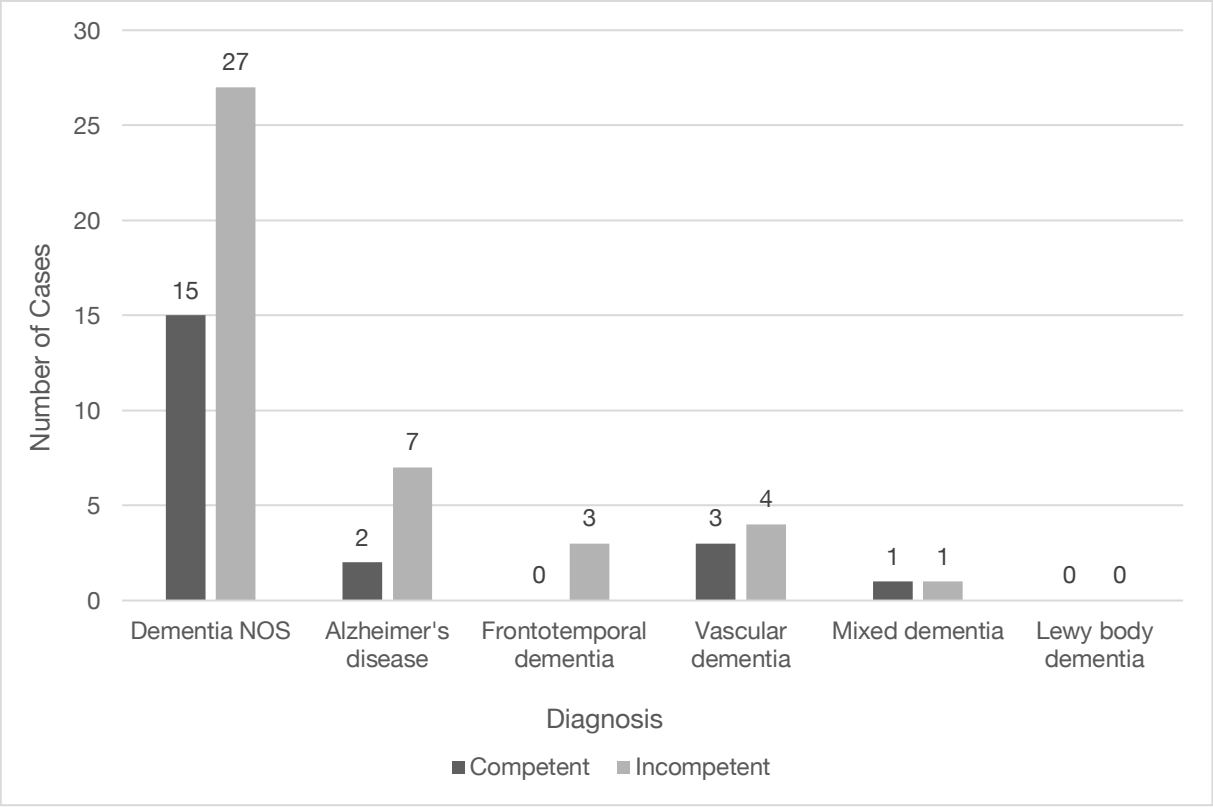
from the court instead (e.g., that the defendant demonstrated symptoms of dementia or Alzheimer's disease) or would note an accepted diagnosis. From this, it may be possible to infer what symptoms the defendant likely exhibited (e.g., memory impairments in the case of Alzheimer's disease) that were related to incompetency to stand trial, despite no direct reports of impairments. This left the other 50% of cases with some direct reports of clinical symptoms. In these cases, significant deficits in both memory and executive functioning was the most frequently cited combination of impairments that contributed to incompetency (n = 12; 29%), followed by impairments in strictly memory (n = 6; 14%) and executive functioning (n = 3; 7%).

When looking at determinations of incompetency, diagnosis appears to be particularly relevant. After removing the 13 cases associated with symptoms of malingering and the 14 cases that did not qualify for a dementia diagnosis, a remaining 63 cases were left where the courts accepted a dementia diagnosis. Out of these 63 cases, 42 were determined incompetent to stand trial (67%), while 21 were deemed competent (33%). Dementia NOS was the most frequently cited disorder overall (n =42), with 27 cases being ruled as incompetent (64%). This was followed by Alzheimer's disease with 7 out of 9 cases being found incompetent (78%), and vascular dementia similarly with 4 out of 7 cases (57%). See Figure 4 for a summary of these findings.

The current legal standard for competency to stand trial incorporates the three "prongs" of *Dusky* standard. Determinations of incompetency were examined in the context of these prongs. Overall, many cases did not describe which prongs of competency were not met. Instead, these cases only detailed the ultimate determination of the courts regarding the defendant's competency to stand trial (n = 20; 49%). However, a portion of cases did detail which prongs were not met. Specifically, among the 42 defendants found incompetent to stand trial, 39% of cases (n = 16) noted that their cognitive impairments significantly interfered with all three prongs of competency.

Figure 4

Competency Determinations, by Diagnosis



A smaller portion of cases cited individual prongs or combinations of two prongs as the justification for findings of incompetency (n = 6; 15%). Overall, the inability to assist in their defense was the most frequently cited prong of *Dusky* that the defendant's impairments interfered with (n = 21; 51%). In five of these cases, the inability to assist in their defense was the only prong of competency not met. One case detailed a defendant who had impaired rational and factual understanding of the proceedings, with an intact ability to assist in their defense (see **Figure 5**).

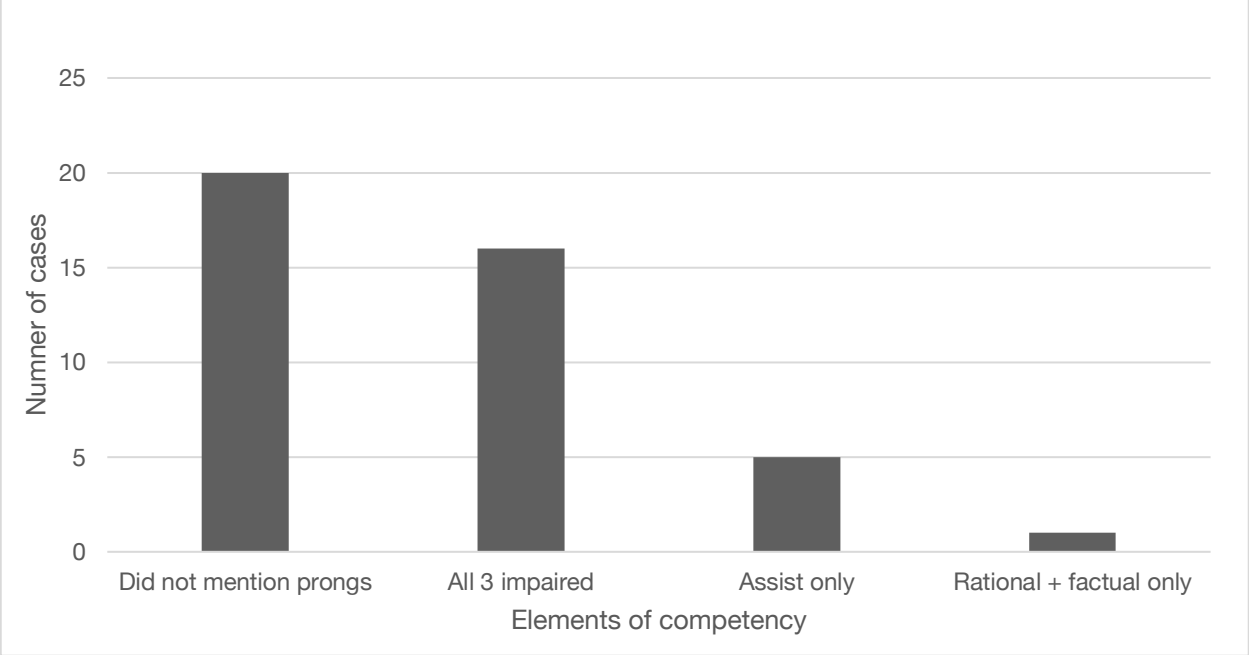
4. Discussion

The current study utilized a case law review to examine dementia and competency to stand trial determinations in United States courts from 2002 through mid-2019. Since 2002, competency to stand trial determinations have been issued in defendants with dementia in 90 unique cases, almost equally distributed between federal and state jurisdictions. These cases spanned 19 states and nearly every level of the federal circuits. Although a case law review model does not allow for the determination of the exact number of cases concerning dementia and competency to stand trial, this study provides an indication that a substantial amount of courts, especially in certain jurisdictions, are likely to come in to contact with these types of defendants. Despite both federal and state jurisdiction courts tending to rely on the same prongs related to the *Dusky* standard to evaluate competency, significant differences emerged between the two jurisdictions. Interestingly, federal cases more often found defendants competent, while state cases more often found defendants incompetent to stand trial.

In this sample, the issue of competency was raised by the defense in the majority of cases. This is unsurprising, due to the obligation of the defendant's attorney to raise this issue to the trial court when there is reason of doubt (*State v. Johnson,* 1986). Most defendants underwent one or two separate evaluations of competency (i.e., 69%). In cases with one expert evaluation, courts

Figure 5

Court justifications of competency determination



agreed with the recommendation of competency most of the time (i.e., 86%), which is in line with prior estimates in the general competency to stand trial literature (Zapf et al., 2004). However, when where there were two separate evaluations, agreement between the experts only reached 55% for diagnosis and 45% for competency recommendation. In cases that relied on more than two expert evaluations, this level of agreement regarding both appropriate diagnosis and competency recommendations were even lower. In instances of disagreement, the courts tended to side with the prosecution or court-appointed experts most of the time. As such, evaluating these individuals in terms of diagnosis and competency abilities appears to present as a challenging task for experts.

Another important consideration to these findings is the developing recognition within the field of forensic psychology related to adversarial allegiance, and cognitive bias more broadly. This research suggests that clinicians can exhibit biases in adversarial settings, such that scores on objective measures may skew toward the retaining party's position (Murrie & Boccaccini, 2016). Further, clinicians may tend to perceive themselves as less vulnerable to biases than their colleagues, which can contribute to a phenomenon known as "bias blind spot" (Neal & Brodsky, 2016). So, while it is important to note that disorders are complex and challenging to evaluate, cognitive biases and adversarial allegiance may be a factor when considering our findings and the significant discrepancies between experts.

This study provides a broad description of individuals with dementia and their outcomes related to competency to stand trial. Results of this study suggest that a number of demographic, clinical, and legal factors are related to findings of incompetency. When considering demographic characteristics, high levels of educational attainment seem to potentially relate with findings of incompetency. Specifically, in these cases educational attainment was likely noted to highlight a serious decline in cognitive functioning in these individuals. When looking at index offense,

crimes of a personal, statutory, and violent nature appear to have more findings of incompetency in this sample, while financial and drug-related crimes appear to have less findings of incompetency. No clear differences appeared for property crime. When looking at age, no significant differences were found in defendants found incompetent from those deemed competent to stand trial. This was surprising, given the fact that the prevalence and severity of dementia generally increases with age. However, this case law review did not have the age of the majority of individuals (i.e., 63%). It is therefore possible that age would have been significantly different between those two groups if age was reported in all cases. As such, future samples that include consistent age demographics should examine this factor when looking at trends associated with competency status.

In this case law review, the details related to the clinical presentation of each individual varied considerably. Specifically, cases that involved only one or two evaluations less frequently reported the clinical symptoms exhibited by the defendant. Instead, these cases would more often report only the diagnosis and competency determination. However, clinically relevant information was more frequently cited as the number of evaluations increased. Cases that required a greater number of evaluations likely represented a more complex presentation of symptoms, which contributed to greater difficulties in understanding how these impairments related to the defendant's psycholegal abilities of competency to stand trial. From this, it appears that clinical descriptions were more relevant and relied upon by the courts to make their determinations of competency to stand trial.

While characteristic symptoms of dementia such as memory decline and problems with executive functioning may both be related to findings of incompetency, a combination of significant symptoms spanning both domains of memory and executive functioning may have the

greatest impact on defendants and their abilities to understand the trial proceedings in a meaningful way. It is possible to infer some likely impairments exhibited by individuals from the court's accepted diagnosis (e.g., memory deficits due to Alzheimer's disease), but the majority of cases in this study relied on dementia NOS as the formal diagnosis. This does not allow for a strong inference of impairments that were related to findings of incompetency, due to so many underlying etiologies and resulting neurocognitive symptoms contributing to a possible dementia diagnosis.

In times where a diagnosis of dementia was accepted by the courts, 67% of individuals charged with a crime were deemed incompetent. In comparison, other studies that have used much younger samples and examined other disorders have found general incompetency rates of approximately 20% (Murrie & Zelle, 2015). Since these general estimates come from meta-analyses of individual studies, rather than case law as in the current study, these findings do not appear to be directly comparable. Nevertheless, our results show that individuals with dementia merit further attention. This is not surprising, given that the difficulties inherent with these disorders – such as memory, executive functioning, and language – are abilities that are generally considered necessary to demonstrate competence. As such, this finding indicates that a diagnosis of dementia, and the impairments inherent with these disorders, are especially relevant and negatively impact the defendant's psycholegal abilities in the context of competency to stand trial.

Limitations of this research are important to note. Inherent to the case law review method is the limitation that not all relevant cases are reported and included in the Nexis-Uni database. As a result, the representativeness of the sample, and the rulings that followed, may not accurately reflect the true nature of dementia and competency to stand trial determinations. In addition, information that was presented in each case varied. Overall, demographic information was unable to be collected in the majority of cases, making the association between these variables and

competency outcomes less robust. Future directions include expanding the currently limited empirical and case law methods to more fully understand the relationship between dementia and competency to stand trial. Particularly relevant research that is needed to more fully understand this relationship is to determine the most frequently occurring cognitive disorders and rates of these disorders in older adults that come in contact with the courts, along with complete demographic information and clear descriptions of their neuropsychological impairments that are reported in a similar manner to appropriately understand these associations.

Implications

Overall, while certain elements of competency to stand trial evaluations can be similar across age ranges, special considerations should be given when evaluating older defendants. Older adults often present with a range of physical, neurological, and other health challenges. The U.S. population is aging, and the prevalence and incidence of dementia is increasing along with it. Therefore, individuals with dementia are likely to be encountered in courts at unprecedented rates in the future. As a result, the evaluation of defendants with dementia and their competency to stand trial is likely to be encountered more frequently than in prior years.

Not only are older adults with dementia likely to be encountered more often in courts, the results of this study suggest that older adults with dementia are found incompetent to stand trial at much higher rates than other psychiatric cohorts of defendants. When considering dementia, a broad array of symptoms may be present. The characteristic symptoms of dementia are difficulties with memory, problem-solving, language, orientation, judgement, and other cognitive skills that affect a person's ability to perform daily activities. Lapses in memory can affect an individual's ability to recall prior events and relay this information to their attorney. Difficulties with critical thinking and problem-solving can severely impede their ability to understand the facts of the case

and how to proceed at trial. Deficits in multiple domains of cognition can cause even more challenges. As such, this study suggests that the symptoms associated with dementia have a profound effect on an individual's ability to demonstrate a factual and rational understanding of their case, and assist in their defense. As such, the high rate of incompetency among this population has many implications pertaining to clinical health, criminal justice, and public policy.

Clinical Implications

Clinicians who are tasked with evaluating competency to stand trial should be knowledgeable about the specific disorders and impairments that frequently occur in older adult populations. Specialized training in geriatrics and neurodegenerative disorders will be even more important for these clinicians as they are tasked with evaluating these defendants at higher frequencies than previously encountered. The results from this study suggest that experts evaluating the same defendant only agreed on appropriate diagnosis approximately half the time. Further, experts agreed on recommendations of competency less than half the time.

Dementia represents a broad constellation of syndromes related to a number of different etiologies, all of which correspond with different symptoms and clinical presentations. However, there is significant overlap in the clinical presentation of symptoms and high proportions of mixed dementias. Given these facts, our results are not unsurprising and highlight that these neurodegenerative disorders are complex and challenging to evaluate. Further, it appears more difficult to relate dementia symptoms specifically to a defendant's competency to stand trial, evidenced by the general lack of agreement in experts' competency to stand trial recommendations. Even more, the results presented here suggest that a portion of defendants were found to not meet criteria for a diagnosis of dementia (16%), despite exhibiting some level of cognitive impairment. Going forward, it is crucial that evaluators be capable of recognizing the

impairments associated with these disorders, accurately providing a strong differential diagnosis of similar disorders (or ruling out a dementia diagnosis when appropriate), and detailing how these symptoms interfere with the defendant's competency. This will prove to be essential when working with these defendants to ensure they receive a fair trial.

Clinicians will also have to be mindful of forensic issues. For one, the results here suggest that the questionable validity of dementia symptoms was quite prevalent in these cases (i.e., determination of malingering in 15% of cases). Because of this, experts must be sure to incorporate measures of performance validity in their evaluations. The evaluation of performance validity is important in every criminal competency case, and is in line with best clinical and forensic practice (Heilbronner et al., 2009; Bush et al., 2005). Therefore, evaluating valid effort in older adults should receive the same attention as other groups. The results of this study suggest that there are significant discrepancies between experts in regard to these defendants' clinical presentations and functional competency abilities. In this already challenging task of determining the appropriate diagnosis, detecting instances in which defendants have deliberately feigned symptoms appears even more relevant.

Legal and Policy Implications

The findings of this study also have important implications for legal personnel and the criminal justice system. Defense attorneys were most often the party raising the issue of competency in the cases reviewed here. However, this case law review also found that the issue of competency was raised by the courts in 15% of cases. It is important for all legal personnel to understand that these disorders can negatively affect a defendant's competency to stand trial. As such, attorneys and all court personnel should be familiar of the symptoms and presentation of dementia, along with encouragement from the legal system for all personnel to raise the issue of

competency when they feel *bona fide* doubt exists. This would allow defendants that possibly have dementia to be identified earlier in court proceedings. Since evaluations of competency to stand trial and the idea of competency are foundational to a fair trial in the United States, having legal personnel informed of this diagnosis and how it relates to competency to stand trial is essential. To date, the assessment of older adults and aspects of civil capacity are well researched and understood by clinicians, lawyers, and judges. However, the assessment of criminal competencies of older adults is not as clearly understood. Having these same groups as knowledgeable about how dementia relates to competency to stand trial to the same extent as in evaluations of civil capacities should be of prime importance moving forward.

These results also have important implications for public policy. In recent times, a substantial section of research and policy has been devoted to the care of older adults and those with dementia already in the criminal justice system such as prisons and jails (Williams et al., 2012). However, this level of policy involvement has not extended to defendants found incompetent and unrestorable due to dementia and either being civilly committed or released to the community. Once a defendant is found incompetent to stand trial, their charges are eventually dropped if they are unable to be restored to competence. Due to the progressive and irreversible nature of dementia, many individuals diagnosed with these disorders may be less capable of being restored to competency. As such, the question of how to handle these individuals following their release becomes especially important. In some cases, these defendants may not have the necessary resources in place to return home, and institutional or community placement may instead be necessary to provide care and treatment going forward. However, psychiatric hospitals are likely not the ideal setting for the treatment of neurodegenerative disorders, and nursing homes and

skilled nursing facilities may be reluctant to accept an individual with a history of violence or serious legal history.

The challenges just described represent just some of the many complicated decisions now facing policymakers within criminal justice, social service, and legislative sectors. Collaboration between stakeholders from these and other related systems is therefore of clear and increasing importance to ensure the highest quality care is being provided to individuals with dementia involved in the criminal justice system, while also maintaining the ideals of justice and the safety of the communities in which they reside.

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Arkansas

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Pennsylvania

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Washington D.C

State v. Lester, No. 70124-0-I, 2014 Wash. App. LEXIS 951 (Apr. 21, 2014).

Appendix B

Case Information

1) **Coder** (1 = Dana, 2 = Becca)

2) **Case** (*write case name*)

3) **Adjudication** (*Date of Adjudication*) (MM, DD, YYYY)

4) **Jurisdiction** (*What jurisdiction level was the case?*) (0 = federal, 1 = state)

5) **JurisdictionFederalCircuit** (*What federal circuit jurisdiction was the case?)* (1 = 1st circuit, 2 = 2nd circuit, 3 = 3rd circuit, 4 = 4th circuit, 5 = 5th circuit, 6 = 6th circuit, 7 = 7th circuit, 8 = 8th circuit, 9 = 9th circuit, 10 = 10th circuit, 11 = 11th circuit, 12 = DC Circuit, 13 = 13th circuit, leave blank if not a federal case and go to question 5)

6) **JurisdictionState** (*What state jurisdiction was the case?*) (1 = Alabama, 2 = Alaska, 3 = Arizona, 4 = Arkansas, 5 = California, 6 = Colorado, 7 = Connecticut, 8 = Delaware, 9 = Florida, 10 = Georgia, 11 = Hawaii, 12 = Idaho, 13 = Illinois, 14 = Indiana, 15 = Iowa, 16 = Kansas, 17 = Kentucky, 18 = Louisiana, 19 = Maine, 20 = Maryland, 21 = Massachusetts, 22 = Michigan, 23 = Minnesota, 24 = Mississippi, 25 = Missouri, 26 = Montana, 27 = Nebraska, 28 = Nevada, 29 = New Hampshire, 30 = New Jersey, 31 = New Mexico, 32 = New York, 33 = North Carolina, 34 = North Dakota, 35 = Ohio, 36 = Oklahoma, 37 = Oregon, 38 = Pennsylvania, 39 = Rhode Island, 40 = South Carolina, 41 = South Dakota, 42 = Tennessee, 43 = Texas, 44 = Utah, 45 = Vermont, 46 = Virginia, 47 = Washington, 48 = West Virginia, 49 = Wisconsin, 50 = Wyoming, 51 = Washington DC, leave blank if not a state case)

7) **IndexOffense** *(what was the index offense committed?)* (0 = drug related, 1 = personal crime, 2 = property crime, 3 = statutory crime, 4 = inchoate crime, 5 = financial crime, 6 = violent crime)

Demographic Information

8) **DOB** (MM, DD, YYYY if available, if not available, enter -99 and go to question 8)

9) **DOB_Other** (Enter what information is available here; example MM, YYYY; -99 = no information given)

10) **Sex** (*sex/gender*) (0 = male, 1 = female, 2 = transgender)

11) **Race** (*race/ethnicity*) (0 = White/European American, 1 = Black/African American, 2 = Hispanic or heritage from a Latin American country, 3 = Asian/Asian American/Pacific Islander, 4 = Middle Eastern/Arab/Turkish/Iranian, 5 = Native American/American Indian/Indigenous, 6 = Biracial/Multiracial, 7 = other, -99 = no information given)

12) **Education** (*highest level of educational attainment*) (0 = less than high school (k-8th grade), 1 = less than high school (9th – 12th but no diploma/GED), 2 = high school graduate/GED, 3 = some college, 4 = college graduate, 5 = post graduate, -99 = no information)

13) **MaritalStatus** (*marital status of defendant*) (0 = single, 1 = married, 2 = divorced/separated, -99 = no information given)

Clinical Information

14) **Evaluations** (*total number of evaluations defendant underwent*)

15) **EvalDef** (*number of evaluations retained by the defense)*

16) **EvalPros** *(number of evaluations retained by the prosecution)*

17) **EvalCourt** *(number of evaluations retained by the court)*

Defense Expert Information

*Note: The next series of questions will be related to evaluators 1 and 2 for all parties. For purposes of coding, evaluator 1 will be assigned to the earliest and 1st assessment completed. (for example, if defense expert A evaluated patient on 1/1/2019 and defense expert B evaluated patient on 12/20/2018, defense expert B would be labeled as defense expert 1). If the part(ies) do not have a 2nd evaluator, leave those questions pertaining to 2nd evaluator blank.

Defense Expert Information

18) **EvalDateDef1** *(Date of evaluation completed by defense evaluator 1)* (MM, DD, YYYY, -99 if date not available and go to question 19; leave blank if no defense expert)

19) **EvalDateOtherDef1** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation; leave blank if no defense expert)

20) **DxDef1** *(diagnosis of defendant given by defense evaluator 1*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, 7 = does not qualify for diagnosis, -99 = does not give diagnosis; leave blank if no defense expert)

21) **Def1MemImpair** *(did defense evaluator 1 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention; leave blank if no defense expert)

22) **Def1OrientImpair** *(did defense evaluator 1 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention; leave blank if no defense expert)

23) **Def1InsightImpair** *(did defense evaluator 1 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention; leave blank if no defense expert)

24) **Def1ExecImpair** *(did defense evaluator 1 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention; leave blank if no defense expert)

25) **Def1SocImpair** *(did defense evaluator 1 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention; leave blank if no defense expert)

26) **Def1SympOnset** *(did defense evaluator 1 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention; leave blank if no defense expert)

27) **Def1Rec** (*what was defense evaluator 1's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say; leave blank if no defense expert)

28) **Def1Assist** *(did defense evaluator 1 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say; leave blank if no defense expert)

29) **Def1Rat** *(did defense evaluator 1 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say; leave blank if no defense expert)

30) **Def1Fact** *(did defense evaluator 1 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say; leave blank if no defense expert)

31) **Def1Restoration** *(did defense evaluator 1 believe the defendant was restorable to competency if recommendation was not competent to stand trial)* (0 = likely, 1 = not likely, 2 = unsure/undetermined, -99 = did not say; leave blank if no defense expert)

32) **EvalDateDef2** *(Date of evaluation completed by defense evaluator 2)* (MM, DD, YYYY, -99 if date not available and go to question 18, leave blank if no defense evaluator 2)

33) **EvalDateOtherDef2** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation)

34) **DxDef2** *(diagnosis of defendant given by defense evaluator 2*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, -99 = does not give diagnosis, leave blank if no defense evaluator 2)

35) **Def2MemImpair** *(did defense evaluator 2 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

36) **Def2OrientImpair** *(did defense evaluator 2 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

37) **Def2InsightImpair** *(did defense evaluator 2 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

38) **Def2ExecImpair** *(did defense evaluator 2 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

39) **Def2SocImpair** *(did defense evaluator 2 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

40) **Def2SympOnset** *(did defense evaluator 2 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention, leave blank if no defense evaluator 2)

41) **Def2Rec** *(what was defense evaluator 1's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say, leave blank if no 2nd defense expert)

42) **Def2Assist** *(did defense evaluator 1 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no 2nd defense expert)

43) **Def2Rat** *(did defense evaluator 1 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no 2nd defense expert)

44) **Def2Fact** *(did defense evaluator 1 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no 2nd defense expert)

45) **Def2Restoration** *(did defense evaluator 1 believe the defendant was restorable to competency if recommendation was not competent to stand trial?)* (0 = likely, 1 = not likely, -

99 = did not say; leave blank if recommended competent to stand trial or if no 2nd defense expert)

Prosecution Expert Information

46) **EvalDatePros1** *(Date of evaluation completed by prosecution evaluator 1)* (MM, DD, YYYY, -99 if date not available and go to question 18, leave blank if no prosecution evaluator)

47) **EvalDateOtherPros1** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation, leave blank if no prosecution evaluator)

48) **DxPros1** *(diagnosis of defendant given by prosecution evaluator 1*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, -99 = does not give diagnosis, leave blank if no prosecution evaluator)

49) **Pros1MemImpair** *(did prosecution evaluator 1 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no prosecution evaluator)

50) **Pros1OrientImpair** *(did prosecution evaluator 1 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no prosecution evaluator)

51) **Pros1InsightImpair** *(did prosecution evaluator 1 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no prosecution evaluator)

52) **Pros1ExecImpair** *(did prosecution evaluator 1 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no prosecution evaluator)

53) **Pros1SocImpair** *(did prosecution evaluator 1 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no prosecution evaluator)

54) **Pros1SympOnset** *(did prosecution evaluator 1 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention, leave blank if no prosecution evaluator)

55) **Pros1Rec** (*what was prosecution evaluator 1's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say, leave blank if no prosecution evaluator)

56) **Pros1Assist** *(did prosecution evaluator 1 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator)

57) **Pros1Rat** *(did prosecution evaluator 1 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator)

58) **Pros1Fact** *(did prosecution evaluator 1 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator)

59) **Pros1Restoration** *(did prosecution evaluator 1 believe the defendant was restorable to competency if recommendation was not competent to stand trial)* (0 = likely, 1 = not likely, -99 = did not say, leave blank if no prosecution evaluator)

60) **EvalDatePros2** *(Date of evaluation completed by prosecution evaluator 2)* (MM, DD, YYYY, -99 if date not available and go to question 18, leave blank if no defense evaluator 2, leave blank if no prosecution evaluator)

61) **EvalDateOtherPros2** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation, leave blank if no prosecution evaluator)

62) **DxPros2** *(diagnosis of defendant given by prosecution evaluator 2*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, 7 = no diagnosis -99 = does not give diagnosis, leave blank if no defense evaluator 2)

63) **Pros2MemImpair** *(did prosecution evaluator 2 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

64) **Pros2OrientImpair** *(did prosecution evaluator 2 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

65) **Pros2InsightImpair** *(did prosecution evaluator 2 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

66) **Pros2ExecImpair** *(did prosecution evaluator 2 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

67) **Pros2SocImpair** *(did prosecution evaluator 2 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no defense evaluator 2)

68) **Pros2SympOnset** *(did prosecution evaluator 2 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention, leave blank if no defense evaluator 2)

69) **Pros2Rec** *(what was prosecution evaluator 2's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say, leave blank if no prosecution evaluator 2)

70) **Pros2Assist** *(did prosecution evaluator 2 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator 2)

71) **Pros2Rat** *(did prosecution evaluator 2 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator 2

72) **Pros2Fact** *(did prosecution evaluator 2 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no prosecution evaluator 2)

73) **Pros2Restoration** *(did prosecution evaluator 2 believe the defendant was restorable to competency if recommendation was not competent to stand trial?)* (0 = likely, 1 = not likely, -99 = did not say; leave blank if recommended competent to stand trial or if no prosecution evaluator 2)

Court Expert Information

74) **EvalDateCourt1** *(Date of evaluation completed by court evaluator 1)* (MM, DD, YYYY, -99 if date not available and go to question 18, leave blank if no court evaluator)

75) **EvalDateOtherCourt1** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation, leave blank if no court evaluator)

76) **DxCourt1** *(diagnosis of defendant given by court evaluator 1*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, 7 = no diagnosis, -99 = does not give diagnosis, leave blank if no court evaluator)

77) **Court1MemImpair** *(did court evaluator 1 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator)

78) **Court1OrientImpair** *(did court evaluator 1 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator)

79) **Court1InsightImpair** *(did court evaluator 1 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator)

80) **Court1ExecImpair** *(did court evaluator 1 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator)

81) **Court1SocImpair** *(did court evaluator 1 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator)

82) **Court1SympOnset** *(did court evaluator 1 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention, leave blank if no prosecution evaluator)

83) **Court1Rec** *(what was court evaluator 1's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say, leave blank if no court evaluator 1)

84) **Court1Assist** *(did court evaluator 1 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 1)

85) **Court1Rat** *(did court evaluator 1 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 1)

86) **Court1Fact** *(did court evaluator 1 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 1)

87) **Court1Restoration** *(did court evaluator 1 believe the defendant was restorable to competency if recommendation was not competent to stand trial?)* (0 = likely, 1 = not likely, 7 = no diagnosis, -99 = did not say; leave blank if recommended competent to stand trial or if no court evaluator 1)

88) **EvalDateCourt2** *(Date of evaluation completed by court evaluator 2)* (MM, DD, YYYY, -99 if date not available and go to question 18, leave blank if no defense evaluator 2, leave blank if no court evaluator 2)

89) **EvalDateOtherCourt2** (Enter what information is available here; example MM, YYYY; -99 = if no information about date of evaluation, leave blank if no prosecution evaluator)

90) **DxCourt2** *(diagnosis of defendant given by court evaluator 2*) (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, -99 = does not give diagnosis, leave blank if no court evaluator 2)

91) **Court2MemImpair** *(did court evaluator 2 note that the defendant had any memory impairments? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator 2)

92) **Court2OrientImpair** *(did court evaluator 2 note that the defendant had any impairment with orientation? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator 2)

93) **Court2InsightImpair** *(did court evaluator 2 note that the defendant had any impairment with insight? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator 2)

94) **Court2ExecImpair** *(did court evaluator 2 note that the defendant had any impairment with executive functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator 2))

95) **Court2SocImpair** *(did court evaluator 2 note that the defendant had any impairment with social functioning? If yes, was it a symptom relied upon when making a decision related to defendant's competency?)* (0 = no, 1 = yes but did not rely upon, 2 = yes and did rely upon, -99 = does not mention, leave blank if no court evaluator 2)

96) **Court2SympOnset** *(did court evaluator 2 note when the defendant's symptoms began to arise?)* (write in answer if applicable – example six weeks ago, a year ago, 3 years ago, etc, -99 = does not mention, leave blank if no court evaluator 2)

97) **Court2Rec** *(what was court evaluator 2's recommendation regarding defendant's competency to stand trial?)* (0 = competent, 1 = not competent, -99 = did not say, leave blank if no court evaluator 2)

98) **Court2Assist** *(did court evaluator 2 believe the defendant was able to assist in his defense?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 2)

99) **Court2Rat** *(did court evaluator 2 believe the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 2

100) **Court2Fact** *(did court evaluator 2 believe the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say, leave blank if no court evaluator 2)

101) **Court2Restoration** *(did court evaluator 2 believe the defendant was restorable to competency if recommendation was not competent to stand trial?)* (0 = likely, 1 = not

likely, -99 = did not say; leave blank if recommended competent to stand trial or if no court evaluator 2)

Legal Information

101. **CompetencyInit** *(who raised the issue of competency?)* (0 = defense, 1 = prosecution, 2 = court)

102. **CourtDet** *(What was the determination of competency to stand trial from the court?)* (0 = competent, 1 = not competent)

103. **CourtDetAssist** (*Did the court determine that the defendant was able to assist in their defense?*) (0 = yes, 1 = no, -99 = did not say)

104. **CourtDetRat** *(Did the court determine that the defendant had a rational understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say)

105. **CourtDetFact** *(Did the court determine that the defendant had a factual understanding of the proceedings against them?)* (0 = yes, 1 = no, -99 = did not say)

106. **CourtDetSymp** *(What symptoms of the defendant is the court citing to justify their determination of competency to stand trial?)* (write in answer; -99 if does not say)

107. **CourtDetDx** (*What diagnosis is the court citing to justify their determination of competency to stand trial?)* (0 = dementia, 1 = AD, 2 = FTD, 3 = LBD, 4 = VaD, 5 = mixed dementia, 6 = symptoms of malingering, 7 = no diagnosis, =99 = does not give diagnosis)