WHAT INFORMATION MATTERS? USING POLICY CAPTURING TO UNDERSTAND LEGAL AND PSYCHOLOGICAL DECISIONS ABOUT CIVIL COMPETENCY

by

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A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Health Psychology

Charlotte

2014

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ABSTRACT

EMALEE JOYCE WEIDEMANN QUICKEL. What information matters? Using policy capturing to understand legal and psychological decisions about civil competency. (Under the direction of DR. GEORGE DEMAKIS)

Civil competency, or one's ability to manage one's own affairs, is an under-researched legal construct that impacts individuals, families and communities. The legal decisions surrounding civil competency seek to balance one's autonomy and safety, and clinical evaluators are often called upon to assist in these cases by making recommendations to the Courts. Despite the importance of both legal and clinical judgments in this area, this decision-making process is not well understood. Policy Capturing, an advanced methodology and statistical tool used to uncover empirically derived decision-making policies, was utilized in two studies to assess civil competency decision-making in legal and clinical contexts. In Study One, 21 legal professionals and 33 community dwelling adults rated vignettes to determine civil competency. The recommendation of the psychologist in the vignette emerged as the most influential factor in participant decision-making. In Study Two, 47 clinical psychologists in North Carolina rated vignettes to determine recommendations of civil competency adjudication. The most impactful factor in clinical decision-making was functional test data. Awareness of decision-making policies was also assessed in both studies. How the results fit into the broader psycholegal literature, coupled with relevant ethical issues, legal issues, policy implications and directions for future research, is discussed.

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CHAPTER 1: INTRODUCTION

Ever since Tversky and Kahneman's (1974) seminal publication on judgment and cognitive heuristics, researchers have documented biased decision-making in contexts ranging from simple predictions about probabilities (e.g., Hirsch & O'Donnell, 2001) to complex predictions about future affect (e.g., Wilson & Gilbert, 2003). Research in this area continues to be applied to a diverse and complex range of human decision-making arenas – in 2013 alone, approximately 1430 articles were published that cite Tversky and Kahneman's (1974) original work[1]. Over the past 40 years, a number of specific heuristics (i.e., mental shortcuts) and subsequent biases have been uncovered. Base-rate neglect, for example, is the tendency to ignore overall probabilities when deciding the likelihood of a given event (see Barbey & Sloman, 2007, for a review of this literature). For example, if a medical test has a 95% accuracy rate, and the base rate for the disease in the population is 1/1000, this means that a positive reading on the test will only be accurate approximately 2% of the time; however, even Harvard University medical students estimated that a positive reading was 56% accurate, on average (Casscells, Schoenberger, & Graboys, 1978). This simple mistake can drastically impact individuals' perceptions and conclusions. Based on this discovery and others, it seems safe to say that broadly speaking, human beings are fallible decision-makers.

[1] Based on a google scholar search conducted on January 12, 2014.

A body of literature has emerged demonstrating that biased decision-making exists in multiple contexts. Even those who are particularly motivated towards accuracy do not seem able to make unbiased decisions at higher rates than the general population (e.g., Shamir, 1998). Moreover, higher degrees of cognitive ability do not seem to attenuate the susceptibility to these heuristics (e.g., West, Meserve & Stanovich, 2012). Not only are the more intelligent equally as biased as their less intelligent counterparts, they also continually judge themselves to be more accurate, a phenomenon known as the "bias blind spot" (West, Meserve, & Stanovich, 2012). These biases also extend to individuals who have expertise in a particular field. In a review of the literature on expert clinical decision-makers, Dawes, Faust and Meehl (1989) demonstrated that decision-makers who use clinical methods are less accurate than those who base their judgments on actuarial methods. For example, the authors outline research on the "Goldberg Rule" for MMPI diagnosis, an actuarial method for distinguishing neuroses from psychosis; the Goldberg Rule has a 70% accuracy rate, whereas the average human judge accuracy rate was only 62% (Dawes et al., 1989, p. 1669). Although no gold standard exists for accuracy in legal contexts, Dawes and colleagues (1989) have shown that actuarial methods derived from actual decision-makers consistently outperform clinical decision-makers due to increased reliability; even when provided with the actuarial information, clinical decision-makers often incorrectly modify the information at higher rates than they correctly modify it, thereby achieving lower overall accuracy rates that relying on actuarial methods alone. In most aspects of daily living, the decisions that individuals

make and whether or not they believe they have made them accurately have relatively innocuous consequences (e.g., what one chooses to eat for lunch). However, there are some contexts in which it seems to be extraordinarily important that decisions are made optimally and without bias. The legal system is one of these contexts, though legal decision-makers are not exempt from the aforementioned biases. Yet, society continues to expect these individuals to make important decisions based on their own expertise (i.e., clinical methods) every day.

Researching decision-making in the legal context is wrought with difficulty due to the lack of a clear "gold standard" for the outcomes in question. For example, whether or not an individual is competent to make their own medical decisions cannot be determined by a blood test or a brain scan. Most research in this area uses agreement as an index of reliability, with the underlying assumption that if multiple decision-makers arrive at the same decision, those decisions must accurately reflect the underlying construct in question. Researchers have also used complex statistical modeling techniques to estimate validity in competency decisions (Mossman et al., 2010). However, when individuals are forced to make dichotomous judgments about continuous constructs such as competency, Mossman and colleagues (2010) conclude that disagreement only reflects the decision-maker's values, not necessarily true disagreements about the continuous abilities that underlie such decisions. For example, if two evaluators both judged an individual's financial capacity as a 6/10, there is no guarantee that both individuals will assign the same dichotomous judgment to that rating; one evaluator may think that a '6' indicates sufficient abilities for financial capacity, whereas another evaluator may believe that a '6' does not have financial capacity. Because of the problems associated with

researching decisions in a legal framework, including the lack of a gold standard and the presence of constructs that may not fit nicely into predetermined dichotomous judgment options, there has been little empirical study into the understanding of decision-making processes in most legal contexts.

Legal decisions occur in two ways: by individuals (e.g., judges) and by groups (i.e., juries). Decisions about various types of competencies (e.g., competency to stand trial, civil competency) are most often made by an individual; thus, this review will focus only on decision-making that occurs at an individual level.[2] In North Carolina, civil competency decisions are made by Clerks of the Superior Court, often with the help of a mental health evaluator who conducts a Multidisciplinary Evaluation (MDE) in cases where the Clerk needs more information to aid in determining competency. These decisions walk a fine line between the protection of the respondent's (i.e., the alleged incompetent individual) safety on one hand, and their autonomy on the other. Clerks are only provided a vague legal standard[3] and the instruction that the evidence must be "clear, cogent and convincing" in order to adjudicate an individual incompetent. Unfortunately, in North Carolina, there is little case law to assist in clarifying this statute and its potential applications. In general, we know very little about legal decision-making across all contexts, and even less about the process of making these important decisions about civil competency.

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[2] For a recent review of the common biases in jury decision-making, see Daftary-Kapur, Dumas and Penrod (2011).

[3] "'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition" (N. C. Gen. Stat. § 35A-1101 [2011]).

However, much of the literature in criminal competency suggests that individual legal decision-makers in other areas (e.g., competency to stand trial) show a high degree of agreement with the mental health evaluator's recommendation (e.g., Zapf, Hubbard, Cooper, Wheeles, & Ronan, 2004). In a review of over 300 competency to stand trial cases, Zapf and colleagues (2004) found only one case of clinician and judge disagreement. High rates of agreement were also found in a recent investigation of civil competency evaluations, such that the court decisions reflected the recommendation of the psychologist in 92.3% of cases (Quickel & Demakis, 2013). There are two possible explanations for this finding. As Zapf and colleagues (2004) have argued, it is possible that legal decision-makers are simply defaulting to the recommendation of the clinical evaluator. Alternatively, it is also possible that clinicians and legal decision-makers are relying on similar data and decision-making strategies in order to arrive at similar conclusions. When studies simply look at agreement rates between evaluators and judges, it is impossible to disentangle these hypotheses. Thus, the two proposed studies investigate decision-making in civil competency in two ways: understanding what factors are important to legal decision-makers in determining competency, and understanding what factors are important to the mental health evaluators in determining recommendations about competency. These recommendations, in turn, inform the legal competency decisions that ultimately impact the life of the respondent and their loved ones in meaningful ways.

To understand the judgments rendered by legal decision-makers, it is necessary to also understand the recommendations offered by the mental health evaluators who regularly assist them. If legal decision-makers do rely most heavily on psychological

testimony (i.e., Study One), then it is important to understand how mental health evaluators arrive at those decisions (i.e., Study Two). Even if legal decision-makers strongly consider other sources of information above and beyond psychological recommendations, the purpose of seeking a recommendation from a mental health expert is often to assist with highly ambiguous cases. In such cases, it remains important to understand how these recommendations are formed, as these experts regularly assist the courts with complex and uncertain cases.

These two studies will use similar methodological strategies (see the Methods section below) to assess what information individuals *actually* use to make their decisions (empirically derived factor weights), as opposed to only looking at what factors they *think* they use to make the same decisions (self-reported weightings of factors). In parallel with the research on heuristics and biases in other areas, it seems plausible that decision-makers in legal contexts default to the same patterns of cognitive shortcuts (i.e., relying on the mental health recommendations), even if they subjectively report systematic and comprehensive decision-making. It may be that these subjective reports simply reflect a bias blind spot (e.g., West et al., 2012) and are not associated with actual competency decisions. Conversely, it may be that the high rates of agreement between legal decision-makers and mental health evaluators reflect a decision-making process by which two decision-makers arrive at the same conclusion using similar comprehensive and unbiased cognitive methods. Past methods of simply documenting high rates of agreement is not sufficient to determine which of these explanations reflects real-world processes. Thus, the current studies seek to shed light on the empirically derived (i.e., objective) decision-making policies that occur on both the legal and the clinical sides of

the civil competency evaluative process in order to better understand civil competency decision-making.

CHAPTER 2: METHODOLOGY

Both of the following studies used a policy capturing methodology to determine how individuals use various pieces of information to make decisions about civil competency. Study One focused on how these determinations are made by legal decision-makers, and Study Two focused on competency recommendations made by forensic mental health evaluators[4]. Policy capturing is a multi-level methodological and data analytic framework that allows researchers to establish individual decision-making policies (i.e., how each person makes complex decisions). These policies are based on participant ratings of vignettes that vary on different factors (i.e., the content that potentially influences judgments of competency). This methodology differs from traditional ways of assessing decision-making because it allows for the possibility that decision-making might occur in a synergistic model (i.e., assessment of the *combination* of factors; Raymark et al., 1995), which is likely an optimal way to process complex information about a respondent (i.e., the allegedly incompetent individual) when making competency determinations.

Although competency decisions may be the result of individual predictive factors, policy capturing methodologies allow for more sophisticated analysis of this complex area. Moreover, a strong body of psychological literature suggests that most individuals

[4] For convenience, throughout this dissertation the term "competency" will be used to refer to both legal judgments of competency as well as clinically determined capacity. This is not intended to be a commentary on the role of psychological opinions in legal contexts (i.e., the "ultimate issue" issue).

are not reliable sources of information about how their decisions are made, tend to answer in socially desirable ways, and their self-reported decision making policies (i.e., reported value of certain types of information) often do not correspond with real world decisions (e.g., Karren & Barringer, 2002). For example, Arnold and Feldman (1981) found that management students placed a high degree of importance on socially desirable aspects of choosing an employment position (e.g., being able to utilize their abilities in optimal ways); however, when they read job descriptions and decided whether or not they would accept the employment opportunity in a policy capturing study, salary and benefits emerged as the most meaningful predictors of accepting various management positions.

Policy capturing is an appropriate methodology for any situation in which individuals consider a variety of information before reaching a decision. Though policy capturing has been most widely utilized in the organizational behavior literature, it has recently been applied to a broad range of decision-making contexts including decisions about condom use (Finkelstein & Brannick, 2000), domestic violence (McDonough, 2010), prescription writing (McIsaac & Hunchak, 2011), test anxiety (Reeve, Bonaccio, & Charles, 2008) and bystander intervention (Fritzsche, Finkelstein, & Penner, 2000). Additionally, policy capturing methodologies have proved useful in psycholegal decision-making. For example, Sensibaugh and Allgeier (1996) employed this methodology to investigate judges' decisions regarding judicial bypass in juvenile abortion cases (i.e., allowing minors to receive abortions without parental consent) in Ohio. Although a few years earlier, the Ohio Supreme Court had ruled against implementing more concrete criteria for judges' use in this process because it was assumed that juvenile court judges were already using these criteria, Sensibaugh and

Allgeier (1996) found that judges tended to use fewer factors in their judgments than what was outlined in the aforementioned court case, as well as fewer factors than they predicted based on subjective ratings. Specifically, of the six possible pieces of information, all judges surveyed predicted that they had equally considered all pieces of information. In reality, only one or two factors (e.g., age of the juvenile) were highly rated, the maximum number of factors that explained variance in judicial decisions was four, and the factors used varied from judge to judge (Sensibaugh & Allgeier, 1996). This demonstrates that in a juvenile bypass context, both judges' and policymakers' assumptions about how legal decisions were made rendered inaccurate, overly confident, and inconsistent with optimal decision-making procedures (i.e., carefully considered all available information).

Similarly, Dhami and Ayton (2001) used this methodology to capture bail decision-making policies among magistrates in England and Wales. They discovered that despite extremely high levels of confidence in self-reported cue use (i.e., which pieces of information individuals explicitly report using in the decision-making process), most magistrates' empirically derived decisions were incongruent with their subjective report. Moreover, most bail decisions were made using only one of nine possible cues (e.g., previous convictions), indicating incomplete assessment of relevant information. In addition, the most salient cue used differed dramatically between magistrates, with less than one quarter of the sample using any given piece of information (Dhami & Ayton, 2001).

Conversely, York (1992) used policy capturing in sexual harassment cases and demonstrated that judges are not only consistent in their determinations, but they make

their judgments in ways that are fundamentally congruent with published guidelines for sexual harassment cases. The Equal Employment Opportunity Commission (EEOC) put forth Guidelines on Sexual Harassment (1980, as cited in York, 1992) that defines sexual harassment according to degrees of coercion, the form of the harassment and the victim's reaction, all of which were salient decision-making cues in York's (1992) study. Based on data from actual and hypothetical cases, using both judges and EEO officers, he concluded that individuals were making decisions about sexual harassment in ways that they ought to be (York, 1992). In this case, he used policy capturing to infer that the legal system was functioning in an optimal way (i.e., consistent, based on guidelines), which is unlike the studies described above.

As can be seen from the diverse adoption of this methodology and its ability to uncover many types of decision-making processes, policy capturing is a widely applicable and useful methodology for determining decision-making policies, and is able to capture decision-making processes that are both congruent with subjective ratings or assumptions about how decisions should be made (e.g., York, 1992), as well as occasions where legal decision-making falls short (e.g., Sensibaugh & Allgeier, 1996). The use of policy capturing to address civil competency decisions has the potential to significantly advance the methodological sophistication of this field, while providing a unique glimpse into the way that legal decision-makers and forensic mental health evaluators *actually* make such complex decisions. The subsequent policies that are uncovered may have important implications for the advancement of policies and procedures currently governing civil competency decisions.

General Procedure

In both of the following described studies, participants completed the study protocol online. Each participant read information about the study, and consented to participate in the study. Vignettes were then presented, in random order, to the participants. After reading each vignette, accompanied by the legal statute for competency in the state of North Carolina, competency determinations were elicited. After all vignette ratings were complete, participants were asked to subjectively rate what information they considered while making the previous determinations. Last, demographic information was collected. The final screen showed debriefing information about the purpose of the research, the study methodology and contact information for the research team.

General Materials

Study vignettes presented information about a prototypical civil competency case (see Appendix A for Study One instructions, vignettes, and rating scales and Appendix B for Study Two instructions, vignettes and rating scales). Each case began with a similar prompt (e.g., Please weigh the following information and determine whether or not Person X meets the following criteria for an incompetent adult in North Carolina), followed by the legal statute (NC General Statute 35A-1101, 2011, article 7). In Study One, vignettes were compiled of common information included in civil competency cases: diagnostic information (Alzheimer's Disease vs. Schizophrenia), wife's testimony (supports competency vs. incompetency), medical records (supports competency vs. incompetency), psychological testimony (recommends competency vs. incompetency) and how the psychological testimony was derived (test data vs. clinical interview alone). In Study Two, vignettes were compiled of common information included in

psychological reports: functional testing (intact vs. impaired), cognitive testing (intact vs. impaired), information regarding psychopathology (mild vs. severe), medication compliance (yes vs. no) and history of previous psychiatric hospitalizations (yes vs. no). Four of the vignettes were duplicated in each study to provide a check of how carefully participants were attending to the information provided and how reliable their judgments were across multiple stimuli. Following each vignette, participants rated the following construct:

Competency. Participants rated civil competency by answering the following question, "Based on the above information, is this individual…" Answers were either "Competent" or "Incompetent." Participants were required to give a determination before moving on to the next vignette.

After all vignettes were complete, participants responded to the following construct:

Self-Reported Policy. Participants were also asked to consider what pieces of information they relied on most consistently to make their judgments of competency. In each study, they were provided with a list of the cues that were varied for that study, and distributed a total of 100 points between the five cues to reflect how important they believed each cue was in their prior decision-making, relative to the other available cues.

CHAPTER 3: MANUSCRIPT ONE

Introduction

Little is known about how legal decision-makers use information to make judgments about legal competency. In North Carolina, NC General Statute 35A-1101 (2011) reads, "'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition." Unfortunately, this statute is vague and incompetency is not well-defined. Moreover, there is little available case law to aid in decision-making in this area (see Demakis (2013) for an overview of the limited existing case law). Additional detail would provide more guidance as to how competency decisions should be made.

In North Carolina, Clerks or Assistant Clerks of the Superior Court can order Multidisciplinary Evaluations (MDEs) for cases in which competency adjudication is unclear and more information is needed to make a competency determination. Evaluations such as these are mandatory in 30 states and the District of Columbia, optional in 15 states, and the remaining 5 states have no guidance regarding these evaluations in the state statutes (Mayhew, 2005). MDEs typically involve a mental health expert conducting an assessment of an individual's capacity and making an

explicit recommendation regarding the individual's competency. In addition, guardian ad litems (GALs) regularly assist the decision-making process in many states, including North Carolina. GALs are attorneys who are appointed to civil competency cases to examine, represent and advocate for the best interests of the respondent (i.e., the alleged incompetent individual). They are considered an integral part of the judicial process, and their evaluation and subsequent opinion is typically taken seriously by Clerks.

The information that clerks have at their disposal usually includes the following: the original petition for the competency hearing (often by a family member), medical records, an MDE completed by a mental health expert, and testimonies (i.e., collateral information) from other family members. As can be seen, though not explicit in the legal statute, legal decision-makers consider a wide range of information, from many different sources, during the decision-making process. But what information drives decisions? So far, decision-making in this context has yet to be investigated. Learning how legal decision-makers utilize and integrate the information available to them has been identified as an important next step in the field of civil capacity research (Demakis, 2012).

Decision Making Bias and Legal Concerns

One substantial difficulty that occurs when researching decision-making is the well-established bias in human judgment (e.g., Hirsch & O'Donnell, 2001; Tversky & Kahneman, 1974; Wilson & Gilbert, 2003). Moreover, it seems as if little can be done to attenuate this bias; motivation through paid incentives (e.g., Shamir, 1998), possessing higher cognitive ability (e.g., West, Meserve & Stanovich, 2012), or being an expert clinical decision-maker (e.g., Dawes, Faust & Meehl, 1989) does not significantly

improve decision-making. In fact, Dawes and colleagues (1989) determined that actuarial methods of decision-making outperformed clinicians in all cases except for those with extraordinarily rare circumstances that would not be captured by an actuarial formula. For example, if you were predicting whether an individual would attend an event that he attends each week, only a clinician would be able to make an exception for a broken leg that might prevent him from attending (Dawes et al., 1989). However, the authors also note that although clinicians can adapt their decision-making to include information that increases accuracy, they also, and much more frequently, adapt their decision-making to include information that decreases accuracy (Dawes et al., 1989). In this way, we would not expect that legal decisions and the individuals who make them would be exempt from these same complications. Neal and Grisso (2014) recently discussed how forensic evaluators may be susceptible to cognitive bias in decision-making, and they explained how classic heuristics (e.g., availability, representativeness, anchoring) apply in forensic contexts. For example, the representativeness heuristic is relevant in forensic contexts in that it promotes the widespread tendency for evaluators to ignore base rates, which can lead to overreliance on case specific information (Neal & Grisso, 2014). There is no reason to believe that these biases would be less applicable for legal decision-makers than for the forensic evaluators discussed in their article, as both contexts involve making a complex determination about an individual's level of functioning in a legal realm.

In an effort to reduce bias due to the representativeness heuristic, we must first understand the current patterns of adjudication across jurisdictions to establish base rates. One representative clinical sample revealed that 81% of individuals who underwent

MDEs were adjudicated incompetent (Quickel & Demakis, 2013). However, rates of adjudication in other jurisdictions are not well-documented, which represents an important gap in the literature as this information can help us to understand ethical issues and potential biases.

This simple issue of base rates might reflect a larger ethical conception. In civil competency cases, there is an underlying ethical drive to balance individual autonomy with the safety and protection of a possibly vulnerable individual. In civil competency cases that result in false positives (i.e., the individual is incorrectly adjudicated incompetent), an individual's rights are unnecessarily removed. This type of inaccuracy may be more prevalent than the alternative, given the high base rate for incompetency adjudication. Alternatively, in civil competency cases that result in false negatives (i.e., the individual is incorrectly adjudicated competent) an individual's safety may be at stake. For example, if an individual with severe memory impairment and a chronic medical condition (e.g., diabetes) is unable to take their medication correctly, it could have severe health consequences that may lead to further impairment or even premature death. It makes sense that false negatives may be more memorable to decision-makers than false positives (Neal & Grisso, 2014), as they may be accused of not protecting the safety of the individual in question. Perhaps the high base rate of incompetency reflects a tendency of the courts to prefer incompetency in times of uncertainty. Moreover, the relatively low base rate of competency found by Quickel and Demakis (2013) leads to increased difficulty in the assessment process (Neal & Grisso, 2014); decision-makers are more likely to be "accurate" just by guessing that the person is incompetent than by conducting an assessment of case-specific information.

Another complicating issue in researching decision-making in the legal context is the lack of a clear gold standard for the outcomes in question (e.g., there is no medical procedure to determine one's competency). One possible first step in determining the accuracy of civil competency decisions would be to establish reliability among decision-makers, as validity cannot occur in the absence of decision-maker agreement. In civil competency cases, competency is ultimately determined by one decision-maker (with the exception of Kentucky, which requires jury decision-making in this area; Benson & Romano, 2012), and no known research exists that compares decision-makers in this context. Determining the extent to which civil competency decisions are reliably made across multiple legal decision-makers, as a first step towards establishing validity, remains an important and ambitious goal of this research domain.

Additionally, humans do not always have high levels of awareness into how their decisions are made, even when there are established criteria for how one ought to make a particular decision. For example, Sensibaugh and Allgeier (1996) studied judicial bypass in juvenile abortion cases in Ohio; they were interested in determining how judges made decisions about whether to bypass the parental notification law that requires parental consent for a minor to obtain a legal abortion. They found that judges tended to use fewer factors (M = 2.67, ranged from 2 to 4) than the six (e.g., age, IQ, ability to accept responsibility) that were outlined in an earlier Ohio Supreme Court case (i.e., how the decisions "ought" to be made); additionally, all but one judge believed that all factors were being utilized, and most of them equally, when in reality they tended to strongly rely on one or two factors almost exclusively (Sensibaugh & Allgeier, 1996). The Ohio Supreme Court had originally decided that the six factors did not need to be written into

state statute because judges were likely using that information in an optimal way – Sensibaugh and Allgeier (1996) were able to determine that they were not, an example of how decision-making research can have important policy implications.

In North Carolina, as in 47 other states, legal decision-makers are required to demonstrate "clear, cogent and convincing" evidence, which falls between preponderance of evidence and beyond a reasonable doubt in terms of legal burden of proof (Benson & Romano, 2012). It seems critical that legal decision-makers use the information available to them in a way that optimizes accuracy in adjudication decisions. To ensure the best utilization of the available information, researchers first need to learn more about how decision-makers currently use available information to render judgments. Broadly understanding the decision-making process is thus a critical first step to investigating decision-making reliability, accuracy, and the effectiveness of current policies and statutes that govern civil competency determinations.

The Role of Psychological Testimony

Because clerks rely on the assistance of mental health evaluations in cases in which competency determinations tend to be complex, an important question is, "How do judicial decision-makers use psychological recommendations in competency cases?" Although a great deal has been written about the assessment of civil competency (e.g., Moye & Marson, 2007; Wood & O'Bryan, 2012), there is a paucity of research about how those assessments translate into legal adjudications of civil competency. However, other competency domains shed light onto how courts use psychological testimony to aid decisions.

In the competency to stand trial (CST) literature (i.e., adjudicative competency), which seeks to assess the competency of a criminal defendant to proceed to trial, researchers find that courts overwhelming rule in the same direction as the forensic evaluator (e.g., Zapf, Hubbard, Cooper, Wheeles, & Ronan, 2004). As early as 1980, studies of CST evaluations reported rates of clinical-legal agreement higher than 90% (Morris, Haroun, & Naimark, 2004). In a retrospective investigation of Alabama CST cases, Zapf and colleagues (2004) found that the courts agreed with the mental health expert in 327 of 328 cases, representing nearly perfect agreement. Moreover, when more than one evaluator's opinion is present in CST cases, courts tend to follow the majority opinion (Gowensmith, Murrie, & Boccaccini, 2012). In Hawaii, CST evaluations require independent assessments from three mental health experts (i.e., a combination of psychologists and psychiatrists); when the three examiners offered incongruent opinions, the court dispositions followed the majority in 92.5% of cases; moreover, when the legal decision disagreed with majority opinion, it was more likely that the recommendation was competent and the court decided in favor of incompetence (Gowensmith et al., 2012). This reliance on the assistance of the evaluator indicates that experts have a strong influence on judicial decision-making in competency domains. Yet, some authors voice concern over the appropriateness of a mental health expert making a legal recommendation (Zapf et al., 2004), thus weighing in on the "ultimate issue" (see Slobogin, 1989, for a comprehensive review of this debate).

In spite of such high rates of agreement, some legal scholars suggest that judges are often skeptical regarding forensic mental health testimony and its reliability, especially in a post-*Daubert* judicial landscape (Shuman, Whitaker, & Champagne,

1994). In 1993, the Supreme Court developed criteria that govern the admissibility of evidence, and ruled that expert testimony, including that from mental health experts, is only admissible if it is based on methods that are falsifiable, peer-reviewed, contain information about error, are relevant and reliable (*Daubert v. Merrell Dow Pharmaceuticals, Inc.*). This decision has changed the standards by which scientific evidence and expert testimony is regulated, possibly making legal decision-makers more mindful of whether expert testimony meets these rigorous standards. Although high rates of agreement have been demonstrated, knowing that some legal decision-makers remain skeptical of psychological recommendations further acknowledges the need to tease apart the causes of the near perfect agreement rates described above.

In this way, one variable that might moderate the impact of psychological recommendations on competency judgments is the presence or absence of psychological test data. Because psychological test data might be judged by legal decision-makers as more rigorous and increasingly consistent with *Daubert* (1993) admissibility standards, compared with a clinical interview alone, individuals might be more likely to rely on the recommendations of mental health experts when psychological test data is present.

The Role of Diagnostic Information

Besides the role of expert testimony, a variety of research has examined other factors that are important to legal decisions in criminal competency areas. Psychiatric diagnosis, for example, has been shown to be a strong predictor of adjudicative competency (e.g., Cooper & Zapf, 2003; Warren et al., 2006). Cooper and Zapf (2003) found that individuals diagnosed with a psychotic disorder (e.g., schizophrenia) were five times more likely than individuals with no diagnosis to be judged incompetent by a

mental health expert, a statistically significant finding. In the competency to be executed literature, Ackerson, Brodsky and Zapf (2005) found a main effect for psychiatric symptom severity, such that clinical psychologists were more likely to rate as 'incompetent' the vignettes that depicted individuals with severe levels of psychiatric symptomatology. However, legal scholars have raised concern about the possibility of psychiatric diagnoses obfuscating the more important capacity issues (e.g., is the individual able to call 911 if they need help?) that should be relevant in both criminal and civil legal decision-making contexts (Greenberg, Shuman, & Meyer, 2004). Perlin (2004) echoes these concerns when discussing the inability of the courts to separate the legal 'incompetency' from the psychological 'insanity' in CST cases, such that these terms are utilized in court as if they are synonymous by both mental health evaluators and legal decision-makers. The diagnosis itself, though certainly implicated as a causal necessity in the North Carolina civil incompetency statute, is insufficient evidence to indicate incompetency. Legal decision-makers confirm that although diagnostic information is helpful in providing a context for the evaluative data, decisions are ultimately based on functional capacities, not the diagnosis alone (Benson & Romano, 2012). However, only 16 states currently require functional assessment as part of the clinical evaluation process (Mayhew, 2005).

In contrast to these concerns, Warren and colleagues (2006), in their study of CST evaluations, found that only 23% of individuals diagnosed with *any* clinical disorder were judged to be incompetent. Of those individuals, 37% with a "psychotic" diagnosis, 40% with an "organic" diagnosis and 30% with "mental retardation/learning" diagnoses were adjudicated incompetent (Warren et al., 2006, p. 122). Thus, the criminal competency

literature shows some variability in the extent to which diagnoses impact legal decisions and potentially confound legal criteria.

When examining decision-making policies, a clinical diagnosis appears to also have some influence in civil incompetency adjudication rates. Yet, the rates found by Warren and colleagues (2006) for CST cases are meaningfully different from the rates of incompetency adjudication found by Quickel and Demakis (2013) in North Carolina civil competency evaluations. For example, 100% of individuals diagnosed with mental retardation were adjudicated incompetent, compared with 81% of individuals with a neurological diagnosis, 67% of individuals with a psychiatric diagnosis, and 81% of individuals with both neurological and psychiatric diagnoses (Quickel & Demakis, 2013). Alternatively, in a study assessing a different area of civil competency (i.e., ability to make treatment decisions) in a VA setting, 69% of individuals with dementia and 37% of individuals with schizophrenia were classified as incompetent, compared with none of the individuals without any diagnosis (Knowles, Liberto, Baker, Ruskin, & Raskin, 1994). Though information about the ultimate adjudication of competency was not available, Moye and colleagues (2007) found that across three diverse states almost 83% of respondents had a DSM-IV diagnosis, with 59% being diagnosed with dementia and approximately 20% evidencing psychosis or mood disordered symptoms.

The variability of diagnostic information across studies suggests that the role of psychiatric diagnoses in criminal and civil literature is inconclusive, at best. Thus, it is important to assess the extent to which diagnostic information is relied on in civil competency decisions, as well as the extent to which diagnostic information might interact with other important factors, such as the tendency of the courts to value medical

versus psychological information depending on the diagnosis of the respondent. Perhaps the aforementioned bias towards relying on psychological testimony has a synergistic effect with reliance on diagnostic information, such that legal decision-makers default to the expert recommendation more often in situations where the diagnostic information appears most consistent with that expert's area of expertise (e.g., a psychologist might be viewed as more of an expert in cases regarding more traditional mental health disorders, such as schizophrenia, than in cases regarding disorders that encompass medical, cognitive and psychological issues such as dementia).

Policy Capturing

Several important factors have been identified throughout the criminal and civil competency literature that may impact legal decisions: the recommendation of the psychologist or physician, diagnostic information, or information about what type of data was utilized in the assessment process. In addition, courts regularly consider collateral testimony from family members. Policy capturing, a research methodology that assesses decision-making at both the individual and the group level, allows researchers to establish individual decision-making policies based on participant ratings of vignettes; these vignettes vary on different factors, such as the ones identified above that potentially influence judgments of competency. These decision-making policies can then be examined at the group level. This technique allows for an objective indication of how decisions are made, and can illuminate important considerations in this context (e.g., are decisions made consistently across decision-makers?)

Originally born out of the industrial/organizational psychological literature, policy capturing has been expanded to study diverse decision-making contexts including

condom use (Finkelstein & Brannick, 2000), domestic violence (McDonough, 2010), prescription writing (McIsaac & Hunchak, 2011), test anxiety (Reeve, Bonaccio, & Charles, 2008), bystander intervention (Fritzsche, Finkelstein, & Penner, 2000), legal decisions about sexual harassment (York, 1992), and bail decisions in England and Wales (Dhami & Ayton, 2001). These latter two studies are particularly important because they demonstrate the utility of policy capturing methodology in legal domains. For example, in the English system, bail decision law describes that decisions should be made on approximately eight factors, including the seriousness of the crime, the character of the defendant and "any other factors that 'appear to be relevant'" (Dhami & Ayton, 2001, p. 143). However, Dhami and Ayton (2001) instead found that most decision-making policies could be predicted based on one factor, and that factor varied across participants; moreover, their participants had little awareness of the "fast and frugal" nature of their decision-making (p. 160). In contrast, York (1992) determined that judges make decisions about sexual harassment cases in ways that are both consistent across decision-makers and consistent with Equal Employment Opportunity Commission guidelines, which ask decision-makers to consider the degree of coercion, the form of the harassment and the victim's reaction; all of these factors were salient decision-making cues for the participants in this study. Thus, policy capturing has been utilized to both demonstrate the effectiveness of current decision-making as well as identify areas in which decisions are based on incomplete assessment of relevant information.

Based on the research gleaned from the criminal competency literature and the use of policy capturing methodology in previous research contexts, it seems plausible that legal decision-makers may render competency judgments in ways that have high

potential for individual difference due to the incomplete assessment of information. Though Clerks and Assistant Clerks of the Superior Court are responsible for competency adjudications in North Carolina, assessing different populations' decision-making policies may prove useful for other jurisdictions. Recall the importance of GAL involvement in North Carolina guardianship proceedings. Investigating how Clerks and GALs differ in their competency decision policies, as well as how they both compare to a non-legal population of community dwellers, would be beneficial. The following research objectives and hypotheses outline the aims of the current study, with the overarching goal to better understand patterns of legal decision-making in civil competency cases. As can be seen, this study is designed to provide the highest degree of ecological validity with respect to the information found in typical civil competency cases.

Research Objectives and Hypotheses

Objective 1) Determine how various pieces of typical case information are weighted when legal decision-makers render civil competency determinations.

Hypothesis 1) Legal decision-makers will rely most strongly on psychological recommendations, compared with other information.

Hypothesis 1a) Participants will rely more heavily on psychological testimony when the respondent has a psychiatric diagnosis.

Hypothesis 1b) Participants will rely more heavily on psychological testimony when their capacity assessment is based on *Daubert*-consistent test data instead of a clinical interview alone.

Objective 2) Compare different populations (i.e., Clerks of the Court, GALs, community dwellers) to see if information is weighted differently (i.e., do different patterns emerge?) across participant type.

Hypothesis 2) Legal populations will make decisions in a significantly different way than non-legal populations (e.g., legal populations may be more likely to rely on professional testimony whereas non-legal populations may be more likely to rely on family testimony).

Objective 3) Compare empirically derived factor weights and participant self-reported decision-making policies.

Hypothesis 3) Individuals will have low levels of awareness into how they make civil competency decisions.

Methods

Participants

This study included three target populations: Clerks and Assistant Clerks of the Superior Court in North Carolina, NC GALs, and community dwelling NC adults (i.e., individuals between the ages of 18 and 65 that have no special education or training in the legal system). Inclusion criteria include being a member of one of these aforementioned categories, speaking fluent English, and being between the ages of 18 and 65. Participants were excluded if they did not meet the above criteria. Moreover, participants in the "community dwelling adults" category were excluded if they had prior or current membership in either of the other two categories.

Participants were recruited in several ways. Community dwellers were recruited via a Craigslist posting which advertised the study and provided a link to the online

survey site (www.surveygizmo.com). This advertisement was posted on March 6, 2013, and was visible on all North Carolina Craigslist sites[5] until the advertisement phased out of their postings naturally; most posts were no longer visible within a few days. Clerks were recruited by emailing Clerks in all 100 counties in North Carolina; email addresses were found online on county websites. Emails were sent from March 8, 2013, through April 14, 2013. In the event that an email address could not be located, phone calls were placed to the county courthouse in order to obtain that information. The email described the study, included the survey link, and invited them to pass the information along to other individuals in their county that participated in the hearings (i.e., Assistant Clerks) or assisted with the cases (i.e., GALs). Once a Clerk participated in the study, they were emailed a recruitment summary and asked to distribute it to other Clerks and GALs that they have worked with on civil competency hearings in the past. In this way, snowball sampling was utilized to recruit most of the GALs who responded to a survey. Similarly, when a GAL participated in the study, they were also asked to recruit others to participate. Finally, recruitment for Clerks and GALs was also conducted at the 2013 North Carolina Guardianship Association annual conference held in Raleigh, NC in May 2013. Data collection closed for all subpopulations on September 15, 2013.

Procedure

The current study has been approved by the Institutional Review Board at the University of North Carolina Charlotte. Participants completed the study protocol online. Each participant read information about the study, and consented to participate in the

[5] The sites were listed on NC Craigslist as follows: Asheville, Boone, Charlotte, Eastern NC, Fayetteville, Greensboro, Hickory/Lenoir, Jacksonville, Outer Banks, Raleigh/Durham/CH, Wilmington, and Winston-Salem.

study by checking a box that states their agreement. One by one, thirty-six vignettes were presented, in random order, to the participants. After reading each vignette, accompanied by the legal statute for competency in the state of North Carolina, competency determinations were elicited. Participants then rated their confidence in that judgment, as well as their judgments of the quality and quantity of the information provided. After all vignette ratings were complete, demographic information, including age, gender, race/ethnicity and education, was collected. Recruitment was incentivized by offering three $50 Target gift cards via a random drawing at the end of the study; participants were given the opportunity to leave their email address, disconnected from their survey responses, as contact information for the drawing. The final screen displayed debriefing information about the purpose of the research, the study methodology and contact information for the research team.

Materials

Study vignettes presented information about a prototypical civil competency case. Each case began with the same prompt: "Please weigh the following information and determine whether or not Person X meets the following criteria for an incompetent adult in North Carolina," followed by the legal statute (NC General Statute 35A-1101, 2011, article 7). Information about the respondent, Person X, was presented in bullet point format and included the petitioner's complaint along with the following sources of information, systematically varied in a complete factorial design: Diagnosis (Alzheimer's dementia or Schizophrenia[6]), collateral information from Person X's wife (agrees or disagrees with petitioner), information from medical records (agrees or disagrees with

[6] These diagnoses, specifically, were chosen as they represent the majority of individuals involved in civil competency cases with associated MDEs (Quickel & Demakis, 2013).

petitioner), psychological testimony (recommending competency or recommending incompetency) and the basis of the psychological testimony (clinical interview or clinical interview plus psychological test data). A complete balance of these five factors provided thirty-two vignettes for consideration. Four of these vignettes, selected at random, were duplicated to provide a check of how carefully participants were attending to the information provided and how reliable their judgments were across multiple stimuli.

Following each vignette, participants rated the following construct.

Competency. Participants rated civil competency by answering the following question, "Based on the above information, is this individual…" Answers were either "Competent" or "Incompetent." Participants were required to provide a determination before moving on to the next vignette.

Following the completion of all vignettes, participants were asked to address the following:

Self-Reported Policy. Participants were asked to consider what pieces of information they relied on most consistently to make their judgments of competency. They were provided with a list of the cues that were varied (i.e., diagnosis, family testimony, medical records, psychological testimony, and the availability of psychological test data) and asked to distribute 100 points between these five factors. For example, if a participant felt as though she weighted all cues equally, she would assign 20 points to each of the five listed domains. This procedure of subjective policy rating has been successfully utilized in previous policy capturing designs (e.g., Wiederman & Dubois, 1998).

Pilot Testing/Focus Groups

The pilot testing and focus group phases of the current study were also approved by the Institutional Review Board at the University of North Carolina Charlotte. To ensure that the vignettes included the most ecologically valid and relevant factors to vary, focus groups with key personnel were conducted. Focus groups were held with legal decision-makers (local Clerks of the Court; see Appendix C) and GALs (see Appendix D) who are regularly involved in competency hearings in Mecklenburg County. Focus groups ensured that a) no important factors were omitted, b) research objectives captured important areas of consideration, and c) the vignettes were as ecologically valid as possible. Additionally, both focus groups aided in determining optimal recruitment measures for our target populations of Clerks/Assistant Clerks and GALs.

Pilot data was also collected to ensure the feasibility of the study in terms of participant burden and comprehension of task instructions (see Appendix E). Pilot testing was conducted with students enrolled in summer school at the University of North Carolina Charlotte in 2012. Pilot testing is recommended by policy capturing experts to ensure that the study can be completed within the expected timeframe without undue participant burden (Aiman-Smith, Scullen, & Barr, 2002).

Results

The online survey was started by 177 individuals and completed by 57 (32.2%)[7]. Demographic data were collected at the end in order to avoid biasing the vignette responses by priming individuals to consider their experience with competency hearings

[7] A similar rate of completion (33.75%) was found in Study Two, which utilized the same methodology with a sample of clinical psychologists; thus, it is thought that the attrition rate represents a typical rate for this type of design and not an abnormality.

and/or MDEs prior to participating; thus, it is impossible to know which sub-population the individuals who did not complete the study fell into or compare them with those who completed the study on any relevant demographic information. Of the 57 individuals who provided complete data, one participant did not pass the reliability criteria of having at least 50% agreement in competency ratings among the duplicated vignettes; moreover, two participants' variability in competency ratings was zero, rendering it unable to be statistically analyzed and suggesting that they did not respond to the vignettes in a way that was reflective of their true judgments. As such, these 3 participants were removed from the analyses, resulting in a final operational sample of 54.

Of this sample (*N*=54), 35 (64.82%) self-identified as female, 17 (31.48%) as male, and 2 (3.70%) did not respond. The majority of the sample (*n* = 49; 90.75%) was Caucasian, with only 2 (3.70%) participants identifying as Hispanic, 1 (1.85%) as African-American, 1 (1.85%) as Asian, and 1 (1.85%) as Other. Participants ranged in age from 18 to 65; the average age was 39.81 (*SD* = 14.66). Community dwellers made up 61.11% (*n* = 33) of the sample, followed by Clerks (*n* = 12; 22.22%) and GALs (*n* = 9; 16.67%). Because the Clerks and GALs were not significantly different in age, sex, or on any of the subjective or objective survey variables[8], they were collapsed into a "legal" subsample (*n* = 21) for all subsequent comparative analyses.

Data was analyzed using SPSS version 20. In policy capturing, each participant represents a mini-experiment, and their unique decision making policy is determined by

[8] Clerks (*M* = -.06, *SD* = .08) and GALs (*M* = .05, *SD* = .10) did significantly differ on the average unstandardized regression coefficient of the test data factor, $t(19) = 2.79$, $p = .012$, $CI_{95} = .03 - .19$. Because this factor was not hypothesized to be related to competency and the confidence interval around this difference was quite large and close to zero, this was not seen as a reason to keep the subsamples separate.

obtaining empirically-derived factor weights. The data analytic process begins at the within-subject level, such that each participant has their own database. Each row in the database, which traditionally represents a participant, represents a particular vignette. Columns in the database traditionally represent variables; however, in policy capturing, the columns represent the dummy codes for all study factors and then the participant's dependent variable ratings for that particular vignette. Based on these ratings, a linear multiple regression analysis was conducted using factor dummy codes as the predictor variables (i.e., diagnosis, collateral information, medical records, psychological testimony, and psychological test data) and dichotomous competency judgments as the criterion. This analysis allows us to examine how each participant objectively weighted each of the five factors in their competency decisions instead of relying on their self-report of this process. Because the factors are all dichotomous, the unstandardized regression coefficients can be compared since they are all on the same metric. The factor weights are interpreted in the same way as in traditional regression analyses – the amount of change in the dependent variable (competency) given the factor in question changes from 0 to 1 and everything else remains constant (see Appendix F for coding key). In this way, the unstandardized regression coefficients pictured in Table 1 represent the literal weight given to a particular factor, averaged across participants.

After a policy was determined for each participant, these policies were combined into a level-two or between-subjects analysis. In this new database, each row represented a participant, and each column represented either relevant demographic information (i.e., population grouping) or unstandardized regression coefficients from the individual analyses. In this way, it could be determined if any factor's average regression

coefficient significantly differed from zero, indicating the average level of importance across participants, or significantly differed from other factors' coefficients, indicating higher levels of relative importance. Moreover, standard comparative analyses (e.g., comparing legal vs. non-legal participants) were conducted here.

Table 1: Policy capturing results by population

		R^2	Intercept	Diagnosis	Wife	Physician	Psychologist	Test Data
Total Sample (N = 54)	Mean	0.58	-0.05	0.00	0.30	0.28	0.45	-0.01
	Standard Deviation	0.19	0.24	0.12	0.21	0.19	0.27	0.11
	Minimum	0.16	-0.31	-0.25	-0.13	-0.25	-0.19	-0.38
	Maximum	1.00	0.88	0.50	0.88	0.69	1.00	0.19
	CI: Lower Limit	0.53	-0.11	-0.03	0.24	0.23	0.38	-0.04
	CI: Upper Limit	0.63	0.01	0.03	0.36	0.33	0.52	0.02
Legal Only (N = 21)	Mean	0.63	-0.10	0.03	0.31	0.32	0.52	-0.01
	Standard Deviation	0.13	0.18	0.16	0.17	0.15	0.24	0.10
	Minimum	0.38	-0.31	-0.25	-0.06	0.00	0.00	-0.19
	Maximum	0.90	0.31	0.50	0.63	0.50	0.94	0.19
	CI: Lower Limit	0.57	-0.18	-0.04	0.24	0.26	0.41	-0.05
	CI: Upper Limit	0.69	-0.02	0.10	0.38	0.38	0.61	0.03
Non-Legal Only (N = 33)	Mean	0.55	-0.03	-0.02	0.29	0.25	0.41	-0.01
	Standard Deviation	0.22	0.28	0.09	0.24	0.20	0.29	0.12
	Minimum	0.16	-0.31	-0.25	-0.13	-0.25	-0.19	-0.38
	Maximum	1.00	0.88	0.13	0.88	0.69	1.00	0.19
	CI: Lower Limit	0.47	-0.13	-0.05	0.21	0.18	0.31	-0.05
	CI: Upper Limit	0.63	0.07	0.01	0.37	0.32	0.51	0.03

Note: Numbers represent the unstandardized regression coefficients (i.e., the literal weight given to each factor). Diagnosis = Schizophrenia vs. Alzheimer's Dementia; Wife = Wife suggests her husband is competent vs. incompetent; Physician = Medical records indicate the physician believes Person X is competent vs. incompetent; Psychologist = Psychologist recommends competent vs. incompetent; Test Data = psychological testimony is based on a clinical interview plus test data vs. a clinicial interview alone.

Our first research objective was to investigate the average decision-making policies of participants when making competency decisions (see *Table 1*). On average, the combination of all five factors explained 58% of the variability in competency ratings. Confidence intervals were calculated to determine whether or not a factor's weight differed significantly from zero or from other factors. When analyzing the total sample and both subpopulations independently, the recommendation of the wife, the physician and the psychologist were all significantly different from zero, indicating that

participants tended to use those recommendations when making their competency decisions. However, in terms of relative importance, the recommendation of the psychologist emerged as having more weight than the recommendations of the wife and the physician, particularly for the legal subsample where the confidence intervals do not overlap at all. Neither group relied consistently on the diagnostic information or on the presence of test data to determine one's competency.

Research objective two involves the role of mental health testimony specifically for the legal subsample. The mean unstandardized regression coefficient for psychological recommendations for legal participants is .52 (*SD* = .24), which means that when everything else is held constant, if the psychologist recommends that the patient be adjudicated competent, the strength of the legal decision-makers' vote of competency increases by .52 from the intercept value (-.10). For example, assume that a respondent was diagnosed with Alzheimer's dementia, the wife and physician both felt he was incompetent, and the psychologist conducted a clinical interview. If the psychologist simply recommends that he is competent instead of incompetent, legal participants' ratings of competency move from their baseline of -.10 (slightly more likely to favor incompetency) to .42 (an increase of .52, indicating that they are now much more likely to favor competency). This suggests that the legal subsample relies strongly on the recommendation of the mental health evaluator, above and beyond the recommendations of other professionals or close family members even when those recommendations are inconsistent.

To assess the role of mental health testimony even more specifically, it was posited that the psychologist recommendation may interact with either the diagnostic

factor, such that participants may be more likely to rely on psychological testimony when the patient is diagnosed with schizophrenia, or with the test data factor, such that participants may be more likely to rely on psychological testimony when it was based on standardized testing as opposed to a clinical interview alone. Interaction terms were calculated for each hypothesized interaction and all level one analyses were re-run, separately, to assess the impact of the interactions on decision-making policies. On average, adding the diagnosis by psychologist recommendation interaction term only explained an additional 1% of variability in competency ratings, with an average unstandardized regression coefficient of -.05 (*SD* = .18); participants were no more likely to use the psychological testimony when the patient was diagnosed with schizophrenia versus Alzheimer's disease (CI_{95} = -.10 – 0). Moreover, the average impact of the test data by psychologist recommendation interaction term was an additional 2% explanation of the variability in competency ratings. The average unstandardized regression coefficient for the test data interaction was .07 (*SD* = .22). Participants were slightly more likely to rely on the psychologist's recommendation when it was based on test data rather than a clinical interview alone (CI_{95} = .01 – .13). Thus, these findings do not support our hypotheses that psychological testimony increases in salience in the presence or absence of other factors.

Finally, empirically derived factor weights and self-reported weights were compared. Bivariate correlations between the self-reported importance of each factor and the empirically derived weights were used to investigate awareness into one's own decision-making policy. Participants tended to have good awareness into their decision-making; the self-reported ratings of reliance on medical recommendations, *r* (53) = .39, *p*

= .004, wife recommendations, r (52) = .51, p < .001, and psychological recommendations, r (53) = .62, p < .001, were all significantly related to their empirically derived counterparts. Conversely, participants had poorer awareness into their reliance on diagnostic information, r (53) = .20, p = .16, and the presence of psychological test data, r (52) = -.07, p = .64, such that they were unable to accurately estimate how much impact these two pieces of information had on their ultimate decision-making.

Discussion

Consistent with previous research in criminal (Gowensmith et al., 2012; Zapf et al., 2004) and civil (Quickel & Demakis, 2013) competency domains, this study supports the conclusion that legal decision-makers rely heavily on the recommendations of the psychologist when making competency determinations. It is particularly noteworthy that the previous literature was supported despite substantial differences in research methodologies (i.e., retrospective vs. prospective; actual cases vs. vignettes) and study location (i.e., Alabama/Hawaii vs. North Carolina). And although participants' decisions were influenced more strongly when the psychological testimony was supported by test data, this finding was small and should be interpreted with caution; it does not appear that legal decision-makers are highly concerned with the development of mental health recommendations based on test data, even in a post-*Daubert* judicial context. Moreover, the participants in this study did not rely *exclusively* on psychological testimony; on average, they also heavily and significantly weighed the testimony given by both medical providers and collateral contacts. Most research in this area uses agreement as an index of reliability, with the underlying assumption that if multiple decision-makers arrive at the same decision, those decisions accurately reflect the underlying construct. However,

in this case, agreement alone does not necessarily provide enough information to determine whether legal decision-makers are being appropriately thoughtful about competency decisions. High rates of agreement only demonstrate reliability among judgments. While some legal scholars (e.g., Perlin, 2004; Zapf et al., 2004) are concerned about legal decision-makers relying too heavily on psychological testimony, the current findings support the notion that both legal and psychological decision-makers carefully weigh a multitude of information and arrive at a decision, rather than the legal decision-maker simply defaulting to the recommendation of the mental health expert.

Another finding in the current study was that diagnostic information (i.e., the presence of a diagnosis of either Alzheimer's dementia or schizophrenia) was essentially irrelevant to participants when making competency determinations. This result disagrees with previous research that has found high rates of incompetency among psychiatric populations (Cooper & Zapf, 2003; Warren et al., 2006), and also contradicts studies that have found that individuals with dementia are found incompetent at much higher rates than individuals with a psychiatric disorder (Quickel & Demakis, 2013; Knowles et al., 1994). However, because of the unique methodology utilized in the current study, the severity of impairment (indirectly represented by the values of the other factors) was held constant between diagnoses, whereas this may not have been the case in other studies. It could be that in the real world, diagnosis is often confounded with severity or type of impairment, making it difficult if not impossible to separate these pieces of information. Although the legal statute in NC specifically discusses diagnosis when it states "…whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition," it

is possible that it was the presence of *any* diagnosis that was important to participants in this study (NC General Statute 35A-1101, 2011). Similar to research that has been conducted in criminal competency domains (e.g., Cooper & Zapf, 2003), future research might compare individuals with and without a diagnosis in order to shed additional light on the role of diagnostic information in civil competency decisions.

One interesting and unexpected finding in this study was that there were no differences between legal decision-makers and community dwellers. One of the driving factors that led to the development of this research was the relative lack of guidance for legal decision-makers to use when hearing these cases. In North Carolina, there is currently no standard in place for the training of Clerks and Assistant Clerks to prepare them to formulate competency decisions, but this is something that has been identified as a need by the current Executive Board of the Conference of Clerks of Court for NC (M. Pegram, personal communication, May 8, 2013). As North Carolina continues to move in the direction of increased training and standardization, we might expect differences between legal and non-legal populations to emerge over time, particularly in the area of increased consistency in the judgments of legal populations, whereas the variability in non-legal judgments is likely to remain. This could be investigated in future research and compared to the findings presented in this study. Additionally, these unexpected findings are consistent with what happens in Kentucky, a jurisdiction that requires competency decisions to be made by a jury (Benson & Romano, 2012). If individuals without special legal training do not make decisions in substantially different ways than a legal population, we would expect that peer juries would not make decisions in significantly

different ways than legal decision-makers; however, the impact of social desirability and group decision-making processes has not yet been investigated in this context.

There are many strengths of the current study, including its emphasis on objective decision-making policies and the use of ecologically valid factors that were developed out of collaboration with the target legal population. The study was completed online, which allowed for anonymity and likely decreased the probability of socially desirable responding. Moreover, to the best of our knowledge, this study was the first one to investigate civil competency decisions empirically. An increased standard of rigor in the scientific pursuit of this intersection of psychology and the law will allow researchers to place more confidence in the results obtained in this area. Additionally, although the sample was small, it was comprised of individuals who make the decisions under investigation and the individuals who regularly assist them with these decisions. Using a small but representative sample is arguably more important than using a large and convenient one, and an important strength of the current study was the target population and subsequent sample.

However, this study is not without its limitations. The sample was small, and 67.8% of individuals who began the survey did not complete it. The task of reading 36 similar vignettes is arguably arduous, and we were unable to incentivize participation in a way that could have compensated for the burden experienced by participants. In hindsight, demographic questions should have been asked at the front end of the survey to allow for an assessment of the differences between individuals who complete and those who do not. And although the factors utilized in this study were ecologically valid, they were not comprehensive in terms of the typical amount of information available to

Clerks and Assistant Clerks when making these decisions. Oftentimes, civil competency hearings occur over the course of several months, and the Clerk and/or GAL is able to meet with the respondent and the respondent's family several times, allowing for them to collect additional relevant data such as behavioral observations. Moreover, the factors were not delivered in an ecologically valid context; that is, participants knew that there was not a real human who might be impacted by their decision-making. It is unknown what, if any, impact this may have had in participants' approach to the decision-making process.

This study marks an important step in the process of understanding legal decisions of civil competency, and specifically how those decisions relate to the psychological recommendations that accompany them. Although the participants in the current study relied most strongly on this type of testimony, they did not rely exclusively on this testimony, a result which has important implications for the ongoing debate over whether legal decision-makers are unduly delegating the decision-making responsibility to the mental health evaluators who assist them. As a first step, future research should work to replicate this research in other jurisdictions so that as a field we can more fully understand the influence of state statute on subsequent civil competency decisions. Moreover, it will be important to also understand how clinical psychologists make decisions regarding their recommendations of capacity given the weight these recommendations have in influencing legal decisions.

CHAPTER 4: MANUSCRIPT TWO

Introduction

The assessment and determination of civil competency is a process that is not well-researched, varies among states and even counties within the same state, and has little case law to aid decision-makers (see Demakis [2013] for an overview of the limited relevant case law). Legal civil competency evaluations occur following a filed petition, often by a family member, stating that a respondent (i.e., the individual whose competency is being contested) is allegedly incompetent and unable to manage their own affairs. These legal evaluations, which may include accompanying mental health evaluations to assist in determinations of capacity, have important consequences for the respondent as the courts seek to balance autonomy with safety in order to reach a decision. Understanding psycholegal assessment and associated clinical decision-making has important implications for legal judgments, as there is a high concordance between clinical recommendations and legal determinations (e.g., Gowensmith, Murrie, & Boccaccini, 2012; Quickel, Demakis & Reeve, in preparation[9]; Zapf, Hubbard, Cooper, Wheeles, & Ronan, 2004). Unfortunately, very little is known about how these recommendations and subsequent determinations occur.

[9] Quickel, Demakis, & Reeve, in preparation, refers to Study One from this dissertation.

Quickel and Demakis (2013) offer a glimpse into the realm of civil competency decisions, noting high rates of agreement (92.3%) between the clinician and the legal decision-maker (in North Carolina, Clerks and Assistant Clerks of the Superior Court hear and decide civil competency cases). Moreover, they note that in the context of a Multidisciplinary Evaluation (MDE; i.e., an evaluation requested by the courts for civil competency assistance in North Carolina), measures of functional assessment (e.g., the Independent Living Scales [ILS]; Loeb, 1996) have higher predictive validity for ultimate competency adjudication than traditional cognitive (e.g., the Mini-Mental Status Examination (MMSE); Folstein, Folstein, & McHugh, 1975) and neuropsychological measures (e.g., Trail-Making Test parts A and B; Reitan & Wolfson, 1985; Quickel & Demakis, 2013). This makes theoretical sense, as functional measures like the ILS require individuals to demonstrate skills that map onto the areas that the state statutes describe as important for the definition of civil incompetency, such as financial abilities and the ability to manage one's own affairs. However, this was the first study to use assessment information to predict court adjudications of competency, and more work in this area is necessary to draw more substantive conclusions.

The Role of Clinicians in Legal Decisions

Although much has been written about the forensic assessment of civil competency by mental health professionals (e.g., Moye & Marson, 2007), a dearth of research exists on how the assessments translate into capacity/competency *recommendations* that subsequently inform legal decisions. Across many legal arenas

(e.g., competency to stand trial), high rates of clinician and judge agreement led researchers to wonder if legal decision-makers simply default to the recommendations proffered by mental health experts (Zapf et al., 2004). For example, in a retrospective study of Alabama competency to stand trial (CST) cases, Zapf and colleagues (2004) found nearly perfect agreement between clinical and legal competency determinations. Similarly, in a study of CST cases in Hawaii, Gowensmith and colleagues (2012) found agreement rates above 92%. Legal scholars (e.g., Perlin, 2004) have suggested that legal decision-makers in criminal competency domains may be delegating their legal responsibilities to mental health experts. Indeed, the high rates of agreement (also above 92%) found in Quickel and Demakis' (2013) examination of civil competency supports these concerns in the civil domain as well. Moreover, Quickel, Demakis and Reeve (in preparation) found that a legal subsample of participants significantly utilized the psychological testimony when making civil competency decisions, and it was more influential than either medical or family testimony. Participants were asked to rate a series of vignettes to make competency determinations based on varying informational cues, such as diagnostic information, psychological, medical and family testimony, and whether the psychological testimony was based on test data or a clinical interview alone. Everything else being equal, a change in the recommendation of the psychologist alone increased the rating of competency .52 points (on a 0 to 1 scale) on average, whereas a change in the recommendation of the wife or the physician only moved the competency rating by .31 or .32, respectively (Quickel, Demakis, & Reeve, in preparation). Because of the importance of these determinations and the ambiguity of the current literature, understanding how mental health experts arrive at their decisions about competency

recommendations is an important step in the process of more fully understanding the civil competency decision-making process.

Relevant Issues in Decision-Making Research

There are many potential difficulties associated with simply asking mental health evaluators what information is important to their decision-making process. Cognitive psychology has a large literature that elucidates many heuristics (i.e., mental shortcuts) and biases in decision-making (e.g., Tversky and Kahneman, 1974). Clinical decision-making is not exempt from these biases. For instance, when clinical judgments are compared with actuarial (i.e., mathematical) judgments, actuarial decision-making tends to result in more accurate and reliable decisions in all cases except those that require the consideration of extremely rare information that actuarial formulas may not capture (Dawes, Faust, & Meehl, 1989). The evidence has continued to grow over the past two decades (e.g., Neal & Grisso, 2014). Though clinicians are often solicited for their expertise in decision-making, they are no more likely to avoid bias than the average human (Dawes, Faust, & Meehl, 1989; Neal & Grisso, 2014). Moreover, increased confidence in decision-making is often associated with lower rates of accuracy, even in forensic contexts (Desmarais, Nicholls, Read, & Brink, 2010). Desmarais and colleagues (2010) investigated decision-making accuracy prospectively for predictions of future risk in psychiatric patients in four domains: harm to others, harm to self, suicidal risk, and unauthorized leave; they found that confidence was rarely related to accuracy. When it was associated, higher rates of confidence in one's judgments was indicative of lower rates of accuracy (Desmarais et al., 2010). Thus, it is important to study the decision-making policies of this population in an objective way. Because cognitive bias in

decision-making often occurs without one's awareness, relying on subjective accounts of decision-making, even with confident participants, may lead to suboptimal conclusions about decision-making processes and outcomes.

Factors Impacting Clinical Decision-Making

Mental health evaluators are asked to consider a variety of information when assessing civil competency. Guidelines specified by an American Bar Association and American Psychological Association (2008) workgroup include legal factors (e.g., state competency statute), causal factors (e.g., a relevant medical or psychiatric diagnosis), functional and cognitive components, and psychological or emotional components. However, little research exists that may determine the extent to which mental health evaluators follow these guidelines, how they use different elements of the guidelines, and what sources of information most strongly predict their recommendations of civil competency.

In a recent meta-analysis of the CST literature, Pirelli, Gottdiener and Zapf (2011) found that various demographic variables, previous psychiatric hospitalization and results of psychological testing were each predictive of competency adjudication. For example, 53% of incompetent defendants were previously hospitalized in psychiatric facilities versus only 32% of competent defendants, a significant difference (Pirelli et al., 2011). Although assessment instruments specific to CST are not relevant to civil competency evaluations (i.e., they assess constructs such as whether one can assist in their own defense), traditional psychological assessment instruments are used across both of these evaluative settings. Pirelli and colleagues (2011) found that both Wechsler intelligence instruments and the Minnesota Multiphasic Personality Inventory (MMPI) were

associated with incompetency, such that incompetent defendants had lower IQ scores on the Wechsler measures (Full Scale, Performance, and Verbal IQs) and more severe psychiatric symptom profiles on the MMPI (e.g., Scale 6 which detects paranoia and Scale 8 which detects symptoms of schizophrenia and/or bizarre thinking) than their competent counterparts. However, the number of studies that were used to derive these conclusions ranged from only two (MMPI) to at most seven (verbal IQ) studies, so these findings should be interpreted cautiously and further assessment of these traditional instruments is warranted (Pirelli et al., 2011).

In the area of civil competency, Quickel and Demakis (2013) found that a functional measure, the Independent Living Scales (ILS), was slightly more accurate in predicting competency status than traditional cognitive screening and neuropsychological measures. Thus, although traditional assessment instruments are still used in these contexts, functional measures may be the most salient feature of civil competency evaluations for mental health experts. However, since this study did not utilize psychological test data (i.e., WAIS-IV, MMPI-2), it remains unclear how psychological testing would compare to functional or neuropsychological measures in determining competency recommendations and how these different assessment measures would predict clinician recommendations.

Policy Capturing: An Objective Look at Decision-Making

Policy capturing, a methodological tool that is widely utilized in the organizational sciences (e.g., employee selections decisions, Sekiguchi & Huber, 2011), is gaining popularity in legal and clinical decision-making contexts. It allows for the investigation of decision-making policies by asking participants to read many vignettes

that vary along several important dimensions and rate them accordingly. Regression analyses are used to reveal how much "weight" each individual assigns a given factor (or combination of factors). Once an individual participant's decision-making policy (i.e., tendency to weight factors in a certain way) is determined, comparative analyses with combined participant data can be conducted (e.g., differences among subgroups, variability in decision-making within a group). Policy capturing is an appropriate methodology for understanding decision-making in a wide variety of contexts, and an optimal way to assess complex clinical decisions in which a multitude of information is available for decision-makers to consider.

Research Objectives

Because research investigating the decision-making policies of mental health professionals is still in its infancy, this is an exploratory study. Nonetheless, the following research objectives will be examined:

1) Determine how various pieces of typical client information are weighted when mental health evaluators generate competency recommendations.

2) Assess whether mental health decision-makers tend to rely more on functional measures (consistent with Quickel & Demakis, 2013) or cognitive/psychological measures to make a judgment about an individual's competency.

3) Compare empirically derived factor weights with self-reported weights of decisions to assess participant awareness into decision-making in this context.

Methods

Participants

This study included individuals who have the necessary background to conduct MDEs in the state of North Carolina (e.g., licensed psychologists). Participants had to be over 18 and speak fluent English. Individuals who were currently conducting civil competency evaluations were explicitly targeted during the recruitment process.[10]

Participants were recruited by emailing all Licensed Psychologists and Licensed Psychological Associates in North Carolina (email addresses provided by the North Carolina Psychology Board on April 22, 2013, reflecting all current licensees as of January 3, 2013). The email included study information and a link to the online survey site (www.surveygizmo.com). Two emails were sent (in May and July 2013), reminding psychologists about the opportunity to participate. Once an individual participated, they were contacted via email and asked to assist with recruitment via snowball sampling methodology. Additionally, if they had experience conducting MDEs, they were asked to send recruitment emails to legal professionals that they had worked with in this capacity as part of a concurrent study (Quickel, Demakis, & Reeve, in preparation).

Procedure

All participants electronically completed the study protocol by reading relevant study information, and consenting to participate by checking a box that indicated their agreement. Thirty-six vignettes were presented in random order. After reading each vignette, as well as the legal statute for competency in North Carolina, participants made a dichotomous competency recommendation. Following the last vignette, participants were asked to rate the different pieces of information they used to arrive at their

[10] In a concurrent study, Clerks and Assistant Clerks of the Superior Court, as well as Guardian ad litems, were recruited for participation. Once an individual participated, they were sent the recruitment email for the current study and asked to pass it along to any clinical evaluators that they have worked with during an incompetency hearing (i.e., snowball sampling).

decisions. Finally, demographic information was collected, followed by a screen of debriefing information, including study purpose, methodology, and researcher contact information. Demographic information included sex, age, ethnicity, education, licensure status and experience with MDEs. As an incentive for participating, three $50 Target gift cards were allocated via a random drawing at the end of the study; participants were asked to include their email address, kept separate from their survey results, as contact information for the drawing if they wished to be included.

Materials

Vignettes were modeled after a sample (abbreviated) psychological report. Each report began with the same prompt (i.e., "Please weigh the following information and decide what competency recommendation Dr. Smith should make in his report."), followed by the legal statute (NC General Statute 35A-1101, 2011, article 7). Information about the evaluation conducted with the respondent, Person X, was presented in bullet point format and included the following: Results of functional testing (i.e., ILS; intact or impaired), results of cognitive testing (i.e., WAIS-IV; intact or impaired), results of psychopathological testing (i.e., MMPI-2; mild or severe), compliance with pharmacological treatment (compliant or incompliant), and history of prior psychiatric hospitalization (yes or no). A systematic factorial design using these five factors generated thirty-two possible vignettes. As a reliability check, four of these vignettes were presented to participants twice. Following each vignette, participants rated the following construct:

Competency. Participants provided civil competency recommendations by answering the following question, "Based on the above information, I recommend that

this individual be adjudicated…" Answers were either "Competent" or "Incompetent." Participants were required to give a recommendation before moving on to the next vignette.

After all vignettes were complete, participants were asked to consider the following construct:

Self-Reported Policy. Participants were also asked to consider what pieces of information they relied on most consistently to make their competency judgments. They were provided with a list of the factors that varied (functional testing, cognitive testing, psychological testing, treatment compliance, hospitalization history), and asked to assign a total of 100 points to the five listed factors. For example, if a participant felt as though they relied solely on functional testing to make their determinations, she would assign 100 points to that category and 0 to all of the others. If she felt as though she weighted all factors equally, each cue would receive 20 points. This approach to understanding self-reported ratings has been successfully implemented in previous policy capturing studies to investigate participant awareness into their decision-making patterns (e.g., Wiederman & Dubois, 1998).

Data Analysis

SPSS version 20 was used to analyze the data. Due to the use of policy capturing methodology, the database was constructed such that each participant represented a mini-experiment (i.e., data entered into a separate database). This allowed for each participant's decision making policy to be determined separately. Data analysis first occurred at the within-subject level. Instead of representing a participant, each row in the database represented a vignette. Instead of representing a variable, each column in the

database represented a factor's dummy code and the dependent variable ratings for a particular vignette. Linear multiple regression analysis was conducted using varied cues as the predictor variables (i.e., functional testing, cognitive testing, psychological testing, treatment compliance and hospitalization history) and competency as the criterion.

Level two analyses reflected between-subjects comparisons. Unstandardized regression coefficients from each participant were entered into a new database for subsequent analyses. This allowed us to determine whether a cue's mean regression coefficient differed significantly from zero or represented greater degrees of relative weight than that of other cues. All other standard statistical analyses were conducted at this level.

Finally, empirically derived and self-reported factor ratings were compared. Bivariate correlations between regression weights and self-reported weightings revealed participant awareness of their decision-making policy.

Results

The current study was completed by 54 of the 160 individuals who initiated participation (33.75%)[11]. The demographic questions were asked at the end of the study to avoid any potential bias in responding by potentially priming participants to consider their experience with this type of evaluation; thus, it cannot be determined if there are any differences between those who chose to complete the survey and those who did not. Five of the 54 participants reported an age that was above the study's acceptable age range (i.e., 65 years), and two of the 54 participants did not achieve 50% reliability across the

[11] A similar rate of completion (32.2%) was found by Quickel, Demakis and Reeve (in preparation), utilizing the same methodology with a sample of legal decision-makers and community dwellers; thus, it is thought that the attrition rate represents a typical rate for this type of design and not an abnormality.

four duplicate vignettes; they were subsequently removed, rendering a final operational sample of 47.

Of these 47 participants, 55.30% (N = 26) identified as female, and the majority of the sample was White/Caucasian (N = 41, 87.23%). Three participants reported their ethnicity as African-American (6.38%), one as Hispanic (2.13%), one as Asian-American (2.13%) and one as Native American (2.13%). Participant ages ranged from 27 to 65, with an average age of 48.81 (SD = 11.80); 30 (63.80%) participants were licensed at the doctoral level, and the rest of the sample identified as Licensed Psychological Associates (i.e., master's level licensure). The one significant difference that emerged between Licensed Psychologists and Licensed Psychological Associates was in reference to age – Licensed Psychological Associates (M = 43.29, SD = 12.38) were significantly younger than Licensed Psychologists (M = 51.93, SD = 10.41), t (45) = -2.55, p = .014. This was expected, given the discrepancy in education attainment needed for these licenses in North Carolina. Licensed Psychologists and Licensed Psychological Associates were not significantly different in terms of sex; moreover, they were not significantly different on any objective or self-reported study variables. Thus, the subpopulations were combined for all subsequent analyses unless otherwise noted.

Table 2: Policy capturing results

		R^2	Intercept	Functional	Cognitive	Psychopathology	Hospital	Medication
Total Sample (N = 47)	Mean	0.67	-0.08	0.61	0.22	0.14	0.08	0.17
	Standard Deviation	0.17	0.23	0.26	0.20	0.11	0.10	0.18
	Minimum	0.27	-0.44	0.13	-0.06	-0.06	-0.19	-0.13
	Maximum	1.00	0.69	1.00	0.81	0.38	0.25	0.56
	CI: Lower Limit	0.62	-0.15	0.54	0.16	0.11	0.05	0.12
	CI: Upper Limit	0.72	0.01	0.68	0.28	0.17	0.11	0.22

Note: Numbers represent the unstandardized regression coefficients (i.e., the literal weight given to each factor). Functional = intact vs. impaired performance; Cognitive = intact vs. impaired performance; Psychopathology = mild vs. severe; Hospital = previously hospitalized vs. not previously hospitalized; Medication = compliant with medications vs. not compliant.

Policy capturing analyses were used to address research objective one by providing descriptive information on how various pieces of information were weighted (see *Table 2*). The combination of all five factors explained 67% of the variability in competency recommendations, on average. The confidence interval around the mean unstandardized regression coefficient for all five factors was significantly greater than zero; that is, participants utilized all five factors when making their recommendations. Because all five factors were dichotomous, the unstandardized regression coefficients can be compared by evaluating whether the confidence intervals overlap. Specifically, information about previous hospitalization was the least weighted factor in participant decision-making, compared to the other four factors. Information about medication compliance, cognitive and psychopathology testing were all weighted at a level significantly higher than hospitalization information, and not significantly different from each other. Functional testing information was significantly more influential in participant decision-making than all other factors.

The results of research objective two, to compare functional testing results to the cognitive and psychopathological testing, supports the previous findings of Quickel and Demakis (2013). The average unstandardized regression coefficient for functional testing information was .61 (*SD* = .26), which means that when the functional testing results suggest that the person is intact, the competency rating of the psychologist will increase by .61, holding all other factors constant. Said another way, if a respondent's cognitive abilities are impaired, he exhibits severe levels of psychopathology, is medication incompliant and has a previous history of hospitalization, but the functional testing results suggest intact performance, the psychologist's recommendation increases from a

baseline (i.e., average intercept) of -.08 to .53 (competency coded as 0 = incompetent, 1 = competent; see Appendix F for entire codebook).

Our third research objective was to determine the degree of awareness individuals have into their decision-making policies by comparing self-reported and empirically derived factor weights (see Table 3). Participants were moderately and significantly accurate in predicting the amount of weight they placed on functional information, r (47) = .49, $p < .001$, psychopathology information, r (47) = .52, $p < .001$, and information about medication compliance, r (47) = .45, $p = .002$. Participants demonstrated a lower degree of awareness into how they utilized cognitive information, r (47) = .22, $p = .13$, and virtually no awareness into how information about previous psychiatric hospitalizations was weighted, r (47) = .02, $p = .92$. Although neither correlation was significant, Licensed Psychologists and Licensed Psychological Associates differed in this regard only on their awareness into information about hospitalization. While Licensed Psychologists were mildly accurate in their predictions, r (30) = .12, $p = .55$, when Licensed Psychological Associates predicted that they used this information, their objective reliance on this factor actually decreased, r (17) = -.16, $p = .53$.

Table 3: Correlations between empirically derived and self-reported factor weights

	Factor	*r*	*p*
Total Sample (*N* = 47)	Functional	0.49	<0.01
	Cognitive	0.22	0.13
	Personality	0.52	<0.01
	Hospitalization	0.02	0.92
	Medication	0.45	<0.01
Licensed Psychologists (*N* = 30)	Functional	0.49	<0.01
	Cognitive	0.29	0.12
	Personality	0.51	<0.01
	Hospitalization	0.12	0.55
	Medication	0.29	0.12
Licensed Psychological Associates (*N* = 17)	Functional	0.47	0.06
	Cognitive	0.11	0.68
	Personality	0.56	0.02
	Hospitalization	-0.16	0.53
	Medication	0.65	<0.01

Finally, one unexpected finding was that clinician agreement, as measured by the percent of the sample that voted for the majority determination for that vignette, ranged from 50% (i.e., perfect disagreement – half the sample recommended competent and the other half recommended incompetent) to 100% (i.e., perfect agreement) depending on the vignette. The average amount of agreement was 81.37% across the 32 possible vignettes. This means that regardless of the information used to make decisions, there was a moderate degree of disagreement among clinicians as to the ultimate recommendations of competency. This has important implications for civil competency assessment, as it demonstrates the variability of recommendations based only on the identity of the evaluator.

Discussion

Mental health testimony can be influential in legal decisions of all kinds (e.g., Quickel, Demakis, & Reeve, in preparation; Zapf et al., 2004); thus, it is important to understand how psychologists arrive at their recommendations regarding civil competency. This study supported previous retrospective findings by Quickel & Demakis (2013) that suggested that functional measures are more predictive of legal adjudications of competency than a traditional cognitive screening or neuropsychological measures. One mechanism by which assessment instruments may influence competency determinations is through mediation of the psychological recommendations of capacity; for example, if psychologists give the most weight to functional measures in building their recommendations, and the legal decision-makers give the most weight to the psychological testimony when deciding about competency (see Quickel, Demakis, & Reeve, in preparation), this could explain the results found by Quickel and Demakis (2013). This study focused specifically on the psychological recommendations, and found that functional measures were highly and significantly influential in psychologists' decisions, and significantly weighted in decision-making above and beyond cognitive or psychological test data, hospitalization history or medication compliance. This confirms the plausibility of the possible causal chain discussed above. Moreover, the differing methodology between these two studies (i.e., retrospective case review vs. vignette-based decision-making) strengthens this finding.

An important question remains – is this an optimal way for clinicians to make competency recommendations? An American Bar Association and American Psychological Association (2008) working group stated that legal evaluations ought to include consideration of legal factors (e.g., state competency statute), causal factors (e.g.,

a relevant medical or psychiatric diagnosis), and functional, cognitive and psychological components. The findings of the current study suggest that mental health evaluators disproportionately consider functional components over cognitive and psychological information. While this is interesting, is it necessarily problematic? The ABA and APA (2008) handbook states, "The purpose of the handbook is to promote sound assessment of older adults […]. This handbook is not a practice guideline and is not intended to establish a standard against which clinical practice is to be evaluated" (p. 10). One interesting way to evaluate decision-making is the extent to which it maps onto state statutes. Currently, 28 states require decisions to be made based on both functional and cognitive information, whereas 14 states and 7 states respectively require the assessment of functional and cognitive information independently (Demakis, 2013). North Carolina asks for both functional and cognitive information to be considered when defining incompetency. Future research can seek to determine what the implications of a narrower framework of assessment might be, and how relying most heavily on functional assessments is within the ethical scope of clinical practice. Moreover, an increase in guidance may serve to increase the agreement among clinicians who make these determinations.

An important strength of the current study is that it is one of the first to explore how clinicians integrate information related to an individual's capacity to arrive at a capacity determination, as well as investigate clinician agreement in this context; these were both recommended by Moye and Marson (2007) as necessary next steps in the scientific study of civil competency. The current study employed a policy capturing methodology that allows for the objective assessment of clinical decision-making instead

of relying solely on self-report. The survey was conducted online, which allowed for an optimal degree of anonymity; moreover, the vignettes contained ecologically valid factors that are consistent with the content of typical capacity evaluations. The participants themselves were ecologically valid, such that the individuals who were targeted for participation are eligible to perform these types of evaluations in the state of North Carolina.

Limitations of the current study include the unrealistic context of vignette-based study, such that clinicians would never have to assess and determine competency based on such limited information and without any face-to-face contact with the respondent. It cannot be determined what impact this may have on the current results; future research should focus on developing ways to study clinical evaluations in ways that both uphold scientific standards (e.g., prospective, objective) and allow for increasingly realistic study materials. It will also be important for future research to replicate the current study in different jurisdictions. Civil competency is a state-based statute, which makes broad study and application difficult. Research that compares across states will be useful in informing policies that govern civil competency – there is no theoretical reason that an individual would be competent in one state and incompetent in another, other than differences in state statute. Just as it would be problematic for an individual to be diagnosed with schizophrenia in one state and not another due to differing definitions of the disorder, some psycholegal scholars may believe it to be equally problematic in the civil competency domain. This will be an interesting ethical and legal debate in the field should differences emerge in the evaluation or adjudication of competency across states.

In conclusion, much can be learned from the continued investigation of civil competency assessments and adjudications. Recall the ethical balance between autonomy and safety; understanding how clinical recommendations are developed and how these recommendations, in turn, inform legal determinations of competency can have important implications at the individual, family, and community level in ethical, psychological, and legal domains. Future research would benefit from replicating this research in other jurisdictions, assessing the impact of training on recommendations, and investigating the impact of undue influence from family members.

CHAPTER 5: DISCUSSION

Taken together, these studies represent the first steps in understanding how civil competency decisions are made in North Carolina. These are the first studies that have investigated decision-making in an objective way, assessing empirically derived decision-making policies of a target population comprised of individuals who are responsible for these decisions. Study One investigated legal decisions of civil competency. Results from Study One indicate that legal decision-makers rely most strongly on the recommendations of the psychologist, though they also consider testimony contained in medical records and from the respondent's spouse. Diagnostic information and the presence of test data did not significantly impact competency decisions. Moreover, the legal portion of the sample did not make decisions in a significantly different way than the non-legal (i.e., community dwelling) portion of the sample. Participant awareness of decision-making policies was significant for three out of the five cues. Study Two investigated clinical recommendations of civil competency. Results from Study Two indicate that licensed psychologists in North Carolina rely most strongly on functional information, and also rely on information from cognitive testing, psychopathology assessment, and medication compliance. Information about previous hospitalization was the least utilized cue. Again, participants had high levels of awareness for three out of the five cues.

Assessing decision-making in this way allowed for an empirically derived, objective look at civil competency decisions and recommendations. We know from decades of work that humans are fallible decision-makers (e.g., Dawes et al., 1989; Tversky & Kahneman, 1974), and that work in the forensic or clinical domain is no less subject to these biases and errors (Neal & Grisso, 2014). The participants in these studies were no exception. Despite receiving the exact same information, our participants made different decisions, and made those decisions in different ways. When looking at the minimum and maximum unstandardized regression coefficients contained in Tables 1 and 2, it is clear that our participants span a wide range of decision-making approaches; Study One ranges span from a low of .57 (test data) to a high of 1.19 (psychologist recommendation), whereas Study Two ranges span from a low of .44 (psychopathology and previous hospitalization) to a high of .87 (functional and cognitive). In fact, across all ten cues contained in both studies, only one cue did not contain unstandardized regression coefficients in both negative and positive directions (functional data, Study Two). This demonstrates that information is not being consistently processed, interpreted or utilized across participants. Future research should focus on clarifying what *is* driving decisions when presented with the same information (e.g., beliefs about the world, biases that favor autonomy or safety).

These studies are important for many reasons. They support previous research that indicates high levels of agreement between mental health evaluators and legal decision-makers across both criminal (Zapf et al., 2004) and civil competency (Quickel & Demakis, 2013). They also support previous research that indicates high predictive value of functional test information over other types of information (Quickel & Demakis,

2013). This latter finding maps onto the competency statute in North Carolina, which requires one to consider information about "capacity to manage the adult's own affairs," which is considered a functional prong of this definition (NC General Statute 35A-1101, 2011). Additionally, the policy capturing methodology that was employed is an innovative way to assess decision-making in this context. Its utility in determining what information matters to legal and clinical decision-makers is of significant value to researchers in this area. Although participants demonstrated a moderate to high degree of awareness of the utility of the factors that were most important to them, they had lower levels of awareness of the ways in which other cues more subtly impacted their decisions. In this way, objective methodologies such as policy capturing are important tools to help elucidate decision-making in a complex environment.

In addition to the application of an innovative methodology, strengths across both of the current studies include samples drawn from target populations of interest, and cues that are ecologically valid and derived from qualitative focus groups with key personnel. Limitations include brief presentations of information that likely provided incomplete snapshots of the case and results that cannot be easily generalized past North Carolina; even states with similar statutes and processes have different cultural standards that might impact decision-making differently. It is also important to note that the context of responding to these vignettes was different from the context of typical civil competency cases in many ways; it is unknown what impact these differences may have had on the subsequent decisions that were uncovered. Future research can work towards replication in other jurisdictions, employing more technologically sophisticated methods to provide higher ecological validity (e.g., video vignettes). Additionally, future research may seek

to determine more optimal ways to incentivize participation, including increasing stakeholder engagement, to increase sample size and provide a more comprehensive and generalizable picture of current decision-making.

As a program of study, these two experiments combine to form the foundation of ongoing research that will explore legal decision-making. This research is important because of the impact these decisions have on the respondent; when the respondent is adjudicated incompetent, his or her rights are removed to protect the safety of that individual and others in that person's environment. When the respondent is adjudicated competent, his or her autonomy is retained at the risk of harm to self or others. This delicate balance has important implications for the quality of life of individuals who undergo civil competency evaluations and trials. Another important next step in this research program will be to include the voices of the respondents. Research rarely references the opinions or perceptions of the individual whose competency is in question, presumably because if they are adjudicated incompetent, their opinion holds less weight than if adjudicated competent. In the related field of advance directives, Godwin and Waters (2009) conducted a qualitative study with dementia patients and found that these individuals were both willing and able to give opinions regarding end of life treatment options and decision-making. If the overarching goal of this field is to better serve the respondents and their families by focusing on reliability and accuracy in decisions, then perhaps it is time to include them in the discussion. This is consistent with previous research in end of life decision-making that has suggested that including the voice of the allegedly incompetent individual is an important step in promoting optimal flourishing of all parties involved in difficult decisions related to end of life care (Weidemann, 2012).

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APPENDIX A: STUDY ONE SAMPLE VIGNETTES

Study Instructions:

Thank you for participating in the following study. The entire survey should take you approximately one hour.

You will be shown a series of 36 cases and asked to make a competency decision about each one. Please do not spend too much time on any page, but answer as thoughtfully and as accurately as possible. We recognize that in actual competency hearings, you would have additional information at your disposal to aid you in your decision-making.

For the purposes of this study, please assume that a) all individuals presented have good intentions for the respondent's well-being, and b) this is all of the information that is available to you.

You will not be able to use the "BACK" button on your internet browser, or return to previous vignettes after making your decisions. Attempting to use the "back" button may interrupt your survey experience and render your participation incomplete.

After completing the survey, you will be entered into a drawing for a $50 gift card as a thank you for your participation. Please leave your email where indicated at the end of the survey if you would like to be considered for this drawing. Thank you for your participation!

APPENDIX A: STUDY ONE SAMPLE VIGNETTES (Continued)

1) Please weigh the following information and determine whether or not Person A meets the following criteria for an incompetent adult in North Carolina:

"'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition" (NC General Statute 35A-1101, article 7).

- Diagnosed with Alzheimer's dementia
- One family member has noticed that he is having trouble with activities of daily living, such as remembering to turn off the stove and taking his medications correctly.
- His wife disagrees with this family member, stating that her husband, though he has some mild memory deficits, is able to keep himself safe. She states that this family member is trying to control their lives
- Review of medical records indicates that Person A's long-term family physician believes that he has the ability to independently complete most activities of daily living
- Based on a clinical interview and a battery of psychological tests, a licensed psychologist recommends that Person A be adjudicated competent

Based on the above information, is this individual:

_____ Competent _____ Incompetent

APPENDIX A: STUDY ONE SAMPLE VIGNETTES (Continued)

32). Please weigh the following information and determine whether or not Person FF meets the following criteria for an incompetent adult in North Carolina:

"'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition" (NC General Statute 35A-1101, article 7).

- Diagnosed with Schizophrenia
- One family member has noticed that he is having trouble with activities of daily living, such as remembering to turn off the stove and taking his medications correctly
- His wife agrees with this family member that her husband is unable to manage activities of daily living or keep himself safe, and that someone should assist her husband in making important financial and medical decisions
- Review of medical records indicates that Person FF's long-term family physician has documented a decline, noting troubling changes in his behavior, mood and cognitive abilities
- Based on a clinical interview, a licensed psychologist recommends that Person FF be adjudicated incompetent

Based on the above information, is this individual:

_____ Competent _____ Incompetent

APPENDIX B: STUDY TWO SAMPLE VIGNETTES

Study Instructions:

Thank you for participating in the following study. The entire survey should take you approximately one hour.

You will be shown a series of 36 cases and asked to make a competency recommendation about each one. Please do not spend too much time on any page, but answer as thoughtfully and as accurately as possible. We recognize that in actual capacity evaluations, you would have additional information at your disposal to aid you in your decision-making.

For the purposes of this study, please assume that a) all of the data was collected in reliable and valid ways, and b) this is all of the information that is available to you.

You will not be able to use the "BACK" button on your internet browser, or return to previous vignettes after making your decisions. Attempting to use the "back" button may interrupt your survey experience and render your participation incomplete.

After completing the survey, you will be entered into a drawing for a $50 gift card as a thank you for your participation. Please leave your email where indicated at the end of the survey if you would like to be considered for this drawing. Thank you for your participation!

APPENDIX B: STUDY TWO SAMPLE VIGNETTES (Continued)

1) Please weigh the following information and decide what competency recommendation Dr. Smith should make in his report based on whether or not Person A meets the following criteria for an incompetent adult in North Carolina:

"'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition" (NC General Statute 35A-1101, article 7).

- Diagnosed with Schizophrenia.
- Functional testing on the Independent Living Scales reveals impaired performance. Person A was unable to show on a telephone how he would call 911 and could not correctly count monetary change.
- Cognitive testing on the WAIS-IV reveals impaired performance. Of note, Person A averaged two standard deviations below the mean on verbal tasks.
- Personality testing on the MMPI-2 reveals severe levels of psychopathology, as both scale 6 and scale 8 were significantly elevated. The assessment is thought to be a valid reflection of Person A's current functioning.
- Person A has been previously hospitalized due to psychosis and self-injurious behaviors.
- Person A is currently not compliant with the anti-psychotic medications prescribed by his psychiatrist.

Based on the above information, I would recommend that this individual be adjudicated:

_____ Competent _____ Incompetent

APPENDIX B: STUDY TWO SAMPLE VIGNETTES (Continued)

32) Please weigh the following information and decide what competency recommendation Dr. Smith should make in his report based on whether or not Person FF meets the following criteria for an incompetent adult in North Carolina:

"'Incompetent adult' means an adult or emancipated minor who lacks sufficient capacity to manage the adult's own affairs or to make or communicate important decisions concerning the adult's person, family, or property whether the lack of capacity is due to mental illness, mental retardation, epilepsy, cerebral palsy, autism, inebriety, senility, disease, injury, or similar cause or condition" (NC General Statute 35A-1101, article 7).

- Diagnosed with Schizophrenia.
- Functional testing on the Independent Living Scales reveals intact performance. Person FF was able to demonstrate high levels of personal safety and had no difficulty with tasks of simple math or financial ability.
- Cognitive testing on the WAIS-IV reveals average performance with no notable cognitive deficits.
- Personality testing on the MMPI-2 reveals mild levels of psychopathology; scales 6 and 8 are only slightly above average. The results are thought to be a valid representation of Person FF's current functioning.
- Although Person FF has a history of mental health treatment, he has no history of psychiatric hospitalization.
- Person FF is currently taking anti-psychotic medications as prescribed by his psychiatrist.

Based on the above information, I would recommend that this individual be adjudicated:

_____ Competent _____ Incompetent

APPENDIX C: FOCUS GROUP ONE

Focus Group (FG) One occurred on May 25, 2012, at the Mecklenburg County Courthouse in Charlotte, North Carolina. FG One participants included two assistant Clerks of the Superior Court in North Carolina. Both participants were female and had law degrees. Participants were given 32 paper vignettes to complete prior to the FG (see Appendix A), with 100% completion rates across both individuals. Upon arrival at the FG, both participants signed informed consents regarding their participation. The total duration of FG One was approximately 90 minutes.

The main qualitative feedback given during FG One was that the scenario depicted in the vignettes did not closely approximate a true legal setting. Both participants felt as though there was not enough context given; they voiced questions such as, "Who was at the hearing?" and "What types of psychological tests were administered?" One participant admitted to plugging additional information into the vignettes to create a complete picture of the hearing, whereas the other participant reported basing ratings on only the available information.

When asked to subjectively estimate which cues were most salient to their decision-making, both participants agreed that they gave little weight to the diagnostic information or the psychologist's recommendations when they were based solely on a clinical interview. One participant reported placing the most weight on information from the family, whereas the other participant reported placing weight on the psychologist's recommendations when they were based on test data. Their suggestions for improving the vignettes included adding more information about the context, the relationships among family members and the psychological tests that were administered. Based on

APPENDIX C: FOCUS GROUP ONE (Continued)

these recommendations, the instructions for the study were amended (see Appendix A). In addition to the incompetency statute for North Carolina, they suggested adding the standard that requires legal decision-makers to have "clear, cogent and convincing evidence" to adjudicate an individual incompetent.

Data Analysis

On competency judgments, subject one rendered 21 decisions of incompetent and 11 decisions of competent, whereas subject two rendered 11 decisions of incompetent and 21 decisions of competent. This led to an agreement of 68.75%, meaning that they agreed on 22/32 cases. During FG One, the participants felt as though this was misrepresentative, as they report one hundred percent agreement during actual competency hearings. When analyzing these judgments of competency using a linear regression analysis, both the wife's testimony and the psychologist's recommendations emerged as significant factors (i.e., predictors of competency decisions) for both participants, despite less certain subjective responses.

When analyzing the confidence ratings that participants placed in their competency judgments, respondent diagnosis and psychologist recommendation emerged as significant predictors for subject one; there were no significant predictors of confidence for subject two. As expected, a diagnosis by psychologist recommendation interaction also emerged. When the psychologist recommended competency, the influence of that recommendation was significantly greater when the respondent carried a diagnosis of schizophrenia (versus dementia). When the psychologist recommended incompetency, the diagnosis was irrelevant.

APPENDIX D: FOCUS GROUP TWO

Focus Group (FG) Two occurred on July 9, 2012, at 6201 Fairview Road, Suite 200, in Charlotte, North Carolina. FG Two participants included two Guardian ad litems (GALs) who regularly assist with civil competency cases in North Carolina. Participants included one male and one female; both participants had law degrees. Participants were provided 32 electronic vignettes to complete prior to the FG (see Appendix A), with 50% completion rates (one participant completed, one did not). Upon arrival at the FG, both participants signed informed consents regarding their participation. The total duration of FG Two was approximately 90 minutes.

The main qualitative feedback given during FG Two was that the quality of the information provided was sufficient, but the quantity of information was significantly lacking. In general, the GALs reported that they assumed the information was provided to them just before putting their report together. They stated that the courts (and subsequently, they as well) place a great deal of confidence in the MDE reports, which encompasses the psychological and medical factors. One participant explained that they interpret the statute as being "two-pronged" – both medical and cognitive information is required for incompetency adjudication. However (and similarly to FG One), the participants disagreed about what the "default" judgment should be. One participant voiced that they give the respondent the "benefit of the doubt" (i.e., competency), whereas the other participant tends to default towards incompetency, and then help with competency restoration if the respondent can demonstrate that they have the abilities to manage their own affairs.

APPENDIX D: FOCUS GROUP TWO (Continued)

When asked to subjectively estimate which cues were most salient to their decision-making, both participants agreed that they emphasized the medical and psychological pieces of the description. Similar to FG One, their suggestions for improving the vignettes included adding more information about the context, the relationships among family members (especially as it may relate to potential conflict) and the psychological tests that were administered. They suggested adding a line that instructs the participant to "assume the petitioner had good intentions" to help avoid unnecessary skepticism or doubt that may lead other GALs away from the salient decision-making issues.

Data Analysis

On competency judgments, the subject who completed the task rendered 17 decisions of incompetent and 15 decisions of competent. However, when analyzing these judgments of competency using a linear regression analysis, no significant predictors emerged. Moreover, when analyzing the confidence ratings that the participant placed in judgments of competency and quantity of information provided, no significant predictors emerged. However, when the wife or the medical provider gave information that suggested the respondent was incompetent, the participant rated the quality of information as significantly higher.

As a result of these focus groups, changes to the instructions were made to prevent extraneous information from influencing the participants' decisions and to encourage more consistent approaches to task completion. For example, the instruction

"do not spend too much time on any one page" was added, along with an overall suggested time limit (one hour).

APPENDIX E: PILOT TESTING

In order to assess study feasibility and ease of instruction comprehension and subsequent task completion, pilot testing was conducted from August 4 – 8, 2012. Participants were UNCC students enrolled in Research Methods II who received course extra credit for their participation. Thirty-six participants completed 32 vignettes each (see Appendix A), along with the following four open-ended questions: 1) Approximately how long did it take you to complete this survey? 2) What information did you rely on most consistently to make your determinations about incompetency? 3) How easy to understand was this task? Did you know what you were supposed to be doing? 4) How much effort did you put into your determinations?

Fifteen participants reported study durations of 10-30 minutes, 10 participants reported study durations of 31-45 minutes, and 9 participants reported study durations of 46-60 minutes. No one endorsed needing more than one hour to complete the tasks. In terms of subjective analysis of information, 3 people reported relying on diagnosis, 8 people reported using the wife's opinion, 13 people trusted the medical records, 11 people used the psychologist's recommendation, and 2 people reported relying on the clinical interview. Five individuals provided answers that demonstrated they were looking for some sort of explicit agreement among different cues. All participants found the task easy to understand and complete. Finally, in terms of task effort, 11 participants endorsed "I read everything carefully and fully considered each option," 17 participants endorsed "I read everything but answered quickly," and 8 participants endorsed "I skimmed everything and answered quickly." No changes were made as a result of pilot testing.

APPENDIX F: CODE BOOK

Coding information for all predictors and criterion for both studies is depicted below (see Table 4).

Table 4: Dummy codes for both studies

		Code = 0	Code = 1
Study One: Predictors			
	Diagnosis	Alzheimer's dementia	Schizophrenia
	Wife	Incompetent	Competent
	Physician	Incompetent	Competent
	Psychologist	Incompetent	Competent
	Test Data	Clinical interview	Interview plus data
Study Two: Predictors			
	Functional	Impaired	Intact
	Cognitive	Impaired	Intact
	Psychopathogy	Severe	Mild
	Prior Hospitalization	Yes	No
	Medication Compliance	No	Yes
Both Studies: Criterion			
	Competency	Incompetency	Competency