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The 23: Racial and Other Demographic Differences in the Assignment of Risk Factors for Individuals Found Not Guilty by Reason of Insanity in Virginia

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**THE 23: RACIAL AND OTHER DEMOGRAPHIC DIFFERENCES IN THE
ASSIGNMENT OF RISK FACTORS FOR INDIVIDUALS FOUND NOT GUILTY BY
REASON OF INSANITY IN VIRGINIA**

by

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ABSTRACT

THE 23: RACIAL AND OTHER DEMOGRAPHIC DIFFERENCES IN THE ASSIGNMENT OF RISK FACTORS FOR INDIVIDUALS FOUND NOT GUILTY BY REASON OF INSANITY IN VIRGINIA

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Virginia Consortium Program in Clinical Psychology, 2020
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Not Guilty by Reason of Insanity (NGRI) acquittees uniquely walk the line of involvement in both the criminal justice and mental health systems, both of which have literature indicating the presence of underlying racial biases related to practices and outcomes. The current study examined 366 forensic charts from an inpatient psychiatric hospital in Virginia to examine potential differences in the number of risk factors assigned for NGRI acquittees based on a variety of demographic variables. Information about demographic characteristics, psychiatric history, and criminal history was recorded and analyzed. It was hypothesized that younger age, male gender, a psychotic diagnosis, violent NGRI offense, and identifying as Black would all be associated with more assigned risk factors. It was also expected that race would account for additional variance in the assignment of risk factors above and beyond other salient demographic variables. Results indicated that Black participants were assigned more risk factors than their White counterparts, men were assigned more risk factors than women, and individuals with a felony offense stayed longer in the hospital than individuals with a misdemeanor offense. Race also accounted for additional variance in the assignment of risk factors above and beyond age, gender, diagnosis, and type of criminal offense. Implications of this study include the need to consider incorporating cultural sensitivity training, specifically related to race, and education around implicit biases into forensic examiner training that may impact risk assessment and clinical judgment.

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This dissertation is dedicated to the original defying stereotypes group, my family and friends, and my clinical supervisors who have supported my efforts to be a change agent and advocate for patients of color across settings.

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NOMENCLATURE

<i>AAB</i>	Analysis of Aggressive Behavior (Report)
<i>IAAB</i>	Initial Analysis of Aggressive Behavior (Report)
<i>NGRI</i>	Not Guilty by Reason of Insanity
<i>TCE</i>	Temporary Custody Evaluation

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CHAPTER 1

INTRODUCTION

Literature from a variety of disciplines including psychology, sociology, and criminal justice points to the presence of systemic biases that negatively affect individuals who are racial minorities, particularly Blacks. For Black men and women who become involved in the criminal justice and mental health systems, these biases manifest in a variety of ways, from higher incarceration and arrest rates, to assignment of more assigned diagnoses and increased prescription of medication. Related to both the criminal justice and mental health systems, the impact of race on risk assessment for not guilty by reason of insanity (NGRI) acquittees is an important, yet understudied topic. NGRI acquittees uniquely walk the line of involvement in both the criminal justice and mental health systems, both of which have literature indicating the presence of underlying racial biases related to practices and outcomes. As such, the present study examined potential differences in the number of risk factors assigned for NGRI acquittees based on a variety of demographic characteristics including age, gender, diagnosis, criminal offense, and race. Specifically, the study investigated whether race would account for variation in the assignment of risk factors above and beyond all other demographic variables. This study fills an important gap in the literature, as if indeed there is a difference in the number of risk factors assigned to acquittees based on demographic variables, particularly race, this points to potential problems related to the objectivity of the forensic evaluation process. As such, minorities may be adversely impacted in the form of lengthier inpatient hospitalizations, with more assigned risk factors making it more difficult to matriculate through the NGRI privileging process.

Systemic Racism

Race and the criminal justice system have been intertwined, dating back to the founding of the United States of America. In his *Notes on the State of Virginia* (1786), Thomas Jefferson explained slavery to be a necessary evil, citing that there would be economic and political consequences of abolishing slavery too harmful to consider (Seabrook & Wyatt-Nichol, 2016). Jefferson, an architect of the Declaration of Independence and third President of the United States, was himself a slave owner, and was noted in his many writings to refer to Blacks as inferior, less attractive than Whites, and incapable of complex emotion. Fifteen of 55 delegates at America's Constitutional Convention were slave owners, helping to craft the Constitution upon which our criminal justice system stands. This same Constitution originally included the slave trade clause (permitting and taxing the sale of Black slaves), the three-fifths clause (identifying Black slaves as three-fifths of a person), and the fugitive slave clause (mandating the return of Black slaves who ran away to their owner) (Seabrook & Wyatt-Nichol, 2016).

In the Civil War era, punishments for crimes were often unjust, with overarching themes of racial discrimination. For instance, many Pre-Civil War states set death as a punishment for Black individuals, with a lesser punishment for White individuals found guilty of the same crime (Levinson, Smith, & Young, 2014). An extension of the biases present in law making included some states labeling certain crimes as eligible for the death penalty or not, based on whether the defendant was White or Black (Levinson et al., 2014). As many Black slaves gained freedom, fear of Blacks (particularly men) permeated throughout the United States, with many state governments adopting or maintaining the death penalty as a means of maintaining societal order against the perceived threat of Blacks (Levinson et al., 2014). Whites thus attempted to maintain societal dominance, creating Jim Crow laws, which led to mass violence, lynching, and race

riots, as the Post-Civil War and Reconstruction era gave way to the Civil rights movement (Seabrook & Wyatt-Nichol, 2016).

The connection between race and criminal justice was again evident in the 1980's when tough criminal justice policies and discussion on crime in the media increased, just as incarceration rates began to increase (Mears, Pickett, Golden, Chiricos, & Gertz, 2013). Coined as the racial typification of crime, this label described the phenomenon of what was occurring during a time of historically extreme rates of imprisonment. Specifically, the majority of those incarcerated were young African-American men from disadvantaged neighborhoods (Wildeman, 2012). This racial typification of crime, linking race with criminality, is thought to have contributed to a collective belief among White individuals that Blacks were the cause of crime in America, thus leading them to support punitive policies (Mears et al., 2013).

Statistics from the Bureau of Justice provide evidence supporting the presence of mass incarceration, and how it has disproportionately impacted Blacks in the United States. As of 2016, 1.53 million people were incarcerated in state and federal facilities across the United States, with men making up the majority of those incarcerated compared to women: 471 per 100,000 versus 65 per 100,000, respectively (Bureau of Justice Statistics, 2016). Nationwide as of 2017, Black individuals (on average) were incarcerated at a rate of 2,336 per 100,000 compared to 397 per 100,000 for White individuals (Bureau of Justice Statistics, 2019). This is an increase from the 2016 statistics which were 1,408 per every 100,000 for Black individuals, followed by and White individuals (275 per 100,000) (Nellis, 2016). In Virginia specifically, disproportionate incarceration rates (for male and female offenders) based on race remain evident, with 1,386 Blacks per 100,000 incarcerated compared to 208 per 100,000 White individuals, and 116 per 100,000 Hispanic individuals (Nellis, 2016).

When comparing incarceration rates by race, as of 2016 Blacks were incarcerated at 5.1 times the rate of Whites nationwide, and Latinos 1.4 times the rate of Whites. In five states (Wisconsin, Vermont, New Jersey, Minnesota, and Iowa) that racial disparity doubles, with 10 Black people imprisoned for every one White person. Twelve states, including Virginia, have prison populations in which more than half of the inmates are Black; and Maryland tops the list with 72% of current prison inmates identifying as African American (Nellis, 2016).

Considering gender, 1 in 20 Black men is incarcerated in a state prison in 11 states, which does not account for federal jails and prisons (this would likely increase that number by 50%). As of the end of 2017, Black men (2,336 per 100,000) were incarcerated at six times the rate of their White male counterparts (397 per 100,000) (Bureau of Justice Statistics, 2019). In Virginia, 1 in 27 Black men over the age of 18 are in prison. Oklahoma has the highest incarceration rate for Black men, with 1 in 15 in prison (Nellis, 2016). The rates of Black females in prison per 100,000 in the national population (92 per 100,000) was almost double that of White females (49 per 100,000) at the end of 2017 (Bureau of Justice Statistics, 2019).

Causes for Disparities in Incarceration

Policing practices. The racial disparities in rates of incarceration begin with the disproportionate amount of arrests made, thought to be a result of racial profiling. The concept of racial profiling is based on the notion that a set of physical, psychological, and behavioral characteristics (often in conjunction with race) are used by police officers at their discretion when making decisions related to policing in communities (Seabrook & Wyatt-Nichol, 2016). The concept of racial profiling in policing is consistently supported by the literature and available statistics. The decision by the United States Supreme Court in *Whren et al. v. U.S.* (1996) gave police officers the power to use race as a basis for a police stop, if there were other

factors motivating the stop. This brings into play the concept of “reasonable suspicion” which can include location (i.e., individual is in a high crime area) and behavior (i.e., person acting suspicious or bizarre) (Gelman, Fagan, & Kiss, 2007). Massey and Denton (1993) noted that because minority citizens usually populate “high crime areas”, these individuals and the neighborhoods they live in are subject to elevated suspiciousness by police. This suspiciousness of minorities based on the communities they live in, may result in a greater likelihood of being stopped by police (Gelman, et al., 2007). For example, in New York City, using the “Stop and Frisk” policy, Blacks made up 51% of stops and Hispanics made up 33% of stops even though they represent only 26% and 24% of the New York City population. Further, Hispanics were stopped 39% more often than Whites, and Blacks were stopped 23% more than Whites (Gelman, et al., 2007).

Research indicates that Blacks are more likely than Whites to be fearful of interactions with law enforcement, believing they will be victims of harsh or unlawful punishment; and Blacks are four times more likely than their White counterparts to be victims of police use of force (Seabrook & Wyatt-Nichol, 2016). Though the rates of Blacks and Whites likely to be stopped for a traffic violation are similar, Blacks are three times more likely to be searched during a routine traffic stop. Across 170 cities in the United States, police officers were more likely to use deadly force in cities in which the economic disparities between Whites and Blacks were evident, and cities in which the Black population was relatively high (Seabrook & Wyatt-Nichol, 2016).

The literature indicates that the likelihood of being stopped as a racial minority (i.e., Blacks and Hispanics) is greater than for their Caucasian counterparts. The results of these stops for minority individuals often include greater use of deadly force, unwarranted searches, and

more arrests made (Gelman et al., 2007; Seabrook & Wyatt-Nichol, 2016). As such, racial profiling in policing is thought to contribute to the disproportionate rates of incarceration, particularly when comparing Blacks and Whites, with no evidence to support that Blacks are committing crimes or traffic violations at a higher rate than their White counterparts.

Racial stereotyping. Though many of the blatant methods of racial discrimination seen in the Civil War and Reconstruction era have faded over the decades, implicit biases toward minorities regarding race remain imbedded within the criminal justice system, specifically related to racial profiling and mass incarceration. One explanation related to both profiling and incarceration rates of minorities may relate to racial stereotypes and implicit biases. A stereotype can be defined as “a standardized or simplified image or conception, held in common about members of a group” (Dictionary.com Unabridged, 2017). Implicit biases are in turn related to unconscious generalizations or stereotypes about one’s group or another group that impact perception and behaviors (Seabrook & Wyatt-Nichol, 2016).

Avenues by which racial stereotypes and implicit biases are created and maintained have been an area of investigation in psychology, journalism, and sociology. Stereotypes held by individuals can impact a number of behaviors and decisions, including job interviews offered, how medical treatment is rendered, and the allocation of economic resources (Abraham & Appiah, 2006). Early stereotypes of Blacks included a focus on physical and anatomical differences they were presumed to possess compared to Whites, including a flat nose, abnormally long arms, big lips, thick skulls and thick skin. These physical characteristics were thought to result in Blacks being less sensitive to pain, Black women not experiencing pain during childbirth, and Blacks unable to think in abstract ways (Plous & Williams, 1995).

Over the decades common race-based stereotypes include African Americans portrayed as violent, criminal, indigent, and uneducated (Abraham & Appiah, 2006; Campbell, 1995; Hurwitz & Peffley, 2005; Plous and Williams 1995). Further, news media in particular implicitly link African Americans with negative themes and images, such as poverty, drug use, prisons, welfare, babies born addicted to substances, and HIV/AIDS (Abraham & Appiah, 2006). Blacks are stereotyped as living in resource poor, unpredictable environments, with lifestyles that include criminality, sexual promiscuity, seeking instant gratification, and impulsiveness (Williams, Sng, & Neuberg, 2015). Further, they are thought to be opportunistic, and display physical aggression or violence (Williams et al., 2015). Black women, who are considered double minorities based on race and gender, experience the most negative workplace experiences and discrimination (Berdhal & Probst 2004; Kulik, Roberson, & Perry, 2007; Nelson & Probst, 2004) and Black men experience worse outcomes than all other races in outcomes related to education, the labor market, and the criminal justice system (Crocker, Favreau, & Caulet, 2002; Sidanius & Veniegas, 2000).

Studying stereotypes within the criminal justice system, Levinson, Smith, and Young (2014) found that jury eligible individuals in six leading death penalty states held implicit racial stereotypes about Blacks and Whites. These stereotypes included that Blacks were worthless, lazy, aggressive, and less intelligent than Whites (Levinson et al., 2014; Sommers & Ellsworth, 2000). Regarding racial profiling, negative stereotypes of Black men held by law enforcement include that they are aggressive and dangerous (Seabrook & Wyatt-Nichol, 2016), giving way to phrases such as “driving while Black.” These stereotypes held by law enforcement appear to have infiltrated the criminal justice system as a whole, with Blacks receiving harsher sentences than Whites who perpetrate similar crimes (Klein, Petersilia, & Turner, 1990; Pettit & Western,

2004). These negative themes and images pertaining to Blacks are linked to growing concern that reoccurring patterns can activate stereotypical schemas and associations when evaluating certain social and political issues (Abraham & Appiah, 2006). For institutions such as the criminal justice system, the infiltration of stereotypical themes and images related to race, poses a great threat to fairness and objectivity in decision-making that can influence lifelong outcomes.

Stereotypes and Mental Illness

Just as individuals who are Black may face a variety of stereotypes based on race, so too may those diagnosed with a mental illness. The stereotypes of mental illness are largely misinformed, creating harmful misconceptions of individuals who suffer from them. Stereotypes of particular importance are not only that mentally ill individuals are thought of (and portrayed in media) negatively, but that they have a propensity to be unpredictable, and engage in criminal behavior and violence (Murphy, Fatoye, & Wibberley, 2012; Swantek, 2009).

For racial and ethnic minority individuals (who already often receive a biased portrayal in the media) struggling with mental illness presents a unique challenge to succeed amidst double discrimination (Swantek, 2008). Racial minorities are disproportionately affected by severe mental illness, as they generally are less likely to seek mental health services, have less access to services, and receive lower quality services. Discrimination, poverty, and the stigma of mental illness in minority communities are thought to contribute to the racial disparities that exist, for both Black and Hispanic individuals. When minorities do receive services, particularly for Blacks, racial disparities impact treatment, diagnoses, commitment, and prescription of medication (Eack & Newhill, 2012).

Racial minorities with mental illness are likely to be stigmatized more harshly than individuals of the racial majority (Corrigan, Edwards, Green, Diwan, & Penn, 2001).

Specifically, Blacks with severe mental illness are more likely to be diagnosed with a psychotic disorder such as schizophrenia; however there are almost no actual differences in prevalence rates of the disorder according to the literature (Eack & Newhill, 2012). Compared to their White counterparts, Blacks are less likely to be diagnosed with a mood disorder (i.e., depression) (Barnes, 2008; Snowden & Cheung, 1990; Strakowski, Shelton, & Kolbrener, 1993). Further, Blacks are more likely to be given injectable forms of medication, prescribed medication at higher doses, and in general are more likely to be prescribed medication overall (Citrome, Levine, & Allingham, 1996; Segal, Bola, & Watson, 1996). Blacks are also more likely to be committed for involuntary inpatient hospitalization than their White counterparts (Eack & Newhill, 2012; Rosenfield, 1984).

Black men and women diagnosed with a mental illness face unique challenges as individuals with double minority status. Stigma, diagnoses, medication regimens, access to services, and quality of services has differed based on race; and racial minorities are disproportionately affected by severe mental illness. As such, it is not surprising that the literature points to the fact that Blacks are more likely to be involuntarily committed for hospitalization than Whites. The presence of these stereotypes about Blacks, related to both mental illness and criminal behavior, lead to potential concerns as we consider how negative stereotypes may affect different areas of forensic evaluation and practice.

Bias in Forensic Evaluation

The literature previously reviewed paints a picture of systemic biases against racial minorities, particularly African Americans, within the mental health and criminal justice systems. Many of the biases identified within the mental health and criminal justice literature are also found in literature on forensic evaluation. Mental health professionals, such as clinical

psychologists and psychiatrists, act in forensic capacities by aiding the courts when psychological issues are relevant to a case (Neal, Hight, Howatt, & Hamanza, 2017). Relevant psychological issues include child custody hearings, psychological injury in a civil lawsuit, competency to stand trial, or insanity cases (Neal et al., 2017).

Implicit bias (bias outside of an individual's awareness) is a challenge facing the field of forensic evaluation as the way evaluators interpret, process, and make conclusions can have important consequences regarding the outcomes of legal matters (Neal & Grisso, 2014). Professionals use heuristics, or mental shortcuts used as "rules of thumb", when solutions aren't readily apparent to make decisions related to a forensic evaluation. It is hypothesized that because of the large (but very important) amount of work forensic evaluators are tasked to complete in a short period of time, individuals may use cognitive or social-cognitive shortcuts to analyze patterns and relationships in data (Neal & Grisso, 2014).

Types of heuristics thought to impact cognitive bias in forensic evaluation are the representative and availability heuristics, coined by Tversky and Kahneman (1973, 1974). The representative heuristic describes a shortcut used to determine the subjective probability of an event estimated by its similarity to a specific class of events (Neal & Grisso, 2014). The availability heuristic refers to the overestimation that an outcome will occur based on the recollection of other similar occurrences (Neal & Grisso, 2014). A well known example of bias in relation to forensics and the availability heuristic is confirmation bias. Confirmation bias occurs when an individual selectively gather evidence that will prove their given hypothesis while ignoring disconfirming evidence. Illustrating confirmation bias in a forensic setting, 120 licensed psychologists with a forensic interest were asked to read a clinical vignette and rank order a list of diagnostic hypotheses. Ninety-three percent of the forensic clinicians chose

confirmatory information (i.e., engaged in confirmation bias) and ignored information that would rule out certain diagnoses (Neal & Grisso, 2014).

The literature also tells us that forensic experts (typically psychologists or psychiatrists) are often influenced by the side who retains them in legal proceedings (Murrie, Boccaccini, Guarnera, & Rufino, 2013). This phenomenon is known as adversarial allegiance, or the degree to which experts tend to make conclusions in support of the side who retained them (Murrie et al., 2009). Adversarial allegiance is related to another form of cognitive bias known as self-serving bias. For example, forensic experts who were retained by the defense assigned lower risk scores to sexually violent predators, while experts retained by the prosecution assigned higher risk scores to the same offender (Murrie et al., 2009). Further, both psychologists and psychiatrists who believed they were retained by the prosecution assigned significantly higher risk scores to offenders than experts assigned to the defense (Murrie et al., 2013).

There are also social-cognitive biases that affect forensic evaluation. One area of bias is related to perception of oneself such as when forensic psychologists perceive themselves as less vulnerable to biases when compared to their peers (Neal & Brodsky, 2016). This phenomenon, the “bias blind spot”, is the tendency to recognize bias in others but not in oneself (Pronin, Lin, & Ross, 2002).

Stereotypes are also a form of social cognitive bias that impact decision making in a variety of contexts including clinical and legal decisions. Specifically implicit and explicit biases related to race are thought to influence decisions made in the criminal justice system. For example, judges in Connecticut set bail amounts for Black defendants that were 25% higher than for White defendants with a similar crime (Aryes & Waldfogel, 1994). Likewise, federal judges imposed sentences that were 12% longer for Black defendants than for White defendants with

similar crimes (Mustard, 2001). Also, Warren et al., 2006 found a small (but significant) racial difference between individuals in Virginia found incompetent to stand trial such that minority individuals were more likely to be found incompetent to stand trial than their White counterparts.

In order to better understand racial disparities in the justice system, Rachlinski, Johnson, Wistrich, and Guthrie (2009) investigated implicit and explicit racial biases in judges' decision making using the Race Implicit Association Test (IAT). In their responses to the Race IAT, White judges showed a significant preference for White faces than Black faces, evidenced by White judges pairing positive words with White faces and negative words with Black faces more quickly than they paired negative words with White faces and positive words with Black faces. Importantly, 44.2% of Black judges also showed preference for White faces. The authors suggest that Black judges have more diverse biases (potentially depending on the situation) than White judges. Further, White judges showed a strong preference for White faces 87.1% of the time. In comparing the judges to participants found on the internet (i.e., a community sample), White judges had significantly stronger White preference compared to the White community sample, whereas Black judges showed scores on the IAT similar to the Black community sample. These findings are important, as they potentially indicate the presence of racial biases in a population (i.e., judges) who have significant power over a system in which minorities, and Blacks in particular, are subject to unfair punishment.

A follow-up study using the Race IAT investigated whether racial biases impacted sentencing decisions. Judges were presented with case vignettes and primed with the race of the defendant. Judges who exhibited a White preference on the IAT were more likely to give harsher sentences to defendants if they were primed with words associated with Blacks. However, judges who exhibited a Black preference on the IAT were more likely to give a more lenient sentence to

defendants if they were primed with words associated with Blacks. Interestingly, when race was made explicit in a vignette given to judges, White judges were equally as likely to convict the defendant regardless of race, whereas Black judges were significantly more likely to convict a White defendant, than if the defendant was explicitly identified as White (Rachlinski et al., 2009). These findings suggest that judges carry implicit racial biases that impact their judgments in cases. As both judges and jurors have both been shown to have negative opinions of Black defendants (and these opinions impact sentencing decisions), these findings raise questions about the role implicit biases play within the criminal justice system (Rachlinski et al., 2009).

The results of the aforementioned studies are striking in that they point to the notion that although individuals make a professional and ethical commitment to view cases objectively, the influence of implicit and explicit biases may indeed override these standards. The prevalence of biases in forensic settings and forensic evaluation call into question the basis upon which risk factors can be objectively assigned to individuals attempting to use the Not Guilty by Reason of Insanity (NGRI) plea and those who are successfully adjudicated. These risk factors shape recommendations for individuals' treatment (i.e., whether they are committed for inpatient hospitalization, conditionally released, or unconditionally released), influence the course of treatment for said individuals (i.e., what activities and programming they will have to participate in if hospitalized or conditionally released), and may even influence the length of treatment (i.e., a greater number of, or particular, risk factors associated with longer hospitalizations). As such, they are extremely important and ideally should be used as objective markers of risky behavior.

There are 23 risk factors outlined and used by the Virginia Department of Behavioral Health and Developmental Services (DBHDS). These risk factors are not concretely defined, but rather described by empirical research examining the risk factor and its association with violence

or prediction of future violence. Though individuals completing forensic evaluations must be trained and approved by the state, there are no guidelines that outline the steps that must be taken when assigning risk factors. Thus, the weight, rank order, and number of risk factors assigned to a given NGRI acquittee are left to the subjectivity of clinicians (Virginia Department of Behavioral Health and Developmental Services [DBHDS], 2016) creating the opportunity and potential likelihood that cognitive and social-cognitive biases may affect clinicians' decision making. However, before one can understand the risk factors and their significance to the course of hospitalization for acquittees, we must first have an understanding of the NGRI adjudication process, risk assessment, and how the aforementioned risk factors are assigned.

The NGRI Adjudication: Past and Present

Not Guilty by Reason of Insanity (NGRI) is a plea in which an individual admits commission of a crime, but claims that she/he was mentally ill at the time of the offense, and as a result lacked the necessary mental capacity to commit the crime (US Legal, Inc., 2016). There are multiple variations of the insanity defense, with criteria differing based on the state in which the crime was committed. For example, the M'Naughten Test deems a person insane, "if as a result of mental disease or defect, the defendant was suffering from a defect in reason that caused them not to know the nature and quality of the act OR that the act was wrong" (DBHDS, 2016, p. 3). The Federal Test says an individual is insane if "as a result of severe mental disease or defect [the defendant] was unable to appreciate the nature and quality, or the wrongfulness of his acts at the time of the offense" (DBHDS, 2016, p. 3).

The American Law Institute Test states that a person is insane if, "at the time [of the offense] as a result of mental disease or defect he lacked substantial capacity either to appreciate the criminality/wrongfulness of his conduct or to conform his conduct to the requirements of the

law” (DBHDS, 2016, p. 3). The Irresistible Impulse Test deems a person insane if, “as a result of mental disease or defect, the defendant did not possess a will sufficient to restrain the impulse that may have arisen from the diseased mind” (DBHDS, 2016, p.3). It is clear that there are similarities, along with slight differences, that define insanity laws. The presence of severe mental illness is required in all cases; however subtle differences are made regarding what secondary criteria must be met for successful defendants (i.e., not understanding right from wrong, insufficient impulse control, inability to appreciate the criminality of the action, or a combination of these criteria).

Legal definitions of insanity are created based on historical court cases (case law) or directly defined through state code (DBHDS, 2016). In Virginia, the insanity defense has never been defined by statute (to date), but rather defined by case law. The historical court cases that were used to create Virginia’s insanity defense are *DeJarnette v. Commonwealth*, 75 Va. 867 (1881); *Price v. Commonwealth* 228 Va. 452, 323 S.E.2d 106 (1984); *Thompson v. Commonwealth* Va. 704, 70 S.E.2d 284 (1952) (DBHDS, 2016). By definition, a defendant is insane in Virginia if “as a result of mental disease or defect he/she: did not understand the nature, character, and consequence of his/her act, or, was unable to distinguish right from wrong, or, was driven by irresistible impulse to commit the act” (DBHDS, 2003, p. 1.3).

Per this definition, there are both volitional and cognitive components of the insanity defense in Virginia, however certain components are more concretely defined than others. For example, *mental disease or defect* is defined as “a disorder that substantially impairs the defendant’s capacity to understand or appreciate his conduct” (DBHDS, 2016, p. 4). However, *nature, character, and consequences of his/her act, unable to distinguish right from wrong, and irresistible impulse* are not directly defined in legal Virginia code. For example, regarding

nature, character, and consequences of his/her act, it is unclear whether a person must believe the act committed was legally justified, or whether believing the act was morally justified is sufficient. The lack of clarity in these definitions presents a potential problem regarding the finding of insanity. Bias can be introduced to decisions in insanity cases, as not all components of the defense are directly defined, and the amount of impairment necessary to adjudicate an individual based on an NGRI plea is left to subjective, social, and value based judgments (either by a jury or judge) (DBHDS, 2016).

In addition to problems with defining components of the NGRI defense, there are certain components to consider when conceptualizing the insanity defense. NGRI is a legal term, not a term created or used by psychology or psychiatry fields. Consequently, this term is used solely in a forensic context. Most rules and regulations related to insanity acquittees and their treatment must go through formal court approval including the important NGRI privileging process. Matriculation through this process is based in part by how assigned risk factors are being handled by acquittees.

Nationally, the use of the insanity defense is very rare, with the plea raised in only 1% of cases, and out of that 1%, it is only successful in cases 25% of the time. In Virginia, the average number of acquittals per year has been increasing. As of 2001 the number of new acquittees per year was 57, however in 2008 that number rose to 80, and in the 2015 there were 90 new acquittees, with 29.3% of these acquittees hospitalized at Eastern State Hospital (DBHDS, 2016). Regionally, Virginia's Eastern Region (i.e., cities such as Hampton, Newport News, Norfolk, Chesapeake, Portsmouth) currently have the highest percentage of new NGRI acquittals for 2003-2015 at 36.5%, followed by the Northern Virginia region (i.e. Ashburn, Alexandria, Fairfax, Manassas) at 16.9%, and the Northwestern Virginia region (i.e. Harrisonburg, Staunton,

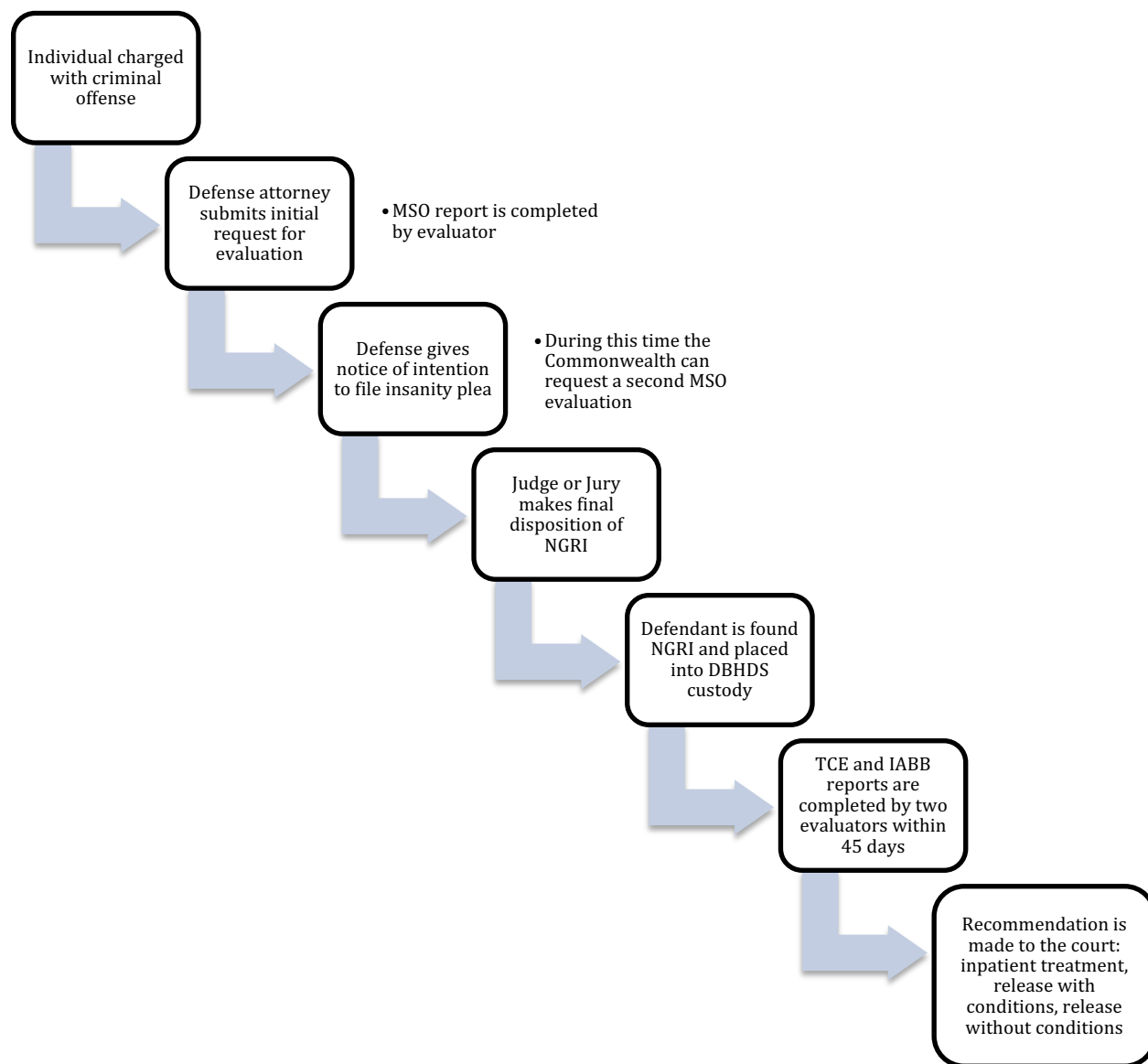
Clifton Forge, Waynesboro etc.) at 15.9%. Regarding type of crime (felony vs. misdemeanor), the majority of NGRI acquittals as of 2015 were felony related (93.3%) with only 6.7% involving misdemeanor crimes (DBHDS, 2016).

Forensic Assessment

There are several steps that occur before NGRI adjudication is granted in Virginia. Once the defendant has raised the insanity defense, the Commonwealth can request an evaluation of the individual's sanity at the time of the offense, determined by an evaluation known as the Mental Status at the Time of the Offense (MSO) report. Once an adjudication is granted by the courts, the Temporary Custody for evaluation period begins, in order to determine the course of treatment for the acquittee. This period is a 45-day window during which time a number of evaluations take place at a maximum security inpatient psychiatric facility. Of particular importance are the Temporary Custody Evaluation (TCE) and Initial Analysis of Aggressive Behavior (IAAB) report. The TCE consists of two separate reports (one by a licensed clinical psychologist and one by a psychiatrist) that make one of three potential recommendations to the court regarding the NGRI acquittee: Commitment for inpatient treatment, release into the community with conditions, or release into the community without conditions (DBHDS, 2016). The flow chart presented in Figure 1 illustrates the initial NGRI evaluation process.

The IAAB report is done in conjunction with the TCE to assess the acquittee's risk of aggression, and to develop means to address outlined risk factors. As such, the IAAB functions to outline data collected on past aggression or dangerous behavior, past psychiatric treatment, background and social history, and current functioning. The review of aggressive and dangerous

Figure 1

Initial NGRI Evaluation Process

behavior is comprehensive, and not simply limited to the NGRI offense. Data collected could include past or present psychiatric disorders, review of psychological assessment scores, or patterns related to aggressive episodes. Once data on each acquittee are collected, clinicians are tasked with determining how patient behavior may be related to future risk of violence. These findings are then used to create individualized risk factors (DBHDS, 2016). Risk factors are identified as characteristics that “relate to the increased risk of aggression toward self or others...each factor will be explained in a narrative and will have a description of strategies that will be used to manage that risk factor” (DBHDS,2016, p. 22).

NGRI Risk Assessment

Risk can be defined as the likelihood or probability that within a specific period of time an undesirable event will occur (Institute of Law, Psychiatry, and Public Policy, 2012a).

Clinicians involved in risk assessment are often tasked with estimating these probabilities for high stakes issues such as violence toward self or others. Risk assessment involves the estimation of the probability of a specified outcome based on relevant base rates (frequency of occurrence within a specific population) and individual risk factors that may influence a case (Institute of Law, Psychiatry, and Public Policy, 2012a).

The history of risk assessment dates back to 1970, during which time first generation research (research from 1970-1984) on risk assessment was conducted. The focus of early risk assessment was very concrete and based on a yes or no answer to the question of whether an individual posed risk for future dangerousness (i.e. is the individual dangerous? Yes or no). However, this approach posed a problem for clinicians, as similar to the term *insanity*, *dangerousness* is considered a legal rather than clinical term. As such, inaccuracy in the identification of future dangerousness was common, with clinicians being correct only 1 out of 3

times, causing psychology as a field to question whether clinicians should be involved in the prediction of violence at all. In *Barefoot v. Estelle (1983)* the Supreme Court ruled that negating clinicians' ability to predict violence would call into question all other contexts in which psychologists and mental health professionals attempt to predict human behavior. This ruling stated that mental health professionals were the individuals most capable of making such determinations, even though inaccurate predictions may occur (Institute of Law, Psychiatry, and Public Policy, 2012a).

Following the *Barefoot v. Estelle ruling*, flaws in the existing research were reviewed, particularly by Monahan (1984), after which there was a call for a second generation of risk assessment research. This research spanned from 1986 to 1995 and yielded a variety of important findings regarding violence and mental illness, as well as the prediction of violence. For example, Swanson (1994) determined that people with certain symptoms or disorders are more likely to be violent, and the focus shifted from dangerousness in general to specific types of risk factors and how they can help assess risk level. Further, Mossman (1994) conducted a meta-analysis of 58 articles and concluded that short-term predictions of risk were more accurate than long term predictions, history of violence was the best predictor of future violence, and that clinicians were no better at predicting violence than regular people who were simply informed of previous violent behaviors of an individual. The second-generation research opened the door for third generation research (1995-2001) that sought to improve the techniques currently used in risk assessment and focus on probabilistic rather than dichotomous (yes/no) questioning.

The identification of static, dynamic, and protective factors and their relation to violent behaviors were the focus in third generation risk assessment literature. Static factors are risk factors that cannot change (i.e., demographics such as age, race, gender etc.) whereas dynamic

risk factors can change or be altered by treatment (i.e., clinical factors such as substance use, psychopathy, and impaired insight etc.). Protective factors (i.e., social support, motivation for treatment, hobbies or leisure activities, etc.) are characteristics or factors that reduce the likelihood that violence will occur (Institute of Law, Psychiatry, and Public Policy, 2012a). Honing in on these risk and protective factors was mainly a result of the *MacArthur Violence Risk Assessment Study* (Monahan et al., 2001) examining 1136 inpatients from three facilities in Pennsylvania, Missouri, and Massachusetts. A total of 134 different risk factors were assessed over the course of a patient's hospitalization. The presence of violence and other aggressive acts committed by the patient in the community prior to and upon discharge, via patient interview, hospital records, and other collateral data were assessed. Results revealed that: [1] Spouses, romantic partners, or family members were the most common victims of violence; [2] The most common method of violence involved beating or hitting someone; [3] Alcohol use was frequently used in the commission of violent acts; [4] One-fourth of patients were not taking their prescribed medication at the time of the event; [5] Few violent incidents occurred when the patient was actively psychotic; and [6] Only a small number of incidents resulted in arrest or hospitalization (Institute of Law, Psychiatry, and Public Policy, 2012a).

The authors also found that when decisions were based exclusively on official reports only (i.e., police or hospital data), a meager 4.5% of the sample would have been predicted to be violent. However, when patient and collateral source information was added, 27.5% of the sample was predicted to be violent (with patients rather than collateral sources reporting incidents most of the time), indicating that the patients themselves were an important source of information related to future risk (Institute of Law, Psychiatry, and Public Policy, 2012). The MacArthur study identified important variables that could be related to the commission of a

criminal offense involving mentally ill persons and demonstrated the importance to using collateral sources of data (as well as patient interview) in order to determine which risk factors present the greatest likelihood of re-offense.

Taken together, the studies on predicting violence among those with mental illness, or comparing mentally ill offenders to the general population, suggest a variety of risk factors important in the prediction of violence. Literature to support the use of these risk factors to predict future violence will thus be discussed in order to understand the origin of the risk factors used in the state of Virginia for NGRI acquittees.

Characteristics of NGRI Acquittees

Individuals found Not Guilty by Reason of Insanity (NGRI) are a small subset (approximately 1%) of the general population (DBHDS, 2016; Rice & Harris, 1990; Villaverde, 1996). Although common characteristics of individuals who make successful insanity pleas have been identified, there is considerable variability regarding psychological, demographic, and criminal components that lead to a successful NGRI plea or adjudication (Roberts & Golding, 1991). In addition to reviewing characteristics associated with successful insanity pleas, the commonalities identified in the competency to stand trial (CST) literature will be examined, as CST evaluations are done in conjunction with insanity evaluations and individuals must be opined competent in order to be eligible for the NGRI defense.

Psychological characteristics. Psychiatric diagnosis is an important correlate of successful NGRI pleas. A diagnosis of psychosis at the time of the offense by experts has been associated with both successful NGRI pleas (i.e., proceeding with an NGRI trial), and successful adjudications (i.e., the defendant is successfully acquitted NGRI; (Roberts & Golding, 1991).

When comparing successful insanity acquittees to those who attempted to use the plea but were

unsuccessful, successful acquittees were more likely to have a psychotic disorder rather than a personality disorder (Rice & Harris, 1990). Similarly, in Virginia specifically, a diagnosis of a psychotic or organic brain disorder has been found to be associated with a successful insanity plea (Warren, Murrie, Chauhan, Dietz, & Morris, 2004). Schizophrenia has been identified in multiple studies as a commonality among insanity acquittees (Cochrane, Grisso, & Frederick, 2001; Packer, 1987; Steadman, Keitner, Braff, Arvanities, 1983). In the majority of these cases successful defendants are diagnosed as psychotic by multiple independent examiners (Roberts & Golding, 1991).

In addition to findings that a defendant with a psychotic disorder is most likely to be successful in obtaining NGRI adjudication, there is also evidence that symptoms of psychosis (i.e., delusions vs. a psychotic disorder) can influence insanity cases. For example, the presence of delusional thought content related to the crime committed influenced mock jurors' decision making in insanity cases (Roberts & Golding, 1991). In another study, half of mock jurors participating in the study reached an insanity verdict when delusions related to the crime were present, even when evidence pointed to the crime being planned (Roberts & Golding, 1991). However, in cases where planning was not involved and delusions related to the crime were present, almost all participants reached an insanity verdict (Roberts & Golding, 1991).

There are other characteristics related to psychiatric history and diagnosis that have been explored in the literature. Diagnoses of personality disorders and substance use disorders were most common in cases in which experts supported recommendations of the defendant's sanity (Warren et al., 2004). In chart reviews of 5,175 sanity evaluations done in the state of Virginia over a 10-year period, previous hospitalization, no diagnosis of a personality disorder, and no substance use at the time of the offense were related to successful insanity pleas. Diagnosis had

the most robust relationship with CST and MSO evaluations such that defendants with psychosis were most likely to be found competent and insane, consistent with previous NGRI research stating that individuals with psychotic disorders are most likely to successfully use the insanity defense (Warren et al., 2004).

Demographic characteristics. In addition to psychological characteristics, demographic characteristics are important to understanding NGRI adjudication. For example, insanity acquittees were older in age, described as more physically attractive, were less likely to be employed at the time of the offense, and more likely to have a college education (Rice & Harris, 1990). Findings regarding gender are mixed with some reporting that gender is unrelated to insanity decisions (Daniel et al., 1984; Steadman et al., 1983) whereas others suggest that men are more likely to be found insane in evaluations (Kois et al., 2017; Warren et al., 2004). This discrepancy related to gender may be in part due to the fact that men are being arrested at higher rates than women (Bureau of Justice Statistics, 2019) and are more frequently charged with violent offenses (Krakowski & Czobor, 2004), resulting in greater likelihood of requesting an insanity plea.

Though race is not a characteristic formally listed when considering demographic risk factors and NGRI adjudication, some literature points to its importance in determining outcomes related to insanity. For instance, Whites were more likely than minorities to be found insane at the time of the offense (Warren et al., 2004). Statistics from the Virginia Department of State Police in 2001, showed that there was not a large racial disparity in the number of arrests compared to referrals for insanity evaluation (42% of minorities versus 59% of White suspects arrested, compared to 43% of minorities versus 57% of Whites referred for evaluation) (Warren et al., 2004). However, there was a significant difference in outcomes of the evaluations, with

Whites more likely to be found insane, and minorities more likely to be charged with their allotted crime, suggesting that race is influential in the determination of sanity in Virginia (Warren et al., 2004). Although these results suggest a racial disparity with regard to determination of sanity, most other studies have not found racial differences in those deemed insane at the time of the offense (Kois et al., 2017, Steadman et al., 1983). These discrepancies may be related due to the sample of participants, as many of the aforementioned studies that found no racial differences related to insanity defense outcomes had more Caucasian than minority participants. Other methodological differences could be that studies that found no racial differences had a small variability in evaluators; that is the majority of evaluations analyzed were done by the same few evaluators.

Criminal offense characteristics. There has been contradictory evidence regarding seriousness of offense and successful insanity acquittals, with some research supporting a relationship between felony charges such as murder with successful acquittals (Rice & Harris, 1990), and others citing misdemeanors like trespassing associated with a successful acquittal (Warren, Fitch, Dietz, and Rosenfield, 1991). When characteristics of insanity acquittees were compared to individuals who had attempted an insanity plea but failed to be found NGRI among patients in a Canadian psychiatric facility, successful insanity acquittees were more likely to have serious criminal offenses (i.e. murder, attempted murder) and more witness testimony during trial.

In contrast, Warren et al. (1991) found that less serious crimes were more likely to be associated with legal insanity in Virginia. For example, 48% of eventual insanity acquittees were charged with public order and trespassing crimes, and 18% were charged with property crimes; whereas 9% were charged with sex crimes, and 8% were charged with murder. The authors point

out that many offenders in Virginia charged with less serious offenses often face more time as a result of NGRI adjudications (i.e., extensive or indefinite hospitalization) than they would in jail for their respective offenses. They also suggest that the relationship between type of charge and insanity findings may be related to the criminalization of those who are mentally ill, as these individuals frequently come in contact with law enforcement and are charged with minor offenses that often have major consequences (Warren et al., 1991).

Contradictory evidence related to type of crime and successful NGRI adjudication, may have a common link related to previous criminal behavior. A history of criminal behavior (violent or nonviolent) is associated with risk for future violence (Kay et al., 1988; Klassen & O'Connor, 1994; Mossman, 1994). We also know that major mental illness is associated with an increased risk of violence (Swanson, 1994). Taken together, regardless of the type of crime committed (felony or misdemeanor), an individual with an extensive criminal history may be likely to have some form of mental illness, and as such their defense may request a sanity evaluation to help their case, eventually leading to a successful adjudication.

History of criminal behavior. The association between previous criminal behavior and successful acquittals has also been discussed in the literature. There are some discrepant findings regarding whether a history of criminal behavior helps or hinders an insanity defense. For example, successful insanity acquittees had a less extensive criminal history, though they had more serious felony charges associated with the NGRI offense (i.e., murder) (Rice & Harris, 1990). Similarly, individuals in Virginia who did not have previous criminal history and were not under the influence of substances at the time of the offense were also often found competent and insane (Kois et al., 2017). In contrast, Warren et al. (2004) found individuals with previous criminal convictions, and who were not charged with a drug related offense, were more

successful at obtaining an insanity acquittal. Earlier research found that seriousness of offense was more important than diagnosis or response to treatment as it related to length of inpatient confinement once adjudicated.

These discrepancies related to type of offense and previous criminal behavior may be linked together by the concept of capacity to plan the alleged offense. Planning, and the capacity to plan, the crime in question have also been studied as factors indicative of a successful or unsuccessful NGRI plea. The prosecution for insanity cases commonly uses the capacity for planning as evidence of criminal responsibility on the part of a defendant (Rogers, Dolmetsch, & Cavanaugh 1981; Roberts & Golding, 1991). Even with no expert testimony (on the part of the prosecution) refuting claims by the defense that an individual is insane, if the actions of the defendant show a planned course of events, courts are typically unwilling to overturn a guilty verdict (Roberts & Golding, 1991). As such, regardless of what type of crime was committed, or the amount of previous criminal behavior and arrests, the ability to meaningfully engage in premeditation or planning before a crime, is related to unsuccessful NGRI cases.

Competency to stand trial. The determination of competency to stand trial (CST), is done in conjunction with determining mental status at the time of the offense (MSO). However, the opposite is not always case; that is individuals may be found incompetent and participate in an evaluation to be deemed “restored” to competency (DBHDS, 2016) without attempting to use an NGRI plea. Competency, as outlined by *Dusky v. United States*, 1960, is described as the defendant’s ability to work in tandem with their attorney to assist in their defense, and their ability to understand general legal proceedings and the charges against them (Kois et al., 2017). In studies of similarities and differences between CST and MSO defendants and outcomes related to their criminal charges, some characteristics remain the same in both cases. For

example, older defendants, those diagnosed with a psychotic disorder, and those with a history of psychiatric hospitalizations are more likely to be found insane and incompetent (Kois et al., 2017). In contrast, some characteristics of CST defendants and the outcomes of their criminal charges have been found that have not yet been seen in the MSO research. For example, women were more likely to be opined incompetent than men (Crocker et al., 2002) and minorities were more likely to be opined incompetent than Whites (Pirelli, Gottdiener, & Zapf, 2011).

Much of the research related to characteristics of defendants in both competency and sanity evaluations has been done in the state of Virginia, as the University of Virginia's Institute of Law, Psychiatry, and Public Policy is responsible for some of the nation's leading research related to forensic evaluation. The most recent study to date examining both demographic and clinical characteristics of pretrial defendants in a sample of 2,751 combined CST and MSO evaluations done in the state of Virginia from 1990-2005 (Kois et al., 2017). In this study, 10.5% of the sample was found competent-insane, compared to 80.8% of the sample found competent-sane, which speaks to the small likelihood of obtaining an NGRI adjudication. The mean age of defendants was 35.63 years, the majority were male (80.9%), White (66.4%), committed a violent offense (64.8%), and were diagnosed with a psychotic (25.6%) or affective (20.5%) disorder. The majority of defendants had prior criminal convictions (66.6%), previous psychiatric hospitalizations (60.2%), were not prescribed medication at the time of the offense (64.1%), and were not under the influence of a substance at the time of the offense (56.9%). Of the 2,751 defendants, only 286 (10.5%) were found competent-insane after the CST and MSO evaluations, which would qualify them for use of the NGRI defense (Kois et al., 2017).

Research regarding characteristics of insanity acquittees has yielded mixed findings over the last three decades. Successful insanity pleas and acquittals are consistently associated with

diagnoses of psychosis (particularly schizophrenia), previous psychiatric hospitalizations, and not being under the influence of substances at the time of the offense (Cochrane et al., 2001; Kois et al., 2017; Roberts & Golding, 1991; Villaverde, 1996; Warren et al., 1991, 2004). Results regarding demographic and clinical correlates of insanity have been inconsistent, however. Some research suggests that NGRI acquittees were more likely to commit serious, violent offenses (Rice & Harris 1990), whereas others found the individuals with less serious offenses were more likely to be deemed insane (Warren et al., 1991). The current study seeks to outline a clearer picture of characteristics of insanity acquittees, and determine potential associations between characteristics of the individual and variables that contribute to increased risk of future violence. This will be done by analyzing risk factors that assigned to acquittees by clinicians during the forensic evaluation process, while completing the initial analysis of aggressive behavior (IABB) report.

Risk Factors

Regarding individuals determined to be NGRI, the IAAB and identification of risk factors is of particular importance in that it is used to shape the remainder of the acquittees' course of treatment and involvement with the courts. The IAAB is used as a basis for: treatment interventions, privileging and placement considerations, recommendations for conditional release and unconditional release, and community aftercare services (DBHDS, 2016). Thus, the understanding of risk factors, and how they are assigned, is crucial to the potential success or failure of NGRI acquittees as they matriculate through the process of hospitalization and reintegration into the community. Information that should be included in every IAAB report according to DBHDS is as follows: (1) a psychological evaluation including data on acquittee history (past aggressive episodes, treatment history, social history, current functioning); (2) An

anamnesic approach to risk management and assessment using the integration of statistics and base rates for aggressive behaviors; (3) A focus on identification of relevant risk factors for future aggression and for making recommendations for risk management rather than to predict aggression (each risk factor should have a corresponding recommendation); (4) A focus on containment of future aggression as opposed to static predictions of dangerousness (DBHDS, 2016). A sample outline for creating IAAB reports from the DBHDS NGRI Reference Manual demonstrates the requirements for completing these reports (see Appendix A). The 23 risk factors used in Virginia were developed by the Virginia Department of Behavioral Health and Developmental Services and are used in all inpatient hospitals across the state (see Table 1). These were created based on four groups that provide the overarching themes associated with the majority of all risk factors: Demographic, Historical, Clinical, and Contextual. Though each factor in an IAAB report can be individualized to reflect specifics of a case, the standard name of the risk factor should be included or made known upon description of the factor. Each factor has outlined literature on how it is associated with an increased risk of violence. The majority of the literature that subsequently defines these factors comes from the consideration of empirically based literature on factors related to violence. However, it is important to note that clinical judgment and interpretation of a factor are present in the assignment, and rank ordering of risk factors (Institute of Law, Psychiatry, and Public Policy, 2012b). Table 1 illustrates the 23 risk factors broken down by theme.

Historical group. Historical factors are classified as important experiences or events that could influence current behavior (Institute of Law, Psychiatry, and Public Policy, 2012b). History of violent behavior is considered the most robust predictor of future violence in psychiatric, community, and criminal samples (Bonta, Law, & Hanson, 1998; Dack et al., 2013;

Kay, Wolkenfeld, & Murrill, 1988; Kivisto, 2015). Further a history of criminal behavior in general presents risk for future violence (Kay et al., 1988; Klassen & O'Connor, 1994; Mossman, 1994). Adults with a history of arrests as juveniles were almost six times more likely to commit an act of violence than adults with no history of criminal behavior (Elbogen & Johnson, 2009). Risk of violence in the community was lower in individuals who were treatment adherent and endorsed a positive perception related to treatment effectiveness (Elbogen, Van Dorn, Swanson, Swartz, & Monahan, 2006). Suicide attempts and completed suicides have also been associated with violence (Elbogen et al., 2006).

Clinical group. Risk factors in the clinical group are described as aspects of individuals' behavioral, emotional, or cognitive functioning (Institute of Law, Psychiatry, and Public Policy, 2012b). Major mental illness (also referred to as severe mental illness) is associated with violence, with individuals diagnosed with bipolar disorder, depression, or schizophrenia two to three times more likely to perpetrate violence than those without such diagnoses (Swanson, 1994). The risk of perpetrating violence is increased if the individual has antisocial personality disorder, or psychopathy (Fazel, Singh, Doll, & Grann, 2012). Individuals who meet criteria for psychopathy via the Hare Psychopathy Checklist- Revised (PCL-R; Hare, 2003) are more likely to engage in threatening, violent, or criminal behavior than those who do not meet criteria (Otto, 2000).

According to a meta-analysis by Douglas, Guy, and Hart (2009), psychosis is associated with a 49%-68% increase in the odds of violence. Further, individuals diagnosed with one or more personality disorders (regardless of the type) also have an increased risk of violence (Tardiff, Marzuk, Leon, Portera, & Wiener, 1997). Some literature points to the idea that

Table 1*Virginia Department of Health and Behavior Services Risk Factors*

Demographic Group	Historical Group	Clinical Group	Contextual Group
Age*	Aggression/Dangerousness to Others	Major Mental Illness	Escape
Gender*	Sexual Assault	Psychopathy	Weapons
Socioeconomic Status*	Arson	Dementia/Other Neurological Disorders	Victims
Marital Status*	Noncompliance with Treatment and/or Medication	Personality Traits	Family/Psychosocial Issues
	Non-Violent Criminal Behavior	Traumatic Head Injury	Employment/Daytime Activity Issues upon Conditional Release
	Suicide/Self Injury	Cognitive Impairment/Mental Retardation Substance Abuse	Failure on Previous Community Release
		Denial/Lack of Insight Threat Control/Override Symptoms Medical Issues	

Note. * All included under “Demographic/Static Factors” risk variable

substance abuse alone may be an even stronger predictor of violence risk than mental illness (Elobogen & Johnson, 2009); however co-morbid substance use and severe mental illness were associated with higher rates of violence than either substance use or mental illness alone (Swanson, 1990).

Individuals with lower intelligence or some form of neurological impairment engage in increased rates of violence compared to those without such impairments (Krakowski, 1997). Those who have insight into their need for treatment are at lower risk of violent behavior in the community (Elobogen et al., 2006). Anger and impulsivity (encompassed in the Threat Control/Override Factors) are also associated with violence risk in both clinical and non-clinical samples (Novaco, 1994). Craig (1982) cited agitation and anger as the most notable predictors of violence post discharge from an inpatient facility. Anger is also connected in the literature with impulsivity. Impulsivity is often considered as a symptom of diagnoses often linked to higher rates of violence (i.e. psychopathy, intermittent explosive disorder, substance abuse disorder) (Otto, 2000).

Contextual group. Contextual factors are situational variables or aspects of an individual's current environment that may influence behaviors (Institute of Law, Psychiatry, and Public Policy, 2012b). For individuals who have lower intellectual functioning or had chronic, severe mental illness, more contact with family or friends was associated with higher rates of violence; whereas family contact and social support served as a protective factor for individuals who were higher functioning with chronic severe mental illness (Swanson et al., 1998). Social support is also linked to stress, and the degree to which stress can impact risk. Stress, in a variety of forms, has been related to increased risk for violence (Borum, 1996; Monahan & Steadman, 1994). Such forms of stress can include unemployment, marital or family problems, health

issues, or housing (Otto, 2000). Further, a dysfunctional family background and inability to adjust in a work environment have been associated with increased risk of violence (Bonta et al., 1998).

Access to weapons has been indirectly linked to risk of violence perpetration, as individuals who have weapons readily accessible are thought to be more likely to use them when engaging in violence (thus making them at risk for more harmful forms of violent behavior) (Otto, 2000). More direct forms of evidence for this relationship comes from the domestic violence literature. Men who have access to a firearm and are abusive to their female partners are eight times more likely to kill them than men without access to firearms (Campbell et al., 2003). Also, those with access to firearms are more likely to engage in more severe forms of domestic abuse, compared to those who have non-firearm weapons, (Folkes, Hilton, & Harris, 2013).

Access to victims and victim specificity is also considered related to violence risk. Psychiatric inpatients that engaged in violence prior to hospitalization were found likely to attack the same victim upon discharge (Tardiff et al., 1997). As such, if violence is limited to one person (i.e. spouse, boss) versus a broad population (i.e. people who work for the IRS), victim availability should become a more significant concern (Otto, 2000). However, even individuals who perpetrate violence against a specific individual, often victimize different individuals later (Warren, Mullen, Thomas, Olgoff, & Burgess, 2008).

Demographic group. The Demographic group consists of one risk factor: Demographic/Static Factors, which serves as a label encompassing several common demographic variables such as age, gender, marital status and socioeconomic status. Demographic factors are considered static in this case as there is little (if anything) treatment interventions can do to change them (Otto, 2000). These characteristics include age, gender,

marital status, and socioeconomic status. Research points to men who are younger in age, of low socioeconomic status, and unmarried as being at higher risk related to aggressive behavior (Institute of Law, Psychiatry, and Public Policy, 2012b). Being male is associated with the perpetration of violence in the general population, however severe mental illness mitigates gender differences (Krakowski & Czobor, 2004). In 2013 the Federal Bureau of Investigation (FBI) reported that men are four times more likely to commit violent offenses than women (Kivisto, 2015).

The Macarthur Study (2001) found that men were more prone to violence immediately following discharge from an inpatient setting, however this gender difference was no longer significant after one year (Robbins, Monahan, & Silver, 2003). In an emergency room setting, however, women evaluated for psychiatric reasons had comparable or higher rates of violence than men (Lidz, Mulvey, & Gardener, 1993). In an inpatient sample, men were more likely than women to commit a violent act (i.e., acts that resulted in physical injury, sexual assault, or acts involving a weapon) within the first five months of discharge from the hospital, whereas women were more likely to commit aggressive (i.e. acts that did not involve physical injury). Further, targets of aggression and violence were more likely to be family members for women, and friends or strangers for men (Institute of Law, Psychiatry, and Public Policy, 2012b).

Individuals who are younger in age had higher rates of violence in multiple settings, including in acute psychiatric facilities (Dack, Ross, Papadopoulos, Stewart, & Bowers, 2013), amongst mentally ill offenders (Snowden, Gray, Taylor, & MacCollouch, 2007), and in the general population (Swanson, Holzer, Ganju, & Jono, 1990). Individuals younger than 43 years old were more five times more likely to commit an act of violence in three years post discharge from an inpatient setting than those over 43 years old (Elbogen & Johnson, 2009). Younger age

at the time of one's first offense has also been found to be a predictor of sexual violence and violence in general (Harris & Rice, 2007); and younger age at the time of first inpatient commitment is associated with violence recidivism (Cottle, Lee, & Heilbrun, 2001). Regarding marital status, Bonta, Law, and Hanson (1998) found that being single was significantly associated with the likelihood of being rearrested or engaging in violent and general criminal behavior.

Though race is not considered an actual factor under the Demographic group, it will be considered in this group for the purpose of the current study. Rates of violent behavior are differentially distributed by race, measured by incarceration rates, arrest rates, and self-report (Otto, 2000). For example, African Americans reported higher rates of participation in violent behavior, being arrested, and being incarcerated than their Caucasian counterparts; however, these differences disappeared when controlling for socioeconomic status (SES) (Swanson, 1994). Bonta et al. (1998) compared mentally disordered offenders to offenders with no mental illness and found a significant correlation between minority race and violence recidivism (i.e. reengaging in violent behavior post incarceration), with a mean effect size of .09, indicating some evidence for an association between violence and race. Though some evidence points to racial differences in violence risk, race is not included as an actual variable under the Demographic/Static Factor.

The Current Study

The 23 risk factors used by the state of Virginia cover a wide array of characteristics as clinicians attempt to identify and assess risk. However, one that is not listed, though may be unconsciously considered, is race and its potentially cascading impact on a number of associated characteristics that could influence an individual's presentation and how he or she is viewed by

those around them. Consciously race is not considered when assigning the Demographic/Static risk factor to an individual and there is no literature to date specifically associating race with an increased or decreased risk of violence. The literature on stereotyping, mental health treatment, mass incarceration, and racial profiling, however, point to the fact that systemic racial biases and stereotypes have infiltrated both the criminal justice and mental health systems in the United States. As such, it is important to consider how race may influence clinicians' assignments of individual risk factors to individuals who are acquitted NGRI.

The purpose of the study was to identify and quantify general demographic characteristics of NGRI acquittees in a Virginia state hospital, using archival data from Initial Analysis of Aggressive Behavior and Temporary Custody evaluation reports. These demographic characteristics included: age, gender, race, marital status, type of criminal offense, education level, and socioeconomic status. Based on the results related to general demographic characteristics of the patient population taken from the archival data, variables (i.e. age, race, criminal offense etc.) that are associated with the assignment of risk factors were identified. Specifically, the degree to which race accounts for a significant proportion of the variation in the assignment of risk factors, when accounting for salient demographic characteristics was assessed.

Hypotheses

H1: Blacks will be more likely to be diagnosed with a psychotic disorder than their White counterparts.

H2: Both race and psychotic symptoms will be associated with the number of assigned risk factors.

H2a: Blacks will have more assigned risk factors than Whites.

H2b: Individuals with psychotic symptoms will have more assigned risk factors than individuals who present with no psychotic symptoms.

H2c: Blacks who present with psychotic symptoms will have more assigned risk factors than Whites who present with psychotic symptoms, Blacks who present with non-psychotic symptoms, and Whites who present with non-psychotic symptoms.

H3: Demographic variables will be associated with the number of assigned risk factors.

H3a: Age will be inversely associated with the number of risk factors, such that those who are younger in age will have more assigned risk factors

H3b: Gender and race will be associated with assigned risk factors such that Black men will have more assigned risk factors than White men, Black women, and White women

H4: Type of criminal offense will be associated with the number of assigned risk factors and longer hospitalizations.

H4a: Individuals with a violent felony NGRI offense will have more assigned risk factors than those with a nonviolent felony or misdemeanor offense.

H4b: Individuals with a violent felony NGRI offense will have a longer hospitalization than those with a nonviolent felony or misdemeanor offense.

H5: The interaction of race and type of criminal offense will be associated with the number of assigned risk factors.

H5a: Blacks with a violent offense will have more assigned risk factors than Whites with a violent offense, Blacks with a nonviolent offense, and Whites with a nonviolent offense

H6: When all risk factors are considered, race will account for additional variation in the number of risk factors assigned after controlling for historical, clinical, contextual, and other demographic risk factors.

CHAPTER II

METHOD

Participants

Data for the study were gathered via chart review. This included archival data from active (i.e., currently hospitalized individuals) and closed (i.e., no longer hospitalized individuals) forensic charts from an inpatient psychiatric facility in the mid-Atlantic United States. The total number of charts reviewed was 380. As the majority of the hypotheses examined differences between Black and White participants, 14 individuals with racial identify classified as either Hispanic or Asian were excluded from the analyses. This exclusion resulted in a final sample size of 366. All participants were adults, over the age of 18, who were adjudicated NGRI in the state of Virginia, after being charged with a criminal offense. After being adjudicated NGRI, participants must have completed a forensic insanity evaluation process, which included TCE, and IAAB evaluations.

The resulting reports from these evaluations from 1982 to 2018 were reviewed for each participant. Exclusion criteria for the study included any individuals who had not been adjudicated NGRI within the inpatient hospital. Though the chart data were identifiable upon initial review, the resultant data file used in this study was de-identified. As a result, the researcher did not have access to the chart data or any identifiable information upon conclusion of data collection. Because of the explicit nature of information required for IAAB reports (see Appendix A), all demographic and risk factor information, including names of risk factors and their order, were recorded verbatim from the chart without subjectivity on the part of the researcher. The Old Dominion University Human Subjects Review Committee and the and

Institutional Review Board at the inpatient psychiatric hospital approved the study prior to data collection.

Power Analysis

In order to evaluate the minimum sample size needed for the study, power analyses were conducted using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). The literature does not provide examples specific to the hypotheses in this study that could serve as an estimate of effect size. However, Warren et al. (2004) examined many of the same variables related to determinations of sanity. Information from that study was used to generate estimates of effect size. Relevant effect sizes were typically in the small to medium range. As a result, an effect size of .2 was used for the power analyses for the chi square, analysis of variance (ANOVA), and multivariate analysis of variance (MANOVA) analyses.

Hypothesis 1 was tested using a chi square goodness of fit test. For chi square goodness of fit tests, a small effect size is .10, a medium effect size is .30, and a large effect size is .50, with an effect size index (ES index) represented by w (Cohen, 1992). To test Hypothesis 1, using a 2 x 2 contingency table with 1 degree of freedom, an α of .05, and a small to medium effect size of 0.2, a sample of 197 participants was needed to achieve a power of .8. A power analysis was also conducted for an ANOVA, as those analyses were used to test Hypotheses 2a-c, 3a-b, and 5. For ANOVA, a small effect size is .10, a medium effect size is .25, and a large effect size is .40, with an ES index represented by f (Cohen, 1992). To test Hypotheses 2a-c, 3a-b, and 6 with an α of .05, and a small to medium effect size of 0.2, a sample of 199 participants was needed to achieve a power of .8. For Hypothesis 3, a correlational analysis was conducted. For a correlation, a small effect size is .1, a medium effect size is .3, and a large effect size is .5, with an ES index represented by r (Cohen, 1992). For Hypothesis 3 with an α of .05, and a small to

medium effect size of 0.2, a sample of 150 participants was needed to achieve a power of .8 To test Hypothesis 4, a multivariate analysis of variance (MANOVA) was utilized. For a MANOVA, a small effect size is .02, a medium effect size is .15, and a large effect size is .35, with an ES index represented by f^2 (Cohen, 1992). For Hypothesis 4 with an α of .05, 3 groups, and a small to medium effect size of 0.10, a sample of 102 participants was needed to achieve a power of .8

For Hypothesis 6, hierarchical multiple regression was used to determine if race accounts for the majority of variation in the number of risk factors assigned when controlling for other salient demographic variables (age, gender, criminal offense, diagnosis); and whether race accounted for the majority of variance in length of hospitalization when controlling for the same salient demographic variables. For multiple regression, a small effect size is .02, a medium effect size is .15, and a large effect size is .35, with an ES index represented by f^2 (Cohen, 1992). To test Hypothesis 5, with an α of .05, 5 predictor variables (age, gender, criminal offense, diagnosis, race), and a medium effect size of .15 a sample of 92 participants was needed to achieve a power of .8. Based on the power analyses described above, a minimum of 303 forensic charts in the sample were required to ensure that all analyses were sufficiently powered.

Measures

The measure used for data collection was created specifically for the study. The measure, in the form of an excel spreadsheet, was used to collect data on demographics, clinical characteristics, offense characteristics, and risk factors (see Appendix B). As the forensic charts included archival data, all patient information entered in the spreadsheet was recorded verbatim, as described in the chart. The major characteristic data (including risk factors) that were gathered

from the chart review using the aforementioned spreadsheet measure are described in more detail below.

Demographic characteristics. The demographic characteristic data were collected: age (at the time of the offense), gender, race, education, and marital status.

Clinical characteristics. Diagnoses were recorded verbatim as listed in the IABB report. Though diagnosis may change through the course of inpatient hospitalization, the diagnosis listed in the IABB report was used to classify psychotic versus non-psychotic disorders as that is the diagnosis used in justification of the assignment of any risk factors related to mental illness (i.e. Major Mental Illness, Psychopathy, Personality Traits). These diagnoses were from the *Diagnostic and Statistical Manual of Mental Disorders* (4th and 5th eds.; American Psychiatric Association, 1994, 2013) classification system depending on the year the insanity evaluation was completed. Data were also recorded as to whether an acquittee had psychiatric hospitalizations or treatment prior to the commission of the NGRI offense. For purposes of data analyses individuals were classified into groups based on the presence of disorders with and without psychotic features. Additional clinical information was collected for descriptive purposes: education level, substance abuse history, trauma history, previous criminal history, and history of inpatient hospitalizations.

Offense characteristics. Data related to offense characteristics included information related to the NGRI offense only. Type of criminal offense was recorded verbatim and then classified as violent felony, non-violent felony or misdemeanor. Further data were collected regarding whether the offense was a felony or misdemeanor charge and whether the acquittee had a history of criminal behavior (i.e. arrests or convictions). Specifics on past criminal behavior was not recorded. If the acquittee was convicted of more than one NGRI offense, only

the most serious offense was recorded (first offense listed), as this is the offense clinicians would reference related to risk factors in the IABB report.

Risk factors. Risk factors were recorded verbatim from forensic charts. Further, each individual risk factor was recorded in the order documented via the IABB report, as the order of the risk factors is a representation of what the clinician deemed to be most important and influential in relation to success or failure upon conditional release from inpatient hospitalization. The risk factors were then summed, in order to determine the number of risk factors assigned to the individual acquittee.

Procedure

The study included all available archival forensic chart data located on site in the inpatient facility. Data were collected on site, in a locked office in which the forensic charts are housed. In order to identify potential clerical errors, data were entered in groups of 10 charts, and then reentered into a separate file. These two files were then compared in SPSS statistical software, to identify errors in data entry. If a discrepancy between the two files was identified, the original chart was again examined to verify the correct information. Number and type of error was recorded in a data error log. A total of 8 errors were found in SPSS after manual entry of the data by the researcher. These errors were recorded and then corrected in the excel file. Type of offense was coded using classifications from the Virginia Code on crimes considered to fall under broad categories of violent felony, non-violent felony, and misdemeanor offenses. All participant data were coded to keep acquittee identity anonymous, even though NGRI adjudication data are public record. The spreadsheet developed to collect and record participant data was locked using a password-protected file via Microsoft Excel and stored on a universal serial bus (USB) device.

CHAPTER III

RESULTS

Preliminary Analyses

Prior to conducting the main analyses, the data were examined for missingness, coding errors, outliers. There were no missing data. Outliers and normality were assessed for the continuous variables: Number of Risk Factors, Age, and Length of Hospitalization. Skewness and kurtosis were within normal limits for the Number of Risk factors and Age, with values of 1.5 to -1.5 for skewness and below 4 for kurtosis (Tabachnik & Fidell, 2013). There were no outliers for Age and Number of Risk factors. For the Length of Hospitalization variable, five extreme outliers were identified, and those values were windsorized. The resultant skew (1.89) and kurtosis (3.69) values were within acceptable limits.

Demographics

Three hundred and eighty charts of patients adjudicated NGRI were reviewed in an inpatient psychiatric hospital in southeastern Virginia for the purposes of the study. Adjudication year for charts ranged from 1982- 2018. Notably, as many of the hypotheses focused specifically at differences between Black and White individuals, 14 charts of individuals who identified as another race/ethnicity (i.e., Hispanic or Asian) were excluded resulting in a final sample of Black and White individuals. Demographic and descriptive information on this resultant sample is presented in Table 2. Individuals in the sample ranged in age from 18 to 73 years, $M= 37.18$, $SD= 12.58$, with a median age of 35 years. The majority of the sample was male, with over half of the sample identifying as Black or of African descent and more than a third identifying as White. Over 60% of the sample was single, and almost one-quarter had at least some high school

Table 2*Description of Final Sample (Black and White Participants Only)*

Variable	Black <i>n</i> (%)	White <i>n</i> (%)	Total <i>N</i> (%)
Race/Ethnicity			
Black/African Descent			224 (58.9)
White			142 (37.4)
Gender			
Male	172 (76.8)	107 (75.4)	279 (76.2)
Female	52 (23.2)	35 (24.6)	87 (23.8)
Classification of Mental Illness			
Psychotic	176 (78.6)	104 (73.2)	280 (76.5)
Non-psychotic	48 (21.4)	38 (26.8)	86 (23.5)
Education			
Elementary School	3 (1.3)	1 (0.7)	4 (1.1)
Middle School	17 (7.6)	7 (4.9)	24 (6.6)
Some High School	63 (28.1)	23 (16.2)	86 (23.5)
High School Diploma	38 (17.0)	28 (19.7)	66 (18.0)
Some College	45 (20.1)	38 (26.8)	83 (22.7)
Associates Degree	7 (3.1)	4 (2.8)	11 (3.0)
Bachelor's Degree	8 (3.6)	8 (5.6)	16 (4.4)
Master's Degree	1 (0.4)	1 (0.7)	2 (0.5)
Doctoral	1 (0.4)	1 (0.7)	2 (0.5)
Professional Vocational Degree	1 (0.4)	1 (0.7)	2 (0.5)
GED	40 (17.9)	30 (21.1)	70 (19.1)
Substance Abuse			
Yes	187 (83.5)	117 (82.4)	304 (83.1)
No	37 (16.5)	25 (17.6)	62 (16.9)
Trauma History			
Yes	86 (38.4)	63 (44.4)	149 (40.7)
No	138 (61.6)	79 (55.6)	217 (59.3)
Prior Criminal History			
Yes	200 (89.3)	110 (77.5)	310 (84.7)
No	24 (10.7)	32 (22.5)	56 (15.3)
Prior Inpatient Hospitalization			
Yes	211 (94.2)	138 (97.2)	349 (95.4)
No	13 (5.8)	4 (2.8)	17 (4.6)
Number of Risk Factors			
3	2 (0.9)	2 (1.4)	4 (1.1)

Table 2 continued

Variable	Black <i>n</i> (%)	White <i>n</i> (%)	Total <i>N</i> (%)
4	11 (4.9)	9 (6.3)	20 (5.5)
5	14 (6.3)	9 (6.3)	24 (6.3)
6	28 (12.5)	29 (20.4)	57 (15.6)
7	29 (12.9)	19 (13.4)	48 (13.1)
8	27 (12.1)	17 (12.0)	44 (12.0)
9	28 (12.5)	22 (15.5)	50 (13.7)
10	34 (15.2)	12 (8.5)	46 (12.6)
11	31 (13.8)	12 (8.5)	43 (11.7)
12	15 (6.7)	7 (4.9)	22 (6.0)
13	2 (0.9)	3 (2.1)	5 (1.4)
14	2 (0.9)	1 (0.7)	3 (0.8)
15	1 (0.4)	0 (0.0)	1 (0.3)

education or a college degree. Over 80% identified as having a substantial substance use history (i.e. substance abuse was included as a risk factor), 40% reported a trauma history (i.e. experiencing psychological, physical, or sexual abuse), and over 80% had been arrested prior to the commission of their NGRI offense. There was a large range of NGRI offenses that led to eventual adjudication, with the most common being malicious wounding, assault on a law enforcement officer, murder, and grand larceny. Related to diagnosis, over 75% of the sample were classified as having a psychotic disorder, (for example Schizoaffective Disorder, Bipolar Type, Schizophrenia, Paranoid Type etc.). Over 95% of the sample had at least one prior inpatient hospitalization before the commission of their NGRI offense.

Main Analyses

Race and diagnostic outcomes. For Hypothesis 1, a Chi Square test was used to examine the proportion of Black and White individuals with psychotic and non-psychotic disorders. Assumptions including adequate sample size and independence of observations were met (Tabachnik and Fidell, 2013). The results indicated that there was no significant difference in the proportion of Black versus White individuals diagnosed with a psychotic disorder, $\chi^2(1, N = 366) = 1.37, p = .24$. There were high rates of psychotic disorders in both racial groups; 79% and 73% for Blacks and Whites, respectively (see Table 3). For Hypothesis 2, a 2 (Race) x 2 (Psychotic Symptoms) ANOVA was used to examine associations between Race, Psychotic Symptoms, and Number of Risk Factors. Assumptions of independence, normality, and homogeneity of variance were met after review of scatterplots according to Tabachnik and Fidell (2013) guidelines. The ANOVA (see Table 4) revealed a significant main effect of Race on the number of risk factors assigned, $F(1,365) = 8.99, p < .01$, partial $\eta^2 = .024$, with Blacks having more risk factors assigned than Whites (see Table 5 for *Ms* and *SDs*)

Table 3*Frequencies for Diagnosis by Race*

	Diagnosis		Total
	Non-psychotic	Psychotic	
Black	48 (13.1%)	176 (48.6%)	224 (61.2%)
White	38 (10.4%)	104 (28.4%)	142 (38.8%)
Total	86 (23.5%)	280 (76.5%)	366

Note. Percentages reported in each cell are n for that cell out of the total N .

Table 4

Analysis of Variance Summary for Main Effects and Interaction of Race and Classification of Diagnosis on Number of Risk Factors Assigned

Variable	Type III Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Race	51.495	1	51.495	8.996	.003
Psychotic_Non	12.945	1	12.945	2.261	.134
Race*Psychotic_Non	22.315	1	22.315	3.898	.049

There was no main effect of psychotic symptoms on number of risk factors assigned, $F(1,365) = 2.26, p = .134$, partial $\eta^2 = .006$. but a significant interaction between Race and Psychotic Symptoms on Number of Risk Factors, $F(1,365) = 3.90, p < .05$, partial $\eta^2 = .011$. Simple effects analyses revealed for Blacks that the mean number of risk factors assigned was related to diagnosis $F(1,222) = 7.16, p = .008$, partial $\eta^2 = .031$. Specifically, Blacks with a non-psychotic disorder had more assigned risk factors than Blacks with psychotic disorders. The number of risk factors assigned for Whites did not differ as a function psychotic disorder, $F(1,140) = .095, p = .758$, partial $\eta^2 = .001$. Interestingly this interaction was not in the direction expected, as Black individuals with a diagnosis classified as non-psychotic (i.e. Depressive Disorder, Substance Use Disorder, Personality Disorder, etc.) had more assigned risk factors than those who had a diagnosis classified as psychotic (i.e. Schizophrenia, Schizoaffective Disorder, Bipolar Disorder with psychotic features, etc.)

Demographic variables and risk outcomes. Hypothesis 3 examined the potential associations among Age, Gender, Race and Number of Risk Factors. Hypothesis 3a was tested with a Pearson correlation, to determine if there was an association between Age and Number of Risk Factors. Assumptions for the correlational analysis were met after review of scatterplots and boxplots revealing linearity, normality, and no significant outliers. Hypothesis 3a was not supported with no significant association between Age and Number of Risk Factors, $r(366) = -.02, p > .05$. Hypothesis 3b was tested with a 2 (Gender) x 2 (Race) ANOVA on the Number of Risk Factors assigned see Table 6). Significant main effects of Gender $F(1,365) = 4.38, p < .05$, partial $\eta^2 = .012$, and Race $F(1,365) = 5.56, p < .05$, partial $\eta^2 = .015$ emerged. As noted, before, Blacks ($M = 8.43, SD = 2.46$) had more assigned risk factors than Whites ($M = 7.87, SD = 2.40$). Risk Factors assigned see Table 6). Significant main effects of Gender $F(1,365)$

Table 5*Number of Risk Factors Assigned for Race by Diagnosis*

	Non-psychotic		Psychotic		Total	
	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>
Black	9.25 (2.63)	48	8.21(2.32)	176	8.43 (2.42)	224
White	7.76 (2.38)	38	7.90 (2.41)	104	7.87 (2.40)	142
Total	8.59 (2.61)	86	8.10 (2.35)	280	8.21 (2.42)	366

Table 6

Analysis of Variance Summary for Main Effects and Interaction of Gender and Race on Number of Risk Factors Assigned

Variable	Type III Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Corrected Model	54.921	3	18.307	3.176	.024
Gender	25.238	1	25.238	4.379	.037
Race	32.017	1	32.017	5.555	.019
Gender*Race	5.407	1	5.407	.938	.333

= 4.38, $p < .05$, partial $\eta^2 = .012$, and Race $F(1,365) = 5.56$, $p < .05$, partial $\eta^2 = .015$ emerged. As noted, before, Blacks ($M = 8.43$, $SD = 2.46$) had more assigned risk factors than Whites ($M = 7.87$, $SD = 2.40$). Men ($M = 8.35$, $SD = 2.44$) had more assigned risk factors than women ($M = 7.77$, $SD = 2.31$). There was no significant interaction between Gender and Race on Number of Risk actors assigned, $F(1,365) = .94$, $p = .33$, partial $\eta^2 = .003$.

Felony offenses, misdemeanor offenses, risk factors, and length of hospitalization.

Hypothesis 4a, was tested with a one-way MANOVA to determine if individuals with a violent felony offense would have more assigned risk factors than individuals with a non-violent felony offense or misdemeanor offense. The dependent variables were Number of Risk Factors and Length of Hospitalization, with the grouping variable of Criminal Offense (violent felony, non-violent felony, misdemeanor). Individuals whose charts indicated that they were still currently hospitalized were not included in this analysis, resulting in $n = 242$ charts. Frequency and descriptive analyses revealed no significant univariate or multivariate outliers, and assumptions of normality, homogeneity of variance and covariance (assessed with the Levene's Test), linearity, and multicollinearity (assessed by the VIF value) were all met according to recommendations of Tabachnik and Fidell (2013). A Pearson correlation indicated a significant, but modest, negative association between Length of Hospitalization ($M = 5.02$ years, $SD = 4.65$) and Number of Risk Factors ($M = 8.21$, $SD = 2.42$), $r(242) = -.13$, $p < .05$. The multivariate F was significant, using Wilks' Lambda criterion as suggested by Tabachnik and Fidell (2013), $F(4,480) = 3.53$, $p < .05$, partial $\eta^2 = .03$ (see Table 7). Follow-up univariate F 's revealed no difference in the Number of Risk Factors as a function of offense type, $F(1,242) = .08$, $p = .92$, partial $\eta^2 = .001$ (Hypothesis 4a). However, length of hospitalization varied as a function of type

Table 7

Multivariate Analysis of Variance Summary for Type of Criminal Offense, Number of Risk Factors, and Length of Hospitalization

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	p
Crim_Offense	Length_Hosp	294.791	2	147.395	7.155	.001
	Num_RiskFactors	.975	2	.487	.082	.921

Note. N=242

of criminal offense, $F(1,242) = 7.155, p < .01$, partial $\eta^2 = .056$ (Hypothesis 4b). Post Hoc analyses Scheffe analyses indicated that the average length of stays in the hospital were that individuals who with both violent and non-violent felony offenses both had significantly longer hospitalizations than those with misdemeanor offenses (see Table 8).

Violent/nonviolent crime and race outcomes. For Hypothesis 5a, a 2 (Race) x 2 (Crime: Non-violent vs. Violent) ANOVA on Number of Risk Factors assigned to examine if Black individuals with a violent offense (regardless of classification as felony or misdemeanor) would have more risk factors than Blacks with a non-violent offense, Whites with a violent offense, and Whites with a non-violent offense. Assumptions of independence, normality, and homogeneity of variance were met after review of scatterplots based on Tabachnik and Fidell (2013) guidelines. The ANOVA revealed no significant interaction effect between Race and Nonviolent/Violent Crime on Number of Risk Factors assigned $F(1,365) = 2.430, p = .089$, partial $\eta^2 = .013$. Means and standard deviations are presented in Table 9.

Race, salient variables, and risk factors. Hypothesis 6 was tested with a hierarchical multiple regression analysis to determine whether salient demographic variables explained a significant amount of variance in the number of assigned risk factors. All assumptions of the regression model were met, including collinearity statistics, which were within acceptable limits. Assessments for linearity (assessed using scatterplots), multicollinearity (VIF value less 10), and homoscedasticity (assessed using scatterplots) were completed according to Tabachnik and Fidell (2013) guidelines. The following variables were entered into a hierarchical multiple regression: Age, Gender (male = 0, female =1), and Diagnosis (psychotic =0, non-psychotic=1) were entered in Block 1. Type of Criminal Offense was entered next, dummy coded such that violent felony offenses was the reference group and the two other groups (non-violent felony

Table 8*Means for Length of Hospitalization and Number of Risk Factors by Criminal Offense*

	Length of Hospitalization M (SD)	Number of Risk Factors M (SD)	<i>n</i>
Violent Felony	5.60 (4.74) _a	7.77 (2.47)	171
Non-violent Felony	4.70 (4.12) _a	7.90 (2.65)	42
Misdemeanor	2.27 (3.92) _b	7.90 (1.92)	31
Totals	5.02 (4.65)	7.81 (2.42)	244

Note. Different subscripts indicate significant mean differences, $p < .05$

Table 9

Means and Standard Deviations for Race and Criminal Offense Outcomes on Number of Risk Factors

	Violent Offense <i>M (SD)</i>	Non-Violent Offense <i>M (SD)</i>	Total
Black	8.40 (2.36)	8.54 (2.62)	8.43 (2.42)
White	7.59 (2.27)	8.81(2.59)	7.87 (2.40)
Total	8.09 (2.35)	8.64 (2.60)	8.21(2.42)

offense and misdemeanor) were entered in Block 2. Then, Race (Black=0, White=1) was entered on Block 3. Race was input last as the hypothesis sought to determine whether race accounted for additional variance in the assignment of risk factors above and beyond the other salient demographic variables. Correlations revealed that none of the independent variables were highly correlated with one another (see Table 10). The hierarchical regression results are presented in Table 11. At Block 1, Age, Gender, and Diagnosis did not result in a significant regression model $F(3,362) = 2.51, p = .06$, accounting for 2.0% of the variance in number of risk factors assigned. Introducing the Criminal Offense variable in Block 2 accounted for a total of 2.6% of the variance in number of risk factors assigned $F(3,362) = 1.92, p = .09$. Finally, introducing the Race variable in Block 3 resulted in a significant regression model $F(3,362) = 2.48, p = .023$ accounting for 4.0% of the variance in number of risk factors assigned. This change in R^2 was significant. The final model revealed that diagnosis and gender were important considerations in the assignment of risk factors, but most notable Race entered at Block 3 explained additional variance above and beyond the other demographic variables (see regression Table 11).

Table 10*Correlations for Variables in Hierarchical Regression Analysis*

	NOR	2	3	4	5	6
2. AGE ATO	-.024	-				
3. Gender	-.102*	.042	-			
4. Diagnosis	.087*	-.162*	.114*	-		
5. Non-Violent Criminal Offense	.082	-.011	-.063	.005	-	
6. Misdemeanor Offense	-.022	.060	.016	-.062	-.179**	-
7. Race	-.114*	.121**	.016	.061	-.036	.110*

Note. NOR = Number of Risk Factors

* $p < .05$; ** $p < .01$

Table 11*Hierarchical Regression Analysis of Predictors of Number of Risk Factors Assigned*

Step and Predictor Variables	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²	ΔR^2
Step 1				.020	.012
Age OTO	-.001	.010			
Gender	-.645	.298			
Diagnosis	.568	.303			
Step 2				.026	.012
Age OTO	.000	.010			
Gender	-.618	.299			
Diagnosis	.563	.303			
Nonviolent F	.459	.324			
Misdemeanor	-.002	.398			
Step 3				.040	.024*
Age OTO	.003	.010			
Gender	-.619	.297*			
Diagnosis	.624	.303*			
Non-Violent F	.447	.322			
Misdemeanor	.092	.398			
Race	-.593	.261*			

* $p < .05$

CHAPTER IV

DISCUSSION

The study identified and quantified general demographic characteristics of NGRI acquttees in a Virginia state hospital, with specific focus on race related differences between Black and White acquttees as it relates to the assignment of risk factors found in Initial Analysis of Aggressive Behavior (IAAB) reports and Temporary Custody evaluations (TCE). General demographic information related to age, gender, race, socioeconomic status, marital status, and education was collected. Additional information potentially important to understanding NGRI populations specifically was also collected including diagnosis, trauma history, substance use history, criminal offense history, type of NGRI offense, prior hospitalizations, year hospitalized, year conditionally released, number of risk factors assigned, and name and order of risk factors identified.

Descriptive Characteristics of NGRI Acquttees

Schizophrenia was the most common diagnosis of participants which coincides with literature from multiple studies that identified Schizophrenia as a commonality among NGRI acquttees (Cochrane et al., 2001; Packer, 1987; Rice & Harris, 1990; Roberts & Golding, 1991; Steadman et al., 1983). It is possible that related to forensic evaluation, it is not so much the label of the diagnosis that is important but how symptoms manifest and impact risk. Regardless of race, the presence of a psychotic disorder such as Schizophrenia and how symptoms may impact an individual's perception (i.e., inability to determine right from wrong per Virginia Code), may make it more likely for them to meet criteria for NGRI adjudication. This may explain why the current sample was compromised mainly of individuals with Schizophrenia and other psychotic disorders.

The majority of the sample was male, single, had a criminal history prior to commission of their NGRI offense, had prior inpatient hospitalizations, and had substantial substance use history. These findings are consistent with much of the extant literature that indicates that men are more likely to be found insane in evaluations (Kois et al., 2017, Warren et al., 2004), and that men are four times more likely to commit violent offenses than women (Kivisto, 2015). Further, being an unmarried male (Institute of Law, Psychiatry, and Public Policy, 2012b), and having a history of criminal behavior in general (Kay et al., 1988; Mossman, 1994; Klassen & O'Connor, 1994) presents risk for future violence. Lastly, successful insanity pleas and acquittals are consistently associated with previous psychiatric hospitalizations (Cochrane et al., 2001; Kois et al., 2017; Roberts & Golding, 1991; Villaverde, 1996; Warren et al., 1991, 2004), and some literature points to the idea that substance abuse alone may be an even stronger predictor of violence risk than mental illness (Elobogen & Johnson, 2009).

It was hypothesized that Blacks would be more likely to receive a psychotic disorder diagnosis compared to Whites. In the current study no significant difference, however, was found in the proportion of Black and White participants diagnosed with a psychotic disorder; both groups had high rates of psychotic disorders (79% vs 73% respectively). This finding conflicts with some of the stereotyping literature, which cites Black as being more likely to be diagnosed with a psychotic disorder than their White counterparts, but supports the notion that there is indeed no meaningful difference related to prevalence rates of these disorders between racial groups (Eack & Newill, 2012). It may be that the clinical approach to risk management is different than the forensic/legal approach to risk management. Clinical diagnostic decisions are made in the context of a structured classification system in which certain criteria must be met to receive a specific diagnosis. In forensic decision making, however, additional information

beyond diagnostic criteria must be considered such as whether the psychiatric symptoms impacted the commission of a crime, and the level of risk the person is to the community without treatment. The absence of a particular structure for the forensic decision may result in a more subjective and fluid process. Differences in clinical and forensic decision-making processes should be explored further in future research.

Correlates of Assignment of Risk Factors

Race and diagnosis. It was predicted that both Race and a Psychotic Diagnosis would be associated with the Number of Risk Factors assigned. Our hypothesis was partially supported, as Blacks were assigned more risk factors than Whites. Contrary to expectations however, a psychotic disorder diagnosis was not associated with the number of risk factors assigned. Further, it was expected that Black individuals with a psychotic diagnosis would be assigned the most risk factors. Though this interaction was significant, it was in an unexpected direction. According to simple effects analysis Blacks with non-psychotic disorders had more assigned risk factors than Blacks with a non-psychotic disorder. Both of the aforementioned findings may be explained by the lack of consideration of comorbid disorders in the analyses. Specifically, comorbid substance use or personality disorder that were not primary diagnoses may have contributed to additional risk factors being assigned upon evaluation.

In previous research, co-morbid substance use and severe mental illness were associated with higher rates of violence than either substance use or mental illness alone (Swanson, 1990), and individuals diagnosed with one or more personality disorders (regardless of the type) also have an increased risk of violence (Tardiff et al., 1997). These personality or substance use concerns may have created multiple other problem areas for these individuals related to risk (i.e. lack of employment, lack of social support, psychosocial and family issues, psychopathy,

noncompliance with treatment, etc.) that are each additional factors to potentially be added into an IAAB report. The psychosocial issues that accompany the presence of substance use or personality disorders may further account for the additional risk factors for Blacks with nonpsychotic disorders.

Age. It was hypothesized that age would be inversely associated with the number of assigned risk factors, such that those who were younger in age would have more assigned risk factors. There was no significant correlation found between age and number of risk factors assigned, however. Previous research has suggested that younger individuals had higher rates of violence in multiple settings, including in acute psychiatric facilities (Dack et al., 2013); and being young and male have repeatedly been considered as static risk factors associated with violence in persons with mental illness (Varshney et al., 2016). Related to our sample, it may be that the Demographic risk factor was automatically assigned to individuals who are younger in age and male at the time of their NGRI offense; whereas older individuals may have the risk factors that could be considered under demographics assigned individually (i.e. employment issues, lack of social support (not married)).

Gender. It was also hypothesized that gender would be associated with assigned risk factors, such that men would have more risk factors than women. Also, an interaction of race and gender was expected such that Black men would have more assigned risk factors than White men, and Black and White women. As expected, men had more assigned risk factors than women. When considering risk, these results are consistent with previous research in which being male was associated with the perpetration of violence in the general population (Krakowski & Czobor, 2004). Also, men are four times more likely to be arrested for violent offenses than women (Kivisto, 2015). Men across age groups are also more likely to use illicit

substances and alcohol than women (National Institute on Drug Abuse, 2018), have higher rates of traumatic brain injury than women (Munivenkatappa et al., 2016), are more likely to be unemployed (Albanesi & Sahin, 2018), and are more likely to be diagnosed with psychopathy than women (Wynn, Hoiseth, and Petterson, 2012). The current finding that men are assigned more risk factors by clinicians is consistent with a large body of previous literature demonstrating substantial risk, across a variety of domains for men compared to women.

Counter to expectations, there was no significant interaction between race and gender on number of risk factors assigned. Assignment of risk factors was related to both race and gender, but not concurrently. It is possible that there are unforeseen variables that are not being accounted for in this model, and that race may be serving in this case as a proxy to another potential moderating variable. More research is needed to better understand these phenomena and what other moderating variables may be impacting the model (i.e. related to diagnosis of personality/substance use disorder, criminal history, psychosocial history, treatment compliance etc.). The presence of moderating variables may better explain why there was no significant interaction between gender and race on number of risk factors.

Criminal Offense Outcomes

There have been discrepant findings in previous research related to whether or not previous criminal convictions help or hinder an insanity defense. Related to general demographic findings, the majority of our sample (83.4%), had a criminal history before adjudication, indicating that they had been charged, even if not convicted, with a criminal offense at some point before their NGRI offense was committed. These findings lend support to previous literature that indicates prior criminal convictions are related to success in obtaining an insanity acquittal (Warren et al., 2004). Regarding the NGRI adjudication offense, it was predicted that

individuals with a violent felony NGRI offense would have more assigned risk factors than those with a nonviolent felony or misdemeanor offense. It was also predicted that individuals with a violent felony NGRI offense would have a longer hospitalization than those with a nonviolent felony or misdemeanor offense.

Felony versus misdemeanor crime. Counter to expectations, type of offense (violent felony, nonviolent felony, or misdemeanor) was unrelated to Number of Risk Factors assigned. Perhaps examiners may be privileging mental health over criminal behavior as in order to be eligible for an NGRI adjudication one must be diagnosed with a mental illness that hinders their ability in some form (i.e. to understand right from wrong, understand the nature or consequence of their actions). Treatment of mental health concerns may then alleviate a large portion of risk for commission of crime in future. Consistent with the notion of privileging mental health, “severe mental illness” was most commonly listed as individual’s number one risk factor regardless of whether the disorder was psychotic or non-psychotic in nature. Taken together, these results support the theory that the NGRI process was put in place in order to avoid unethically punishing the mentally ill (DBHDS, 2016).

Interestingly, type of offense (violent felony, nonviolent felony, or misdemeanor) was related to length of hospitalization such that individuals with a violent felony offense or a nonviolent felony offense had longer courses of hospitalization than individuals with misdemeanor offenses. Per Virginia Code, misdemeanant NGRIs can only be hospitalized for 12 months before a recommendation must be made for civil commitment or conditional release (DBHDS, 2016). Thus, somewhat by default, misdemeanants should have a shorter course of hospitalization compared to those with a felony offense per Virginia Code. Individuals with felony crimes (which by law carry would longer jail or prison sentences than misdemeanor

violent or non-violent crimes) may be viewed by the criminal justice system as needing more treatment in a controlled setting to assure risk to the community has been remediated than those with non-violent felony crimes.

Violent versus nonviolent crime. It was predicted that race and type of violent/nonviolent crime would be associated with the number of assigned risk factors, such that Blacks with a violent offense would have more assigned risk factors than Whites with a violent offense, Blacks with a nonviolent offense, and Whites with a nonviolent offense. Though there was a significant main effect related to violent/non-violent crime, it was contrary to what was predicted, as individuals with a non-violent offense (regardless of classification as felony or misdemeanor) had more assigned risk factors than individuals with a violent offense. Literature suggests that violent behavior is considered the most robust predictor of future violence in psychiatric, community, and criminal samples (Bonta, Law, & Hanson, 1998; Dack et al., 2013; Kivisto, 2015; Kay, Wolkenfeld, & Murrill, 1988). However, Warren et al. (1991) point out that many offenders in Virginia charged with less serious offenses often face more time as a result of NGRI adjudications (i.e., extensive or indefinite hospitalization) than they would in jail for their respective offenses (potentially influenced by stability of illness, which influences insight and judgment and also been connected to an increased risk of violence (Swartz et al., 1998)). This supports the idea that the mentally ill are criminalized in the state due to multiple encounters with the criminal justice and mental health systems. Since judges ultimately make the decision whether or not conditional release is approved, it should be considered that type of crime committed (in this case violent crime) could influence perception on how long an individual should remain hospitalized. In particular, if a case is high profile or a capital case, judges may be influenced by community perception as it relates to outcomes (i.e. push for harsher punishment).

Therefore it may take individuals with violent felony crimes more time to matriculate through the NGRI privilege levels, increasing their time spent hospitalized, regardless of how many risk factors they have been assigned.

Race and Potential Implicit Biases in Forensic Decision Making

It was predicted that race, above and beyond the demographic variables of age, gender, diagnosis, and criminal offense would explain a significant amount of the variance in the assignment of risk factors. All of these variables together accounted for 4% of variance in assignment of risk factors. As predicted, race accounted for an additional 2.4% of the variance in the number of risk factors assigned above and beyond these demographic variables. As these demographic variables accounted for a relatively small amount of the variance in the assignment of risk factors overall (4%) it is important to consider that other clinical, demographic, and environmental characteristics are likely important to the assignment of risk factors. Such characteristics could include family history of mental illness, socioeconomic status, previous suicide attempts, whether or not the individual is generally treatment or medication adherent, or homelessness. Future research that examines additional contributors to the assignment of risk factors is warranted.

The additional variance accounted for by race in the assignment of risk factors, though small, suggests that racial biases may infiltrate the forensic evaluation process and impact the subjectivity of clinician ratings. Previous literature suggests that racial minorities with mental illness are likely to be stigmatized more harshly than individuals of the racial majority (Corrigan et al., 2001; Eack & Newhill, 2012; Rosenfield, 1984). The results of the current study lend themselves in support of previous stereotyping literature related to racial minorities and mental

illness, suggesting that simply being a Black person could potentially increase the likelihood of being assigned more risk factors than White counterparts.

The NGRI privileging process attempts to balance two uniquely different systems of criminal justice and mental health. The literature on racial biases and discriminatory practices within the criminal justice system is extensive, and the basis of risk assessment and forensic evaluation for NGRI's comes as an extension of the research around violence recidivism (also a product of the criminal justice system and literature related to it). The criminalization of Black persons, combined with the criminalization of the mentally ill, may unconsciously influence decisions made related to risk assessment for NGRI acquirtees of color; and as such the importance of race as it relates to assignment of risk factors cannot be overlooked. Examples of racial bias infiltrating varied situations and tasks is clear, and points toward the influence of abstract instances even when unintentional. For example, literature indicates that the concept of perceptual illusions impact how Whites view Blacks through varied situations or tasks. Black faces are sometimes perceived as angrier than White faces (even with the same expression), abstract images and words paired with Black faces are thought to be bad more often than when paired with White faces, and harmless objects in the hands of Black men are more often thought to be weapons than in the hands of White men (Payne, Niemi, Doris, 2018).

The forensic evaluation literature continues to stress the necessity of objectivity, though it acknowledges that subjectivity continues to infiltrate the process. The results of the current study suggest the same, indicating that even when accounting for major demographic and dynamic variables, race may still influence clinicians' decisions to assign risk factors. Black individuals receiving more risk factors than their White counterparts may be indicative of underlying implicit or explicit biases related to race, which is concerning as it relates to forensic evaluation.

Particularly, even though clinicians may want to, or think they, are objective as it relates to risk factor assignment, implicit associations made based on race may unconsciously impact not only the assignment of risk factors themselves, but the subsequent recommendations made on how the risk factor should be remediated.

The results of the current study also create concern as the literature acknowledges that implicit biases create overgeneralizations about a group and can lead to discrimination even when people believe they are displaying fairness (Payne et al., 2018). As such it may be that simply based on race, stereotyped generalizations and assumptions may be applied to Black individuals with uniquely different presentations, diagnoses, and risk levels, impacting the assignment of risk factors. Assumptions or generalizations based on race may result in unfair and unethical treatment of Black NGRI if they are assigned risk factors that are inappropriate for their given presentation. Results of the current study indicate that the objectivity in completing the initial analysis of aggressive behavior evaluation could be compromised in some situations based on biases, explicit or implicit, about race and what race means about Black NGRI acquttees. Further, forensic evaluators may implicitly or explicitly utilize race as the basis for decisions made related to risk and assignment of risk factors rather than factors such as symptom presentation and diagnosis, criminal behavior, or other psychosocial and environmental factors. It should be considered that this could be indicative of pervasive, systemic, discriminatory practices based on race within the specific inpatient hospital setting itself, as well as the larger mental health system of Virginia and processes such as forensic assessment within said system.

Strengths of the Study

This is the first study to address the associations between the 23 risk factors used in Virginia NGRI risk assessment and demographic variables related to NGRI populations. This

study provides support for the change made by the state of Virginia related to risk assessment procedure in late fall of 2018. The change includes transitioning from the use of the HCR-20V3 and the subjective assignment of the 23 risk factors discussed in this study, to the use of the HCR-20V3 only. The results point to the influence of subjective clinical judgment as well as possible implicit racial biases on the number of risk factors assigned to NGRI acquittees and highlights the need for actuarial assessment as it relates to risk. Further, results highlight the potential necessity for taking a hard look at the mental health system as a whole, including at the individual inpatient hospital level, and identifying areas that systemic racism or discrimination based on race may be negatively contributing to outcomes for Black individuals and other patients of color.

The study results further add to the literature on NGRI acquittees as a unique clinical population, which does not have a dearth of research behind it as do other inpatient populations. By examining the demographic differences of this population, clinicians and providers can continue to parse out the unique aspects of NGRI populations, which could positively impact approaches to treatment. Further, using the results to think more critically about specific barriers to treatment based on common characteristics of this population may be helpful to improving acquittees success upon conditional release.

Limitations of the Study

In addition to strengths of the study, there are limitations that must be considered. The study utilized a convenience sample of NGRI's from one state hospital in Virginia. Only participants' primary diagnosis was listed, which did not account for comorbidities and how that may be associated with symptom presentation or assignment of certain risk factors. The majority of the sample had prior inpatient hospitalizations, and thus had patient records which examiners

could review prior to completion of IAAB and Temporary Custody reports. Though these prior hospitalizations were recorded, there was no way to accurately determine how prior record review and information about participant history could influence examiners assignment of risk factors during the evaluation period. Only participants' most recent NGRI adjudication was documented, so individuals who had a previous NGRI adjudication and subsequent revocation may have had additional risk factors added or carried over; however, there was no way to accurately determine which if any were listed only because of revocation. Similarly, only the first NGRI offense was listed (the most serious).

The generalizability of these results to other NGRI populations must be done with caution, as this sample was a small subset of individuals, solely based in the state of Virginia, and the analyses were done with Black and White participants only. Further, the assignment of the 23 risk factors previously used in IAAB and Temporary Custody evaluations are only applicable to risk assessment in the state of Virginia. Finally, this sample was relatively homogeneous in that all had a diagnosis of severe mental illness, with the majority with psychotic disorders and/or substance use), resulting in a restricted range on variables of interest that may have impacted the results. Time is also a limitation of the study, as there have been substantial changes to various aspects of mental health treatment and guidelines, such as diagnostic criteria (different versions of the Diagnostic and Statistical Manual) and personnel changes (requirements to be able to complete forensic evaluations in the state). Furthermore, given the wide range of dates of initial NGRI adjudication, attitudes and beliefs related to both mental illness and race should be considered. Issues of civil rights, deinstitutionalization, criminality, and progress in understanding mental illness as a whole has shifted and changed

between the early 1980's and 2018. As a result, we should consider how the cultural climate of the greater nation may have had influence on evaluator understanding and underlying biases.

Future Directions

Clinical implications. The subjectivity in the assignment of risk factors in Temporary Custody and IAAB reports cannot be ignored as it relates to risk assessment for NGRI populations in Virginia. Results of the present study suggest that implicit biases based on gender, diagnosis, type of offense committed, and race all may potentially impact the assignment of risk factors in IAAB and Temporary Custody evaluations. Given what we know about psychological assessment in general (i.e., the importance of reliability, validity, normative samples, and standardization of procedures etc.), work toward developing a standardized process of risk assessment appears necessary. Importantly, the commonwealth of Virginia recognized the importance of standardization resulting in changes to risk assessment in the temporary custody phase of evaluation. As of late fall 2018 (post completion of data collection), DBHDS began utilizing only the HCR-20V3 as the method of risk assessment in IAAB and Temporary Custody evaluations, removing the 23 risk factors from the process completely. This change was in response to acknowledgment of subjectivity and the dependency on clinical judgment needed to use the 23 risk factors described in this study. The use of the HCR- 20V3 allows for more actuarial assessment of violence risk and management, with a multitude of empirical evaluations and data sets testing its utility. Though many variations of the 23 risk factors can be found within the HCR-20V3, the difference is in the provision of guidelines for how to evaluate the relevance of these risk factors, and how to make meaning of them related to current and future violence risk and recommendations for treatment (Guy et al., 2013). However, though a step in the right direction, the HCR-20V3 is not free from the subjectivity of clinician ratings. Data has shown

evidence of its ability to estimate levels of risk, but less research has shown its ability to accurately manage or reduce risk as a result (Shepard & Sullivan, 2006), which is the ultimate goal of the NGRI privileging process.

Forensic assessment implications. The mass incarceration literature points toward biases, stereotyping, prejudices, and racism as having created a broken criminal justice system in which even core policies contribute to the incarceration of Black and Brown persons at higher rates than their majority counterparts. Literature dating back to the creation of the Constitution indicates that there have been differences in sentencing practices based on race, with Black individuals in particular being sentenced more harshly than their White counterparts for similar crimes (Levinson et al., 2014). Black males in particular are also being incarcerated at six times the rate of White males nationally as of the end of 2017 (Bureau of Justice Statistics, 2019). The literature cited that even judges are not immune to the infiltration of implicit biases in sentencing practices (Rachlinski et al., 2009). Individuals involved in forensic evaluation, particularly forensic psychologists, think of themselves as less vulnerable to biases than their peers even though this is unrealistic (i.e. the bias bling spot) (Neal & Brodsky, 2016; Pronin et al., 2002). The current study suggests that these biases also exist within smaller systems, in this case an inpatient mental health system, where identifying as Black added more predictive power than diagnosis or criminal offense committed. These are two factors that the NGRI literature have consistently demonstrated as being heavily linked to successful NGRI pleas and adjudication, as well as behavior while hospitalized, and violence recidivism post conditional release.

Discussion on implicit biases in forensic evaluation, as well as cultural competence training around social and cultural factors of Blacks and other racial/ethnic minority groups, may be helpful as an addition to the Virginia Forensic Examiners training. Specifically, focus on how

race and culture can influence symptom presentation and behavior could be beneficial. This knowledge could influence objectivity in conceptualization of patient risk, as we know the majority of mental health services are rooted in Western assumptions, and providers should be responsive to ethno-cultural differences of patients and clients served (Marsella, 2011). The literature shows benefits of cultural sensitivity training healthcare settings, and that it is feasible for large healthcare systems to implement and train around cultural awareness and interventions to bolster patient outcomes (Majumdar, Browne, Roberts, & Caprio, 2004).

Though some social psychology literature points to the fact that many organizations attempt to push a color-blind perspective in hopes of combating the social categorization of race, a study by Richeson and Nussbaum (2003) found that those exposed to a color blind perspective were more likely to display automatic racial bias on the race IAT measure compared to those who were exposed to a multicultural perspective. This suggests that attempting to ignore racial diversity and how it impacts systems may potentially breed more implicit bias than openly speaking about differences in culture. The implementation of diversity training in conjunction with the forensic examiners training could bolster honest discussion about how culture impacts forensic evaluation and risk assessment in psychology, and possibly allow for clinicians to consider a holistic view of NGRI acquittees when making decisions related to risk assessment and recommendations.

Research directions. Recommendations for future research include examining risk assessment outcomes for individuals with non-psychotic disorders, differences in risk assessment outcomes for individuals with co-morbid diagnoses versus a single diagnosis, and differences in risk assessment outcomes for specific types of disorders such as psychotic, non-psychotic, personality, and substance use disorders. More research in general is needed to increase

understanding of the NGRI populations, as there is much more literature related to inpatient and civilly committed populations than NGRI's, who are a unique subset of the inpatient population. Further, research on whether or not differences exist based on race of forensic examiner on outcomes of risk assessment may be beneficial to examine potential in group and out group biases. Research looking at moderators as it relates to the association between certain demographic variables and number of risk factors could be useful to parse out more specific details on what variables are salient to the clinical decision-making process. Finally, there may be core differences in the study and translation of violence risk that do not fully encompass the unique characteristics and needs of NGRI acquttees. Identifying where these differences are and how they may impact the forensic evaluation process related to how clinicians think about risk should be further explored. A specific area of future research that could be explored by looking at differences in clinical decision making versus forensic/risk related decision making as it relates to diagnosis.

Conclusion

The current study utilized a diverse sample of 380 individuals adjudicated NGRI, between the ages of 18 and 73, to identify demographic characteristics related to NGRI populations as a whole, and examine differences in certain characteristics based on race and other demographic variables on number of risk factors assigned. The general demographic profile of the sample revealed the majority of participants were single, Black, men, with a psychotic disorder, who had committed a violent crime. Other demographic findings included that the majority of the sample had substantial substance use, did not endorse a history of physical or sexual abuse, had a prior criminal history, prior inpatient hospitalizations, and an average of 8 risk factors assigned. Overall, Black participants were assigned more risk factors

than their White counterparts, men were assigned more risk factors than women, and individuals with a felony offense stayed longer in the hospital than individuals with a misdemeanor offense. Failure to find some hypothesized differences may be due to certain variables like diagnosis or criminal offense were recorded, as only primary diagnosis (no comorbidities) and primary NGRI offense was accounted for.

Race was determined to be an important demographic factor, accounting for additional variance in the assignment of risk factors above and beyond age, gender, diagnosis, and type of criminal offense. Implications of this finding include the need to consider incorporating cultural sensitivity training and education around implicit biases into forensic examiner training. The results of this study offer meaningful support for the Commonwealth of Virginia's change to a more actuarial method of risk assessment in IAAB and Temporary Custody evaluations, as the use of the 23 risk factors showed evidence of the potential infiltration of subjective biases based on race and other demographic characteristics such as gender, and diagnosis.

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APPENDIX A

Formatting Outline of IAAB Reports per Virginia DBHDS

1. Identifying Information
2. Purpose of Evaluation
3. Statement of nonconfidentiality
4. Sources of Information
5. Relevant Background Information
6. NGRI Offense
 - a. Acquittee's Account of the NGRI Offense
 - b. Collateral Accounts of the NGRI Offense
7. Behavioral Observations and Mental Status Examination
8. Psychological Testing Results
9. Diagnostic Impression
10. Patient Strengths Which Mitigate the Probability of Future Aggressions
11. Analysis of Aggressive Behaviors
 - a. Narrative description of current risk factors
 - (1) Include past instances of occurrence of that factor
 - (2) Frequency of occurrence
 - (3) Intensity
 - (4) Conditions under which factor is exhibited
 - (5) Dates of occurrence(s) if available
 - (6) Any other relevant information regarding why this factor represents a risk for this particular acquittee
 - b. Current status of risk factors
 - (1) Indicate whether or not the acquittee has exhibited recent behavior relevant to the risk factor
 - (2) Indicate whether the acquittee demonstrates insight into the factor or any gains or losses towards managing the risk factor
 - c. Means of addressing risk factors
 - (1) Include a detailed description of interventions to be utilized in order to assure, to the extent possible, that the probability of the individual exhibiting this factor will be minimized.
 - (2) Strategies for managing risk factors may be extensive and could involve medications, different forms of therapy, sanctions, etc.
 - (3) Some management strategies will apply to more than one risk factor, and some risk factors will require more than one management strategy.
12. Factors which Mitigate the Probability of Future Aggression Positive findings about the acquittee that could contribute to a decrease in the acquittee exhibiting inappropriate aggression are also important and can be integrated into risk management and treatment planning.

APPENDIX B

Data Entry Spreadsheet Example

Variable	Example
Chart Number	A035
Age_ATO	38
Gender	Male
Race	Black
Marital Status	Divorced
Education	HS Diploma
Substance Abuse History	Yes
Trauma History	No
Criminal History	Yes
NGRI Offense	Murder
Felony	Violent
Misdemeanor	NA
Diagnosis	Schizophrenia
Psychotic/Non	Psychotic
Prior Hospitalizations	Yes
Number of Risk Factors	9
Risk Factor 1	Major Mental Illness
Risk Factor 2	Denial/Lack of Insight

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POSTER PRESENTATIONS

Blanchette, D.R., Lewis, R.L., Osborn, L.A. (2018, April). *The 23: Racial and Other Demographic Differences in the Assignment of Risk Factors for Individuals Found Not Guilty By Reason of Insanity in Virginia*. Poster presenter at 2018 Virginia State University Black Psychology Conference, Petersburg, Virginia.

Blanchette, D.R., Conboy, N. (2012, December). *I Don't Want to Go to Work Today: Look at Occupational Health and Wellness, Stressors, and Intervention Techniques*. Poster presented at Winter Industrial Organizational Psychology Research Conference, The Chicago School of Professional Psychology, Los Angeles, California.

ORAL PRESENTATIONS AND INVITED SYMPOSIUM

Blanchette, D.R. (2015, September). *Disclosure of Sexual Behavior in African American Men who have Sex with Men and Women*. Oral Presentation at the Virginia Consortium Program in Clinical Psychology Research Day, Norfolk State University, Norfolk, Virginia.

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