EVALUATING RACIAL BIAS IN INPATIENT RISK ASSESSMENTS

by

STEPHEN M. SMITH, M.A.

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_____	_____
Date	Philip Yanos, Ph.D. Chair of Examining Committee
_____	_____
Date	Maureen O'Conner, Ph.D. Executive Officer

Matthew Johnson, Ph.D.

Daryl Wout, Ph.D.

Ali Khadivi, Ph.D.

Elizabeth Owen, Ph.D.
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

ABSTRACT

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Stephen M. Smith

Advisor: Philip Yanos, Ph.D.

Research has consistently identified disparities in the mental health treatment of black individuals with mental illness. Specifically, black individuals with mental illness are shown to be more likely diagnosed with a psychotic disorder, subjected to coercive treatment services (involuntarily hospitalized, receive emergency medication, be physically restrained on inpatient unit), prescribed first-generation antipsychotics, referred for outpatient group psychotherapy, and expected to be violent in the future. A web-based experimental study was conducted with advanced clinical psychology doctoral students and licensed clinicians to examine the role that race plays in clinical judgments of future violence. Clinicians read the same clinical vignette, but were randomly assigned to one of four conditions: black race/no salience instructions, black race/salience instructions, white race/no salience instructions, white race/salience instructions. It was hypothesized that predictions of violence would vary by race, with clinicians giving higher estimates of violence when given a hypothetical vignette describing a black psychiatric patient. It was also hypothesized that making clinicians aware of this tendency ahead of time (bias salience) would significantly reduce ratings of future violence. Overall, ninety clinicians participated in the study. Though no significant differences in violence predictions were evidenced according to race and/or bias salience, a non-significant pattern was observed for predictions of serious

violence, with higher estimates of serious violence being given for vignettes describing a black psychiatric patient without the preemptive mention of the potential to bias. In addition, it was found that clinicians were significantly more likely to recommend seclusion in the “black” conditions. These findings suggest that race may play a role in predictions of future serious violence and affect subsequent treatment decisions. Future studies are needed to further explore this possibility. Implications for race and racial bias in violence predictions are discussed.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

The finding of significant racial disparities in psychiatric services has been well established in mental health research. Black individuals presenting for psychiatric services are more likely than their White counterparts to be diagnosed with a psychotic disorder (Feisthamel & Schwartz, 2006), receive emergency treatment (Chow, Jaffee, & Snowden, 2003; Spector, 2001), prescribed psychotropic medications with more potent side-effects (Kuno & Rothbard, 2002), and under-utilize psychotherapy services (Walkup et al., 2006). Much debate as to the cause of such disparities has centered on whether they result from real-world racial differences in psychopathology and behavior or racially biased decision-making. To answer this question, the current study evaluated clinical decision-making in violence risk assessments, an often-overlooked area in which significant racial differences have also emerged. Findings in the violence risk assessment literature suggest that clinicians are more likely to over-predict violence for Black individuals with mental illness, though no racial differences exist regarding actual violence (Garb, 1997; McNeil & Binder, 1995; Hoptman et al., 1999). These findings, however, are limited by scope (i.e. type of violence assessments) and methodological approaches used (i.e. correlation, archival).

The present review thus aims to expand upon the existing literature on racial disparities in psychiatric services, by first reviewing the racial disparities in various areas of psychiatric care in general and violence risk assessments in specific. Arguments were presented which suggested that clinical predictions of violence are driven by faulty decisional heuristics and stereotyped thinking, which are influenced by the belief that Blacks are more violent than Whites. A study will be proposed which seeks to both experimentally test and reduce the role of race in violence risk assessments. Specifically, it will be posed that not only do clinicians tend to assign higher

ratings of future violence for Black inpatients, but that making such bias salient can significantly reduce its influence in clinical judgments. Finally, implications of racial bias in risk assessment and prediction will be discussed.

CHAPTER 2: LITERATURE REVIEW

Racial disparities in psychiatric services

Clinical diagnosis. There is extensive research documenting racial disparities in clinical diagnosis. In general, Black individuals with psychiatric disorders are more likely than other racial groups to be diagnosed with a severe psychotic or behaviorally disturbed disorder (Feisthamel & Schwartz, 2006; Schwartz & Feisthamel, 2009). Black mentally ill individuals are over-represented among those diagnosed with childhood behavior disorders (e.g., conduct disorder, oppositional defiant disorder), schizophrenia spectrum disorders, and paranoid and antisocial personality disorders. Particularly robust is the over-diagnosis of schizophrenia. Studies show that Blacks are twice as likely as Whites to receive a diagnosis of schizophrenia in clinical settings and nearly three times as likely in inpatient settings (Lawson, Helper, & Holladay, 1994; Strakowski et al., 1995; Chrishon, 2009; Chow, Jaffee, and Snowden, 2003). White individuals with psychiatric disorders, on the other hand, are shown to be under-diagnosed with schizophrenia and are more likely to carry mood (e.g., major depressive, bipolar) and alcohol abuse diagnoses (Schwartz & Feisthamel, 2009; Delbello et al., 2001).

Some may argue that such disparities reflect real-world racial differences in psychopathology, with schizophrenia symptoms being expressed differently in Black and White populations. For instance, features of suspiciousness, expressiveness, and externalization (e.g., aggressiveness, irritability) are often portrayed as being more characteristic of Blacks than cognitive symptoms and internalizing behavior (Feisthamel & Schwartz, 2006, Hicks, 2004). These claims, however, are not reliably supported by the literature. Findings from epidemiological studies show that no significant racial differences exist in prevalence rates of schizophrenia (Kessler et al., 2004). Thus, the elevated rates of diagnoses of schizophrenia in the

Black population can more plausibly be attributed to errors in diagnosis rather than real-world differences in psychopathology (Baker & Bell, 1999).

Medication. Significant racial disparities have also been found in the prescription of psychotropic medications. Kuno and Rothbard (2002) conclude that, although standards of appropriate prescription regimens exist, Whites diagnosed with schizophrenia are more likely to be prescribed second-generation antipsychotic medications than Black individuals with schizophrenia. In their study, the authors evaluated the prescription patterns of over 2500 individuals being treated for schizophrenia within a 12-month period. Results indicate that White subjects were four times more likely than Blacks to be prescribed with atypical antipsychotic medications such as clozapine, risperidone, and olanzapine. With the exception of clozapine, these medications are considered to be generally more effective than first generation medications and are associated with fewer harmful side effects (first generation antipsychotics are associated with extrapyramidal side-effects such as neurological and motor impairment while second-generation antipsychotics have been linked to metabolic impairments). Herbeck et al. (2004) found similar discrepancies in medication patterns when reviewing medical records collected by the American Psychiatric Institute for Research and Education between 1997 and 1999. Black patients in this study were found to be significantly less likely than Whites to receive first-line antipsychotic medications (49% and 66% respectively). These results remained after controlling for clinical and socio-demographic factors.

Though evidence in support of a racial bias in medication prescription abound, some have argued that such disparities can be more strongly attributed to physiological differences between Blacks and Whites. For instance, Lawson (1986) presents evidence suggesting that Blacks as a whole tend to metabolize antipsychotic medications more slowly than other racial groups and

thus are more responsive to traditional depot medications. These metabolic effects, however, are virtually erased once symptom presentation and demographics (i.e. age, weight) are controlled (Ruiz et al., 1999).

Emergency intervention. Significant racial disparities exist in psychiatric emergency intervention, with Black individuals evidencing more frequent and coercive emergency service use. A long-standing finding in the literature has been the disproportionate rates of inpatient admissions for Black individuals. Black individuals are significantly more likely than all other racial groups to be admitted to a psychiatric hospital (Snowden, Hastings, & Alvidrez, 2009; Spector, 2001); some studies showing as much as a 3 to 1 ratio of admission for Blacks and Whites (Mckeithen-Franks, 1998). These findings are particularly apparent in low poverty areas (LPA's) where both minority populations and psychiatric prevalence rates are relatively small. Chow, Jaffee, and Snowden (2003), in reviewing patient characteristic data from the New York State Office of Mental Health, found that Black individuals with psychiatric disorders residing in LPA's were almost twice as likely as Whites to need emergency and inpatient services and nearly 4 times more likely to be referred by the legal system and social service agencies. The authors suggest that the increased salience of minority mentally ill individuals and decreased tolerance in low poverty areas are to blame for such disparate treatment. Supporting this view is the well-documented finding in the literature of discrepant rates of involuntary admission of Black psychiatric individuals. Blacks, on average, are considerably more likely to be admitted to a psychiatric emergency room under coercive conditions (Spector, 2001). Additionally, evidence indicates more frequent rates of re-hospitalization and shorter stays for this population (Snowden Hastings, & Alvidrez, 2009). It should be noted that disparities at these initial points of

intervention are especially troubling as emergency service utilization is often used as an indicator of poor quality of care (Snowden, Catalano, & Shumway, 2009).

The racial differences continue once admitted into the hospital, particularly with respect to the management of violent behavior. In a retrospective study of the violence incidents on a medium secure psychiatric unit over a four year period, Gudjonsson, Rabe-Hesketh, and Wilson (2000) found that Black inpatients were more likely than patients of other ethnicities to be given emergency (i.e., PRN) medication following a violent incident. Significantly higher PRN administration rates were recorded for Black inpatients that assaulted nursing staff rather than other patients (see also Flaherty & Meagher, 1980). There is also evidence, though less profound, which suggests that Black inpatients are over-represented among those subjected to the more coercive aspects of violence management. For instance, Black patients are nearly four times more likely to be physically restrained following disruptive behavior (Kuhlman, Telintelo, & Winget, 1982; Bond, DiCandia, & MacKinnon, 1988; Spector, 2001). However, no consistent racial differences have been documented for seclusion rates. In addition to increased emergency medication allotment and physical restraints, studies have also shown that clinicians on average tend to spend less time evaluating and attending to Black clients on emergency treatment wards (Segal, Bola, & Watson, 1996).

Psychotherapy. Also well-documented are the racial gaps in psychotherapy services. Just as Black individuals with psychiatric disorders are significantly over-represented among those requiring emergency services, they are significantly under-represented among those receiving psychotherapeutic services. Walkup et al (2006), in analyzing Medicaid claims of over 1900 individuals with schizophrenia in the state of Georgia, found that, in addition to having significantly lower rates of psychotherapy use, Black individuals were more likely to use group

rather than individual therapy. Such data on statewide service use is of particular importance in that it did not rely on self-report surveys or experimental designs and instead based its findings naturally occurring variations in both service use and service delivery. In addition to these findings, Black individuals presenting for psychotherapy services report higher dropout rates in both individual and group therapy settings (Snowden, 1999). Blacks are also under-represented in outpatient therapy services and show more frequent use of public, rather than private sector services than Whites (Snowden, 1999).

From the above-mentioned disparities, a daunting picture emerges of the provision of mental health services for Black individuals. Black individuals with psychiatric disorders are more likely than Whites to be diagnosed with a psychotic disorder (namely schizophrenia), though actual prevalence rates of the disorder are similar across the two races. Black psychiatric individuals are less likely than Whites to be prescribed first-line psychotropic medications such as second-generation antipsychotics; thus placing them at greater risk for developing harmful extrapyramidal side effects. Blacks are over-represented in emergency psychiatric treatment and are more likely to be involved in the coercive aspects of these services. Conversely, Black mentally ill individuals are relatively absent from psychotherapy services, including individual and outpatient treatment; suggesting that Blacks are under-represented in the more volitional and effective treatment service options. The magnitude of these findings, and particularly those from epidemiological and statewide data sources, suggest that such disparities are not attributable solely to cultural differences in service utilization. The evidence instead points to issues with the delivery of psychiatric services. It can be argued that a systemic racial bias underlies and maintains the above-mentioned disparities. A racial bias that appears to be guided by the belief

that Blacks are less deserving of effective care and more deserving of the arenas of treatment focused on social control.

Although claims suggesting racial bias as the culprit of unequal psychiatric care and practice can be made, more support is needed regarding specific clinical decision-making practices. To accomplish this, I now turn to the clinical practice of violence risk assessment. Like other areas of clinical service, research has shown significant racial disparities in predictions of violence. Clinicians forecasting future violent behavior are shown to over-predict the violence potential of Black clients (McNeil & Binder, 1995; Hoptman et al., 1999). Although the violence risk literature focusing on this area of racial disparity is sparse, arguments generally suggest that faulty clinical decision-making and stereotyped thinking in particular may be operating (Murray & Thomson, 2010b). The current review thus sought to expand upon the existing literature on both psychiatric services in general and violence risk assessments in specific by examining the attitudes and practices of the clinical decision-maker.

The practice of violence risk assessments was chosen for two main reasons. First, violence risk assessments differ from other areas of service in the conclusions that can be drawn regarding decision-making error. During a risk assessment, a clinician is asked to predict the likelihood that a particular individual will commit a violent act within a given time period (e.g., immediately, during confinement or hospitalization, or post-discharge). Such 'likelihood' predictions are compared to and measured against actual incidents of violence (Webster, 2006). Thus, any evidence of racial disparities in predictions can be more confidently attributed to clinical decision-making bias rather than racial differences in real-world behaviors. Second, I argue that violence risk assessments are an area of psychiatric service whereby negative perceptions of Black individuals are most likely to manifest themselves. As will be discussed

further, the stereotype of Blacks as violent is most relevant to settings in which violence (and violent acts) is the main focus of clinical decisions. This raises the possibility that any racial disparities found in this area of service can be attributed to beliefs regarding which population is more or less likely to be violent. The below sections will broadly review the literature on violence risk assessments as well as the research on racial disparities in predictions.

Violence Risk Assessments

The assessment of future violence has become a staple of clinical practice. Clinicians are routinely asked to distinguish and predict with a degree of certainty which individuals will be more or less likely to commit violent behavior in the future. Traditionally, such determinations were limited to clinical settings such as hospitals and community mental health facilities. However, the mental health field has seen a significant spike in the demand for risk assessment services in other settings. For example, clinicians are increasingly called upon to perform these assessments in court proceedings, serving to inform the court as to the dangerousness and likelihood for recidivism of criminal defendants (Murray & Thomson, 2010a). The implications of such growth are two-fold. On the one hand, clinicians are bestowed with the responsibility to assist various stakeholders (e.g., treatment providers, parole boards, the court) with maintaining safety by reliably identifying members that prove a threat to the broader society. On the other hand, clinicians also have an ethical responsibility to ensure that their services do not result in biased judgment, unequal treatment, or unjust confinement. As such, a great deal of effort in this area of practice has focused on the development of competent and accurate methods of violence risk assessment.

Traditional clinical judgment. Risk assessment practices have evolved greatly over the years. Traditional risk assessment methods were based primarily on clinical judgment.

Basically, clinicians would make determinations of dangerousness based on their own experience and what they felt about the case. When appropriate, clinicians would utilize various evaluative approaches such as diagnostic evaluations, collateral information, and impressions gained from interactions with their clients to help guide their opinions of future risk (Convit et al., 1989; Melton et al., 2007; Murray & Thomson, 2010a). Though still widely used, this approach has often yielded poor results within the research, with findings consistently showing that clinicians perform slightly at or below chance level when predicting future violence (Werner, Rose, & Yesavage, 1983; Webster, 2006).

Many explanations have been given for such poor performance. For instance, there is often little consensus on the operational definition of violence. Significant variability can be found in both the types of violence under question (e.g., verbal aggression, physical aggression toward self, others, or property) as well as the concepts of violence (e.g., dangerousness). Also contributing to the moderately low predictive accuracy of clinical judgment is the setting in which predictions are made. Often times, violence risk assessments are conducted in structured clinical settings that do not closely resemble those likely to be encountered in the real world. As will be discussed later, settings and contexts can greatly moderate one's propensity for engaging in violent behavior. Perhaps the most essential problem plaguing the traditional approach is the lack of standardization. Traditional risk assessment practices vary significantly in terms of the sources of information, types of methods, and predictor variables used. Clinicians are accustomed to treating each case individually and are likely to rely on a vast amount of data and techniques when formulating their opinions. Thus, traditional risk assessment practices can vary considerably between clinicians, limiting the reliability of any one opinion (Monahan, 1981; Convit, et al. 1989). Related to the lack of standardization is the subjectivity inherent in clinical

judgments. Clinicians, when trying to predict future behavior, will excessively rely on idiosyncratic factors such as their own intuition to guide their evaluations. This allows for biases and pre-existing beliefs to easily contaminate clinical judgment (Melton et al., 2007).

Actuarial tools. To address these pitfalls, efforts in the field have shifted toward the development of more scientific and streamlined assessment tools. Actuarial tools were developed which require that determinations of future risk be made according to strict decision-making guidelines. Here, clinicians assess the presence or absence of a number of empirically supported predictor variables. These variables are weighted and tallied to yield a numerical risk classification. In essence, actuarial assessment tools function to reduce the overreliance on subjective clinical judgment and increase the consistency of both the decision-criteria and inter-clinician ratings (Murray & Thomson, 2010a).

Though the list of actuarial tools and violence screening measures is extensive, three instruments stand out as the most empirically-validated tools for the accurate prediction of future violent offending: the HCR-20, VRAG, and the PCL-R. The Historical-Clinical-Risk Management 20 (HCR-20; Webster et al., 1997) is used to assess violence potential and recidivism in both civil and correctional settings. Items on the HCR-20 are divided into three categories based on past, present and future evidence of psychopathology, violent behavior, and community risk factors. The Violence Risk Appraisal Guide (VRAG; Quinsey et al., 1998) is a 12-item questionnaire used to assess violence risk within specific time frames. It was developed primarily for use on mentally disordered offenders. The Psychopathy Checklist, Revised (Hare, 1991) is a 20-item questionnaire used for correctional and psychiatric populations. The PCL-R differs from the previous two measures in that it taps personality constructs that tend to underlie violent behavior. The PCL-R is often heralded as the best tool for the assessment of future

violent behavior. All three actuarial tools are shown to maintain reliability estimates between 0.63 and .0.80. The PCL-R is shown to maintain estimates exceeding 0.8 (Dolan & Doyle, 2000).

While actuarial tools have proven to be superior in predicting future violence, traditional assessment techniques are still commonplace. These assessments often take the form of impressionistic judgments occurring within the regular milieu of treatment services. Whether in an admission assessment, a progress note, a brief interpersonal interaction, or a comprehensive psychological evaluation, clinicians and staff members routinely assess the potential danger of their patients. It is likely that these impressionistic judgments are particularly common in inpatient settings where patient behavior is the focus of concern. I contest that it is through these regular and often implicit judgments where biased decision-making is most likely to surface.

Predictor variables. A great deal of the risk assessment literature has focused on identifying core variables and characteristics that are reliably associated with future violence. Though there is an abundance of empirical studies examining the correlates of violence predictor variables, few are more comprehensive and referenced than the MacArthur Violence Risk Assessment Study (Monahan et al., 2001). In this seminal work, investigators examined the profiles and post-discharge behavior of more than 1100 inpatients (one of the largest samples to date) and assessed over 130 potential risk factors. All individual and systems-level factors were classified according to three categories: criminological, clinical, and demographical. The results of this study are outlined below.

Criminological factors broadly included type and frequency of prior arrests and periods of incarceration. Of the criminological factors, prior violence and particularly a history of a violent crime proved to be the strongest predictor of future violence. Thus, individuals with a psychiatric disorder that had a history of arrests for violent crimes against others were

significantly more likely to commit a future violent act than those with no violent arrests history (32.7% and 16.6%, respectively). This finding has been consistently supported in the literature as the most predictive of all individual and systems-level variables (Tardiff, 2002). The authors further noted adult violent offending as being more predictive of future violence than juvenile offending.

Investigations into the predictability of clinical factors have stirred considerable debate in the risk assessment literature. Some argue that there are identifiable symptoms and disorders that greatly enhance one's propensity for violence (Simon & Tardiff, 2008), while others are of the opinion that aggressive behavior is dynamic and can result from a combination of symptoms, characteristics, and contexts (e.g., gender, intensity of current stressors). Results from the MacArthur study tend to confirm the former argument, suggesting that there are specific features of psychopathology that can reliably increase one's violence potential. The following clinical variables were compared to post-discharge violence: diagnosis, psychopathy, delusions, hallucinations, violent thoughts, and anger. Of the diagnostic factors, discharged patients who carried a major mental disorder diagnosis with co-occurring substance abuse were more likely than those without substance abuse to commit a violent act at 1-year follow-up (31.1%, 17.9%, respectively). Individuals labeled as having an "other mental disorder (e.g., personality disorder, adjustment disorder, suicidality)" along with a co-occurring substance abuse disorder evidenced even higher rates of violence (43%) than the two other groups. Consistent with much of the existing literature, psychopathy (as measured by the Psychopathy Checklist, Screening Version) was a significant predictor of future violence at 1-year periods (49.7%, compared to 21.9% for nonpsychopathic patients). Antisocial features of psychopathy were the strongest single predictor, a finding that underscores the role that past criminal behavior and personality

dynamics play in increasing violent behavior. Neither delusional thoughts nor hallucinations were significantly correlated with rates of violence. Command hallucinations, however, did increase violence risk, but not significantly. The findings for the role of violent thoughts on violent behavior is more complex than that for the above mentioned clinical variables, with variations associated with the frequency and time of thoughts. In general, the authors concluded that patients who had violent thoughts during hospitalization were more likely to commit a violent act within a 1-year period following discharge. Furthermore, frequent violent thoughts during the discharge period also increased incidents of violent behavior for psychiatric individuals. The relationship between violent thoughts and violence, however, was not strong.

The authors also analyzed the correlates of three demographic variables: gender, neighborhood, and race. With regards to gender, findings indicated that male psychiatric patients were significantly more likely than female patients to commit a violent act within 20 weeks of discharge (men: 15.2%, female: 12.4%), an effect that is consistently supported in the research (Steadman et al., 1994). However, the gender effect disappeared over time with no significant differences evidenced at 1-year follow-up (men: 29.7%, female: 24.6%). Thus although men tended be more violent immediately following discharge, no significant gender differences existed over extended periods of time. Findings on neighborhood factors indicated that levels of poverty affect rates of future violent behavior. Specifically, patients discharged to areas with a high concentration of poverty were significantly more likely to commit a violent act than those discharged to medium and low poverty areas. The authors used the findings on neighborhood effects to analyze the effect of race on future violence. Upon initial analysis, race was shown to significantly correlate with rates of violence, as Black patients were more than twice as likely than Whites to commit a violent act at 20-week post-discharge (Blacks: 19.8%, White: 8.4%).

However, this racial effect disappeared after further analyses controlled for neighborhood type. In other words, Blacks and Whites living in comparable neighborhoods did not differ in their incidence of violence. Both Blacks and Whites living in high poverty areas had a high propensity for violent behavior. Similarly, Blacks and Whites living in low poverty areas had a decreased likelihood of violent behavior. In explaining the results, the authors debated previous research indicating that Blacks are more violent by suggesting that previous studies often fail to account for the role of contextual factors (e.g., neighborhood type) on violent behavior. As was the case in the MacArthur study, areas with high poverty rates are often associated with high rates of violence. Black discharged patients were overwhelmingly represented in these high crime areas. Thus, one must control for this confound when assessing the true predictability of race. The authors went on to conclude that race did not predict future violence.

Steinert (2002) suggests that the predictive effects of the above mentioned variables are more nuanced than what is depicted in the MacArthur study. In this large-scale review of the risk assessment literature, Steinert concludes that value and effect of many of the predictor variables will differ significantly depending on the type of setting. Although the authors agree with existing research that past violent behavior is the most predictive factor overall, they suggest that many of the other factors will differ depending on whether they are examined in community, inpatient, and forensic settings. For instance, in community settings, factors such as criminology, historical (e.g., childhood environmental violence), and socio-demographic variables strongly correlate with violent behavior while clinical factors are less predictive in these settings. In inpatient settings, quite the opposite is true. The authors found that in these settings, psychopathology (namely psychotic symptoms and hostility) is better associated with future violent behavior than historical and demographic variables. Findings from forensic

settings generally suggest that historical and static variables are most predictive of future violent behavior.

In sum, past violent behavior, personality-type disorders with co-occurring substance abuse, psychopathy, and residence in a high poverty neighborhood are the strongest predictors of future violence for psychiatric populations. Gender, violent psychotic thoughts, and hostility were also good predictors of violence, though the effect may vary. Clinical factors such as a diagnosis for major mental disorder (e.g., schizophrenia, major depression) and demographic factors such as race, however, were poor predictors. Furthermore, evidence suggests that the true effect of any predictor variables will differ in strength based on the type of setting. Clinical factors were shown to be more predictive for inpatient settings, while criminological and demographic factors more pertinent in community settings.

Such findings, when taken together, have important implications for the arguments of the current review. As can be seen, certain variables strongly correlate with future violent acts while others do not. Race is not shown to be a reliable predictor of future violence, particularly for inpatient populations. Black individuals with psychiatric disorders are no more likely than White individuals to commit violent acts when neighborhood is controlled for. Although the lack of predictive value of one's race is established in the research, as will be discussed further, it continues to be used as a criterion in violence risk assessment decisions.

Prediction accuracy. Efforts in the violence assessment literature have also focused on exploring the accuracy of clinical predictions. A common technique used to assess prediction accuracy is the evaluation of judgment "diagnosticity" (Douglas, Ogloff, & Hart, 2003; Webster, 2006). With this method, clinical violence predictions are analyzed according to a two-by-two statistical matrix, which pairs predictions of violence with actual incidents of violence. This

results in the following four groups: true positives (predicted violent, actually violent), false positives (predicted violent, not actually violent), true negatives (not predicted violent, not actually violent), and false negatives (not predicted violent, actually violent). Prediction measures are typically yes/no dichotomous ratings (i.e., predictions: yes/no; actual violence: yes/no). An analysis of prediction diagnosticity yields findings that indicate the clinician's ability to accurately identify individuals who will be violent (sensitivity: true positives) as well as rule out those who will not be violent (specificity: true negatives). False positives and false negatives are associated with sources of judgment error (i.e., erroneously predicting that someone will be violent when they did not actually become violent). Researchers have used this approach to not only compare predictions of violence to actual violence, but to more importantly, distinguish those individual characteristics that are associated with accurate predictions from those associated with incorrect predictions. By evaluating prediction diagnosticity, we can thus gain insight into the underlying biases associated with violence assessments.

Various studies have attempted to examine the predictive accuracy of clinical judgments of violence. As mentioned previously, clinicians performing risk assessments in the absence of actuarial tools tend to demonstrate poor accuracy rates, performing slightly below chance level (Convit et al., 1989, Melton et al., 2007; Murray & Thomson, 2010a). Although discouraging, such findings do not truly capture the prediction abilities of clinicians. While investigations are few, studies indicate that prediction accuracy rates vary significantly depending on the setting and time frame of interests. In fact, clinicians are shown to perform relatively well (i.e., above chance) when making short-term predictions of inpatient violence. Nijman et al. (2002) investigated the abilities of clinical staff members to predict unaided (i.e., strict clinical judgment, no actuarial tools) the violence potential of newly admitted psychiatric patients.

Clinicians were specifically asked at the time of patient admission to rate the likelihood that each patient would become physically and/or verbally aggressive during their short-term stay in the hospital (mean length of stay; 28.5 days). Clinical staff members were able to correctly classify 75% of the patients (diagnosticity), with 55% of those predicted to be aggressive actually becoming aggressive (sensitivity) and 86% of those who were not predicted to be aggressive not actually becoming aggressive (specificity). McNeil and Binder's (1995) findings also testify to the high accuracy rates of short-term violence predictions. Here, hospital physicians were asked to estimate the probability that each of 226 inpatients would assault someone within the first week of hospitalization. Clinicians performed well, with relatively accurate predictions for both predetermined violent offenders (67%, sensitivity) and predetermined non-violent offenders (69%, specificity). Hoptman et al. (1999), in a similar study, found that psychiatrists could correctly predict inpatient violence within a 12-week period following admission. Psychiatrists in their study were asked to indicate the likelihood that their assigned patients would hit or hurt someone at some point during their acute stay in the hospital. Psychiatrists achieved a diagnostic accuracy of 71%, with a sensitivity rating of 54% and a specificity rating of 79%.

Although results from the previously mentioned studies on predictions of inpatient violence suggest that clinicians can make violence predictions with a great deal of accuracy, a closer examination of the findings and specifically the sources of judgment errors (i.e., false positives, false negatives) reveals significant limitations in their decision-making abilities. In addition to prediction estimates, McNeil and Binder (1995) and Hoptman et al. (1999) also charted those patient characteristics most commonly associated with correct and incorrect judgments. McNeil and Binder found that individuals who were judged to be violent and actually became violent were more likely to have a psychotic disorder, be of young age, have

recent history of violence, and display uncooperative behaviors on the ward. Those individuals who were predicted to be violent, but did not become violent, were more likely to be male and Black. Hoptman et al concluded that psychiatrists in their study tended to over-predict assaultive behavior for Black patients (predicted assaultive: 67%, actually assaultive: 55%) and under-predict for White patients (predicted assaultive: 10%, actually assaultive: 15%).

While these findings lend support to the current review's claim that clinicians over-value patient race in judgments of violence, definitive conclusions cannot be made given the lack of substantive evidence and the correlation design of both studies. Though resolvable, few studies have emerged which attempt to tackle these pitfalls. Lewis, Croft-Jeffreys and David (1990) attempted to do this with their study, which experimentally assessed the role of race in violence predictions. The authors instructed 220 psychiatrists working in a hospital in Britain to read hypothetical case vignettes whereby the race and gender of the client were manipulated (i.e., Black/White, male/female). Participants were then asked to make various judgments relating to the likelihood of future violence. Findings revealed that psychiatrists rated Black male patients as being significantly more likely to be violent toward staff members, more likely to evidence future violence, and more fit for incarceration than White cases. The authors noted that the use of a combined race-gender variable most likely strengthened the effect of dangerousness predictions.

When taken together, findings from the risk assessment literature on predictor variables and prediction accuracy patterns indicate that race has little bearing on one's potential for violence. This is particularly evident when neighborhood factors are held constant (Monahan et al., 2001). Even though race is not found to be a significant predictor of violence, studies show that clinicians continue to use it in their violence predictions. Specifically, clinicians working on

inpatient wards are shown to be more likely to erroneously predict that Black psychiatric patients will have a higher potential for violence than White patients. This is in light of the consistent finding that no significant differences in violence rates exist between the two racial groups (Garb, 1997; McNeil &Binder, 1995; Hoptman et al., 1999). Furthermore, clinicians given hypothetical scenarios in which comparisons to actual violence are absent still demonstrate a bias toward assigning higher ratings of potential violence for Black cases (Lewis, Croft-Jeffreys, & David, 1990). These findings, in sum, strengthen the previously stated claim that racial bias can be used to explain variations in predictions. However, there continues to be paucity in the breadth and scope of research. Thus, in attempting to advance the established literature, the current review will focus more narrowly on decision-making. As will be seen, this focus is essential to understanding how and why it is that clinicians engage in biased decision-making.

Decision-making Bias in Risk Assessments

In line with the stated claim that racial bias is to blame for the racial disparities in various areas of psychiatric services, I argue that clinicians routinely (and unknowingly) rely on a set of decisional heuristics when assessing violence that increase their chances for making errors in judgment. Furthermore, it is hypothesized that negative pre-existing beliefs about Blacks further contribute to errors in judgment by biasing the clinician's appraisals regarding future violence for their Black patients. These heuristics as well as the negative racial beliefs are discussed below.

Cognitive heuristics. The decision-making model can be used as a framework for understanding how errors and biases in judgment manifest throughout violence risk assessments. According to this model, individuals routinely engage in a number of cognitive strategies and short cuts when attempting to processes information from the environment. These cognitive

short cuts serve to both consolidate and efficiently process vast amounts of information, thus reducing the cognitive effort being used. Once repeated, these strategies evolve from simple short cuts to interpretive guidelines. These heuristics tend to occur automatically and are often beyond awareness. Though these heuristics do assist in reducing the amount of cognitive effort needed for processing, they can also work to systematically bias the way information is interpreted; influencing for instance what information is attended to, how long we attend to it, and the conclusions drawn (Kassin, Fein, & Markus, 2008). Thus, the decision-making model holds that cognitive heuristics can have both a positive (i.e., efficient processing) and negative (i.e., biased thinking) influence on how we interpret our surroundings. The specific types of heuristics as well as their effect on clinical decision-making are discussed below.

Studies show that cognitive heuristics are routinely employed during violence risk assessments and are the primary source of errors in judgment (Murray & Thomson, 2010b). Though many types of heuristics exist, the following are the most prevalent in violence assessments: illusory correlation, context effects, representativeness heuristic, confirmation bias, confidence, and learnability bias. The illusory correlation bias is pinned on the notion that a significant and consistent correlation exists between two often-unrelated variables. This bias is said to develop through selective attention practices whereby an individual uses past experiences and beliefs to make connections between two observed variables. The connection, however, is often insignificant or non-existent. This strategy is repeated until the individual comes to believe that the relationship between the two variables is stronger and more frequent than what is actually the case (Honig, 1982). Murray and Thomson (2010b) depict that the illusory correlation bias underlies many of the problems associated with potential risk factors. For instance, many clinicians believe that the seriousness of an individual's crime is strongly related

to their likelihood of future violence. The correlation between these two variables, however, has not shown to be significant (Quinsey & Maguire, 1986).

Context effects are also frequent in risk assessments. Context effects refer to the influence that contexts and situational factors play in decision-making. With regard to risk assessments, contexts can greatly influence the direction of one's prediction of violence. Research has shown that violence predictions vary significantly by the type of setting associated with the individual. As mentioned previously, there are significant differences in both the predictor variables and the violence potential for community and inpatient populations (Steinert, 2002). Inpatient populations are afforded additional services such as emergency medications, staff interventions, and observation periods, which can greatly affect the prognosis of their behavior. Individuals in community settings, on the other hand, are exposed to various environmental triggers, such as peers and access to illegal substances that can increase their propensity for violent behavior (Crowner, 1989). These contextual factors can bias perceptions regarding one's propensity and opportunity for becoming violent in the future. Situational factors are relevant even within inpatient settings. Here, differences have been found between emergency and regular psychiatric units, with emergency admission units being more likely affected by time constraints (quick decisions) and limited patient information (Convit et al., 1989). Clinicians must consider these effects and must frame their opinions within specific contexts.

The representativeness heuristic bias occurs when an event is judged based on its similarity to other events. Essentially, it is a strategy in which people, intentionally or unintentionally, categorize others based on their perceived similarity to other group members. Judgments formed tend to be representative and generalized rather than idiosyncratic (Honig,

1982). For example, one may assume that a gang member is violent simply because of his/her affiliation with a gang. As will be discussed later, this type of heuristic tends to manifest in the form of stereotyped thinking in which a person's behavior is seen as being typical of the group to which he/she belongs. The representative heuristic is faulty because it over-estimates the probability that such behavior occurs within a population of individuals.

Confirmation bias is a common source of error in clinical judgments. Essentially, confirmation bias occurs when judgments are made based on pre-existing expectations and assumptions. An individual will unknowingly seek and attend to information that confirms and is consistent their preconceived notions. Such a bias is effective because less cognitive effort is used to process information that is consistent with pre-existing beliefs than information that is inconsistent. Confirmation bias is said to be most influential in immediate clinical assessments, whereby quick and impressionistic judgments are made with little information or time. Here, the clinician will utilize preconceived notions of violence as a source of information when more comprehensive information is not available (Murray & Thomson, 2010b).

A clinician's level of confidence can greatly moderate the extent of their violence risk appraisals. Indeed, prediction accuracy has been shown to increase when confidence levels are moderate or high, and decreases when confidence is low (McNeil, Sandberg, & Binder, 1998). The reason for the moderating effect of decision-confidence is two-fold. First, clinicians are often guided by moral and ethical thinking when performing risk assessments, such that they are more likely to make predictions when they feel as though the probability of being wrong (and doing harm) is low. Second, confidence is usually indicative of the degree to which a decision-maker believes that the scenario being judged is similar to past scenarios. A clinician's confidence may increase the more they believe that their client resembles past clients who have

similar traits (representative heuristic), or in the case of violence assessments, have committed a violent act (Murray & Thomson, 2010b). Thus, a patient presenting with symptoms that are similar to high-risk populations is likely to receive a prediction that is based on a high degree of confidence.

An often overlooked but equally biasing heuristic is the learnability heuristic. Many decisions about an individual's propensity to engage in violent behavior are based on probability estimates rather than accuracy judgments. Clinicians are rarely given feedback regarding whether or not their predictions were correct. As such, clinicians are not afforded the opportunity to learn from their errors in order to make adjustments for future decisions. Thus faulty heuristics regarding predictor variables and representativeness often endure unchallenged and are easily incorporated into the decision-making process (Honig, 1982).

Murray and Thompson (2010b) list other cognitive biases that are prevalent in risk assessments such as selective perception (paying attention to certain aspects of information while disregarding others), devaluing base rate data (not relying on base rate data regarding violence rates for specific populations), and anchoring (basing an opinion on initial impressions and adjusting according to this anchor). These cognitive biases, when considered together, can greatly skew a clinician's decision-making abilities. Clinicians operating under these implicit heuristics may unintentionally disregard important information, make unsupported generalizations about behaviors, and leave pre-existing beliefs uncontested; all of which can contribute to errors in final judgments and accuracy predictions.

While the above-mentioned heuristics can account for some of the errors occurring in clinical decision-making, they do not completely explain how such thinking can manifest in the form of racial bias. To address this, I suggest that another biased cognitive strategy, namely

stereotyped thinking, can influence decision-making. I argue that stereotyped thinking is the most influential mechanism underlying the racial disparities in clinical decision-making and violence risk assessments in particular. Specifically, it is believed that much of the variance in psychiatric care for Blacks can be accounted for by perceptions, which associate Blacks with violence and dangerousness. The features and function of stereotypes are discussed further below.

Stereotypes/stereotyped thinking. Briefly stated, a stereotype is a belief that a set of individuals shares certain characteristics. Stereotyped thinking refers to the tendency to believe that these characteristics are stable and consistent (Kassin, Fein, & Markus, 2008). Like other biased heuristics, stereotypes function to facilitate efficient information processing by quickly categorizing behaviors and characteristics.

Stereotypes and stereotyped thinking encompass many of features of the above-mentioned heuristics. For instance, similar to the representative heuristic bias, stereotyped thinking entails the tendency toward overgeneralization. When engaged in stereotyped thinking one is likely to assume that the behaviors seen in an outgroup are representative of the behaviors of the entire outgroup. Some commonly held stereotypes include the belief that all gay men have AIDS, female bosses are overbearing, Jewish people are frugal, and Asians are good at math (Hilton & von Hippel, 1996). This study focuses on the stereotype that Black people are violent. Such a stereotype is deeply rooted in American history and, in many respects, is still prevalent today. This is evident in a magnitude of social psychology studies showing that Blacks, and Black men in particular, are viewed as being more violent, physically aggressive, dangerous, and prone to criminal behavior than other racial groups (Welch, 2007; Steen, Engen, & Gainey, 2005; Lim & Bell, 2008). Indeed, such stereotyped thinking is said to underlie the

disproportionately high percentages of Blacks being maintained within the avenues of social control (e.g., jails/prisons, arrests, psychiatric hospitals, etc.). These findings are pinned on the relationship between the perceived threat that Blacks pose and the discriminatory practices that are in place to control their behavior.

The illusory correlation bias is inherent in stereotyped thinking. Stereotypes are grounded on the notion that two variables (an individual and a specific trait) are highly correlated. People who engage in stereotyped thinking will often exaggerate the frequency of the traits and behaviors they perceive in outgroup members. By believing that this pairing of behavior and individual is more frequent and commonplace than they actually are, the stereotype will move from a simple association to an actual belief about the group members' core attributes. For instance, many individuals believe aggression to be a stable trait of Black people. Devine (1991) demonstrated that, when asked to describe various outgroup members, Blacks were more likely to be described with words such as hostile, aggressive, and forceful. Sagar and Schofield (1980) found that Whites were more likely to label ambiguous behavior as aggressive if it was committed by a Black individual.

Stereotyped thinking, like most other heuristics, relies on selective attention to confirming evidence. Here, preconceived notions about group behavior persist because the individual is cued in to information that supports their beliefs. For example, images of a Black person acting aggressively may be encoded into memory as being consistent with pre-existing beliefs regarding Blacks having a higher propensity for violence. The individual may fail to notice other groups who also act aggressively as these are inconsistent with their preconceptions. Any evidence found to contradict these beliefs is viewed as being the exception rather than a cause for cognitive change (Kassin, Fein, & Markus, 2008).

Another stereotype feature that is particularly important to this review is automaticity. People are constantly exposed to stereotypes about out-group members. These stereotypes can be easily activated when in the presence of the group member to whom the stereotype belongs. Through learning and/or repeated exposure, the stereotype becomes an automatic part of cognitive processing. Overtime, stereotyped thinking can be triggered even when not in the presence of the stereotyped group, many times before conscious awareness (Kassin, Fein, & Markus, 2008; Kawakini, Dion, & Dovidio, 1998). Thus, an individual can begin to engage in stereotyped thinking when they are unknowingly exposed to a subtle stereotype cue or association. This is particularly relevant in this particular context. Of interest here is whether race serves as a cue for stereotyped thinking during violence risk assessments.

Although automatic, there is evidence to suggest that individuals can exhibit control over the extent of the stereotype activation. Research has shown that individuals made consciously aware of a stereotype cue or who are driven by an intrinsic motivation (e.g., maintain a consistent social view) are able to curtail the extent and influence of automatically activated stereotypes. For instance, studies on jury decision-making in cross-racial legal cases (i.e., White jurors and Black defendant) have shown that making race and/or racial bias salient during court proceedings can significantly reduce the likelihood of racially prejudiced stereotyped judgments. Pfeifer and Ogloff (1991) presented White mock jurors with an ambiguous legal trial in which a Black defendant was accused of a crime against a White victim. Jurors were randomly assigned to either a racial bias-salient condition, whereby jury instructions were given which reminded jurors not to let racial bias influence their guilt determinations, or a non-race-salient condition (no jury instruction about racial bias). The authors found that jurors in the non-racial bias-salient condition were significantly more likely to find the Black defendant guilty (guilty: 83%,

not guilty: 17%) than those in the racial bias-salient condition (guilty: 38%, not guilty: 62%). The authors concluded that individuals were more likely to rely on pre-existing biases (i.e., racial stereotypes) in ambiguous decision-making situations. However, individuals were less likely to engage in biased decision-making when made consciously aware of such a tendency. Similar jury decision-making studies which use witness testimony as a means of making race a salient issue (e.g., testimony suggesting the incident involved racial slurs) have also documented a significant race/racial bias-salient effect (Sommers, 2006, Cohn et al., 2009).

The likelihood of controlling stereotyped thinking and racial biased stereotypes in particular will also depend on the individual's intrinsic motivation. It is documented that although many people may harbor negative stereotypes about outgroup members, they do not always act on them, as it may conflict with their desired social image. Devine (1989), for instance, demonstrated that White individuals who outwardly regard themselves as low-prejudiced, but evidence implicit prejudice towards Blacks are able to inhibit their automatic negative stereotypes. Devine predicted that these individuals will prohibit the explicit expression of a stereotype in order to maintain their egalitarian image. Thus, it is likely that concerns for not being perceived as racially biased will reduce the likelihood that race will be negatively used in decision-making.

Stereotypes, because they are indiscriminate, exaggerate correlations of behavior, and are automatically activated and easily triggered, pose significant problems for decision-making. In addition to increasing errors in judgment, stereotyped thinking has been shown to be influential in the formation of prejudicial attitudes and acts of discrimination toward out-group members (Kawakini, Dion, & Dovidio, 1998). I argue that such is the case with clinical decision-making. Specifically, it is believed that the apparent disparities in psychiatric services stems from the

prevailing stereotype that associates Blacks with violence and dangerousness. This claim, which has been only sparingly made in the mental health literature (Flaherty & Meagher, 1990; Garb, 1997), holds that such a stereotype leads to perceptions of Blacks as having more debilitating disorders (i.e., schizophrenia), more in need of coercive services (i.e., over-representation in emergency treatment), and less suited for effective treatment (under-representation in psychotherapy services). Furthermore, I argue that this stereotype is particularly relevant in risk assessment practices with evidence suggesting that clinicians deem Blacks as having a higher propensity for future violent behavior.

Conclusion

The evidence indicating racial disparities in psychiatric care is robust. In general, Black individuals with mental illness are more likely than other racial groups to be diagnosed with a psychotic disorder (Fesithamel & Schwartz, 2006; Schwartz & Fesithamel, 2009), placed in emergency psychiatric treatment (Chow, Jaffee, & Snowden, 2003; Spector, 2001), and remain absent from effective psychotherapy services (Walkup et al., 2006). Explanations for these systemic disparities must go beyond simple claims of cultural differences in pathology and service utilization to suggest that a clinical bias prevails in mental health practices. One cannot ignore the profound impact that negative racial attitudes and stereotypes towards Blacks in America have had on psychiatric treatment practices and decision-making. Thus, in order to understand the extent of the previously mentioned disparities, one must first closely examine the way in which race works to bias the decisions of clinicians.

One area of psychiatric service in which issues of clinical bias have become particularly salient is violence risk assessments. A review of the literature on violence risk assessments shows that race continues to be used as a proxy for violence appraisals though it has been found

to have little bearing on one's propensity for violence. This is especially true for inpatient settings, where impressionistic violence appraisals are commonplace. While the data on biased predictions is convincing, few studies have adequately addressed the issue of race. Studies by McNeil and Binder (1995) and Hoptman et al (1999) confirm that clinicians do tend to over-predict the violence potential of Black individuals with psychiatric disorders. Conclusions naming racial bias as the underlying mechanism, however, are limited due to the correlational nature of these studies. To date, only one study has used experimental methods to directly examine the effect of race on opinions of violence. Lewis, Croft-Jeffreys, and David (1990) found that British psychiatrists presented with hypothetical case vignettes (manipulating race and gender while holding all other variables constant) made significantly higher estimates of violence for Black males. However, these findings are limited in several ways. First, the use of both race and gender limits any inference that can be made regarding the isolated role that race may play in clinical judgments. Also, because the study was conducted in Great Britain, generalizations regarding racial perceptions and the role of racial stereotypes in the United States are limited. Also, because the study is dated, it is likely that significant advances in risk assessment practices and competencies have been made between 1990 and the present.

In addition to these limitations in research attempting to examine the extent of the role of race in violence risk assessments, no attempt has been made to examine ways to reduce its influence in decision-making. Borrowing from research on jury decision-making, it is evident that making individuals aware of the biasing effect of race and stereotype thinking can significantly reduce its role in decisions. Thus, not only is more research needed which experimentally examines decision-making bias in violence assessments, but more importantly, additional attention must be given to addressing ways to reduce such bias.

CHAPTER 3: INTRODUCTION TO RESEARCH CONDUCTED

While existing studies in the risk assessment literature support the argument of racial bias in clinical decision-making, the results are considerably limited in breadth and scope. As mentioned, the correlation design of McNeil and Binder (1995) and Hoptman et al (1999) limit conclusions regarding the causal role of race. Although the Lewis, Croft-Jeffreys, and David (1990) methodology does attempt to assess causation, the use of both race and gender confounds the picture and does not allow for direct investigations to be made regarding the independent role of race. This study is dated and may not be generalizable to U.S. populations. In addition to these limitations, no attempt has been made to reverse the racial effect. Thus, more studies are needed which both adequately examines the role of race in violence risk assessments as well as ways to reduce its biasing effects.

The current study sought to resolve the above-mentioned shortcomings by focusing specifically on the perceptions of the decision-maker. Here, a case vignette technique similar to that employed by Lewis, Croft-Jeffreys, and David (1990) was used to assess differences in the way clinicians rate the violence potential for Black and White psychiatric populations. The advantages of the vignette methodology were two-fold. First, this experimental methodology allowed for key variables to be manipulated while holding constant all other potential confounding variables. Thus, the role and effect of race was independently assessed. Second, such methodology allowed for participants to be randomly assigned to different experimental conditions. It was proposed that findings obtained through this method would add greatly to existing research on racial bias in psychiatric services in general and risk assessments in specific.

The current study also sought to expand upon the existing research by attempting to reduce the role of race in decision-making. Specifically, an attempt was made to show that in

ambiguous decision-making situations, clinicians will be more likely to rely on biased pre-existing beliefs. With regards to this particular study, it is the pre-existing belief that Blacks are more prone to violence. Investigated here was whether making individuals aware of the potential for biased decision-making would significantly reduce the likelihood that race would be used as an unintended factor in their judgments of violence.

Overview and Purpose of Study

Significant disparities exist in the care and treatment of Black mentally ill individuals. Black psychiatric individuals are more likely to be diagnosed with a psychotic disorder, subjected to greater use of behavior-control methods, and expected to become violent in the future. It was argued here that these disparities do not stem from differences in real-world behaviors, but rather biases in clinical judgment. Specifically, I proposed that the stereotype that associates Blacks with violence underlies many of the routine decisions that clinicians make when servicing Black psychiatric individuals. To test this argument, an investigation was made in to the decision-making tendencies of clinicians performing violence risk assessments. I further proposed that making clinicians preemptively aware of such biased tendencies can significantly alter their decisions and reduce the role of race in clinical judgments.

Methods

Design

To examine the effect that race and bias-salience has on violence predictions, a between subjects design was employed, with the independent variables of patient race (White, Black) and bias salience (Non-salient, Salient). Analyses explored variations within the independent variables on the various violence prediction measures (dependent variables).

Participants

As this study was interested in exploring clinical decision-making, two groups of participants were recruited: advanced doctoral students and licensed mental health professionals. The following eligibility criteria were established for the two groups:

Advanced doctoral students. Doctoral students that are currently enrolled in a clinical or counseling psychology training institution (Ph.D. and Psy.D.) and who were at least within their fourth year of training at the time of the study were eligible for inclusion in the study. Prior experience conducting risk assessments or experience in an inpatient setting was not required.

Mental health professionals. Psychiatrists and psychologists with at least one year of experience in an inpatient setting were also eligible for inclusion in the study. Residents in training, post-doctorate positions, and both licensed and non-licensed psychologists were all eligible to participate. Prior experience with conducting risk assessments was not required.

In attempt to satisfy the effect size needed for significance, a recruitment goal of 200 participants was established. Ideally, this intended sample size of 200 would allow for 25 participants to be assigned to each of the four conditions (based on predetermined analysis of power). This goal aimed to have 100 advanced doctoral students and 100 mental health professionals. Beginning in June, 2012 and continuing until March, 2013, a snowball sampling technique was used in which participants were recruited through personal and professional networks of various doctoral programs and psychiatric hospitals throughout the New York City area (snowball sampling is an effective sampling method often employed when a target population is difficult to obtain, Stangor, 2011). Email advertisements containing a brief description of the study, eligibility criteria, and a link to the web-based survey was sent to potential participants within these networks. Doctoral programs that were specifically targeted as where information was disseminated through contacts included: Adelphi University, Long

Island University-Brooklyn, Long Island University-Post, Teacher's College, Yeshiva-Ferkauf, Fordham University, Rutgers University, St. John's University, and City College. Licensed professionals were recruited through connections at local hospitals and service organizations, including Kings County Hospital Center, Bronx-Lebanon Hospital Center, UMDNJ, and Pathways to Housing. A second phase of recruitment expanded efforts to include personal and professional networks throughout the United States and Canada, including Indiana University, Nova University, Boston University, and supervisors at all psychology externship training programs in New York City. These recruitment efforts resulted in a total 109 participants who began the survey. Of these 109 participants, 73 (67%) fully completed the study, while 17 (19%) answered enough questions to be included for most analyses. In total, 90 participants were listed in the study, well below the intended recruitment goal. It is likely that this study's participant sample number was due in part to the difficulty with recruiting from a professional population. In addition, there is evidence that 19 individuals who began the survey did not proceed, possibly because they were aware that the project would be assessing racial bias (although this information was not disclosed in the consent form) and selected themselves out of the project (the possible impact that this may have on findings will be discussed further).

Procedure

Eligible participants were directed to the web-based survey to complete the study. The study was designed on interactive internet-based format called surveymonkey.com. Participants were informed that their participation in the survey was voluntary and anonymous (see Appendix A). Participants were informed that the purpose of the study was to explore clinical decision-making in an inpatient setting. Participants were not informed of the true purpose of the study

(explore the relationship between race and violence predictions) as it would potentially compromise findings.

After obtaining informed consent, participants were randomly assigned to one of four conditions. In each condition participants were asked to read a hypothetical case vignette and answer a series of questions about the vignette. Each vignette consisted of a four-paragraph summary describing the profile of a newly admitted inpatient male. The first paragraph contained instructions for the participants. The second paragraph served as mental status exam, briefly describing the patient's psychiatric profile, reason for admission, and symptoms. The third paragraph detailed the history of patient's illness. The fourth paragraph described the patient's recent behaviors on the inpatient unit. Specifically, this section stated that the patient has been observed around the unit to be increasing in agitation, belligerent, argumentative toward staff, and constantly speaking in an elevated tone. See Appendix B for the full vignette.

Manipulations. The vignettes were the same for each condition with exception of the following two manipulations: *race of the patient* (Black, White) and *bias salience* (Non-salient, Salient). For the *race of patient* manipulation, the patient in the case vignette was described in the mental status section (second paragraph) as being either of a Black or White racial identity. For instance, the patient was described only *once* as being either a "thirty-six year old Black male," or a "thirty-six year-old White male." All other identifying information remained the same for each condition. In light of findings indicating the significant positive correlation between high poverty neighborhood and violence (Monahan et al, 2001), a neutral location descriptor ("general hospital located in a large city") was included in the instructions and held constant throughout each vignette. This served to reduce the potential confounding effects of

assumptions about the connection between neighborhood type and race on violence risk assessments.

For the *bias salience* manipulation, clinicians were either provided with a statement embedded within the instructions stating that they should be careful not to rely on biased or prejudicial beliefs when reaching a decision ('Salient' condition: "please be careful not to let pre-existing beliefs or biases factor into your decisions") or instructions without such a statement ('Non-salient' condition). Thus, each participant was presented with vignettes containing one of the four following types of manipulations: White/Non-salient, Black/No-salient instructions, White/Salient or Black/Salient.

After reading the vignette, participants were instructed to answer questions regarding their impressions and judgments of the hypothetical case. Specifically, participants were asked about the diagnosis, cause of hospitalization, suicide risk, violence risk, and various treatment decisions. For questions about diagnosis, participants were asked to choose between a list of disorders that they believed most accurately described the patient. For questions regarding the cause of hospitalization, participants were asked rank on a scale of 1 to 5 (1 = *most important factor*, 5 = *least important factor*) which factors they believed were the cause of the patient's behaviors and admission to the hospital (i.e. delusional thinking, impulsivity and aggression). For the violence risk questions, the study's main dependent variables, participants were asked to predict the likelihood that the patient would be verbally or physically aggressive at some point within a week (short-term) and within three months following discharge (long-term). Additionally, participants were asked to predict the likelihood that the patient would commit a serious violent act within three months following discharge (long-term). Prediction estimates were made on a gradual percentage scale (e.g., 0% *not likely to be aggressive* to 100% *likely to*

be aggressive). After completing each prediction measure, participants had to indicate their level of confidence in their decisions (gradual percentage scale: 0% *confident* to 100% *confident*). Next, participants were asked to choose from a list of immediate and long-term treatment recommendations (i.e., immediate: psychotropic medication, seclusion; long-term: outpatient psychotherapy, no services). Questions regarding diagnosis and treatment recommendations were included in order to explore further the findings in the research depicting racial disparities in diagnostic patterns, inpatient interventions, and outpatient treatment referrals (Appendix C). Following the decision-making questionnaire, participants were instructed to complete a brief demographics questionnaire. They were asked to indicate their age, gender, race, level of training, and prior experience on an inpatient setting and with violence risk assessments. See Appendix D.

Following the demographics section, participants were also asked to answer a series of additional questions about relevant facts from the vignettes (i.e., "The patient was of what race?" "Did your instructions include the following statement: *Please be careful not to let pre-existing beliefs and biases factor into your decision-making*"). These multiple choice fact-recall questions served as the manipulation check. See Appendix E. Participants were then debriefed and informed of the true purpose of the study. See Appendix F.

Data analysis

A 2 X 2 analysis of variance was used to assess the effect that the independent variables (race, bias salience) had on the dependent variables (violence predictions). Of particular interest was whether violence prediction ratings differed according to race, bias salience and/or their interaction.

Predictions

Violence predictions. Consistent with prior research showing greater rates of violence in the short-term, a significant difference was expected to emerge between the immediate and long-term violence estimates. Specifically, it was hypothesized that higher ratings would be given for predictions of immediate aggression (within a week) when compared to predictions of long-term aggression (within three months following discharge). This finding was predicted to remain consistent across all four conditions.

Race and violence predictions. Consistent with prior research, it was predicted that significant differences would emerge based on the race of the case vignette. Specifically, it was hypothesized that participants with case vignettes involving a Black psychiatric patient would result in significantly higher ratings on all measures of future violence (likelihood of immediate violence, likelihood of long-term violence, and frequency of violence) than those involving a White patient.

Bias salience and violence predictions. It was predicted that significant differences in violence predictions would emerge based on bias salience. Specifically, it was hypothesized that participants whose vignettes did not contain instructions reminding them of potential biased decision-making would give significantly higher ratings of violence on all measures of future violence than participants whose vignettes do contain said instructions.

Race, bias salience, and violence predictions. It was also predicted that race and bias salience combined would have a significant effect on predictions of future violence. Specifically, it was hypothesized that participants with case vignettes describing a Black psychiatric patient without being given instructions about potential biased decision-making (Black/Non-salient condition) would give significantly higher ratings on all measures of future violence compared to all other conditions. Conversely, it was believed that violence appraisals would be lower in the

'Black/Salient' condition relative to the 'Black/Non-salient' condition. In other words, participants would give lower prediction ratings of violence for Black psychiatric patients if they were made aware of such biases ahead of time.

Results

Sample Demographics

Table 1 lists demographic characteristics of the overall sample. As can be seen in Table 1, the participant sample consisted mainly of women: a finding that is consistent with the current gender breakdown in the profession of psychology (Cynkar, 2007). Most of the participants in this study were White/European American and in their mid 30's. Of those who reported their training, almost half were advanced doctoral students. Seventy-four percent of those who identified as mental health professionals were certified licensed clinicians (psychologists/psychiatrists). The overwhelming majority of participants stated that they had previous experience in an inpatient setting and experience with violence risk assessments.

Demographics of Participants Assigned to the Four Conditions

As mentioned previously, all study participants were randomly assigned to one of four conditions. Table 2 lists the demographic characteristics of participants assigned to each condition. The White/Salient condition had the largest number of participants (n = 30), relative to all other groups (each condition: n = 20). As can be seen in Table 2, there were no significant differences in participant characteristics between the four conditions. However, chi-square analysis found a non-significant trend for degree of violence risk assessment experience, with 43% of participants in the White/Salient condition having no prior violence risk assessment experience.

Table 1: Demographic characteristics of the sample

Variable		***Participant Sample*** *(n = 90)* *n*	*%*
Gender:	Male	17	19
	Female	71	79
	Missing	2	
Race/Ethnicity:	Black/African American	4	4
	Asian/Asian American	10	11
	White/European American	65	72
	Hispanic/Latino(a)	4	4
	Pacific Islander	0	
	Native American/American Indian/Alaskan Native	0	
	Multiracial/Multicultural	5	6
	Missing	2	
Training:	Fourth-year doctoral student	21	23
	Fifth-year doctoral student	14	16
	Sixth-year doctoral student	7	8
	Seventh-year & above doctoral student	0	
	Post-doc/non-licensed psychologist	10	11
	Licensed psychologist/psychiatrist	28	31
	Medical resident	0	
	Missing	10	
Inpatient exp.:	Yes	68	76
	No	21	23
	Missing	1	
Risk assessment exp.:	Yes	61	68
	No	28	31
	Missing	1	
		Mean(SD)	
Age		33.3(8.05)	

Table 2: Demographic characteristics of the sample by randomly assigned condition

Variable		**White/ Non-salient** *(n= 20)*		**Black/ Non-salient** *(n= 20)*		**White/ Salient** *(n= 30)*		**Black/ Salient** *(n= 20)*				
		n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	χ^2	***Df***	***P***
Gender	Male	2	10	3	16	5	17	7	37	5.15	3	.161
	Female	18	90	16	84	25	83	12	63			
Race/Ethnicity	Black/African American	0	0	0	0	3	10	1	5	11.0	12	.528
	Asian/Asian American	2	10	4	21	3	10	1	5			
	White/European American	17	85	13	68	19	63	16	84			
	Hispanic/Latino(a)	0	0	1	5	3	10	0	0			
	Multiracial/Multicultural	1	5	1	5	2	7	1	5			
Training	Advanced doctoral students	11	69	9	47	12	46	10	53	2.32	3	.510
	Mental health professionals	5	31	10	53	14	54	9	47			
Inpatient Experience	Yes	17	85	14	70	22	73	15	79	1.50	3	.682
	No	3	15	6	30	8	27	4	21			
Risk Assessment Experience	Yes	14	70	18	90	17	57	12	63	6.51	3	.089
	No	6	30	2	10	13	43	7	37			

Violence Predictions

The study was primarily concerned with the following five predictions of future violence: short-term verbal aggression (verbal aggression occurring within a week of hospitalization); short-term physical aggression (physical aggression/violence occurring within a week of hospitalization); long-term verbal aggression (verbal aggression occurring within three months after discharge from hospital); long-term physical aggression (physical aggression/violence occurring within three months after discharge from the hospital) and; long-term serious violence (a serious violent act occurring within three months after discharge from the hospital). The characteristics of each violence prediction rating are described below.

Short-term verbal aggression. Prediction ratings of verbal aggression occurring within a week of hospitalization ranged from 10-100%. The average rating of short-term verbal aggression was 83.8 (*SD* = 17.8), the highest of all violence prediction estimates. Ratings for this measure were negatively skewed (*skewness* = -2.06; *kurtosis* = 5.66), suggesting that within all of the conditions there was a bias toward giving higher ratings of short-term verbal aggression.

Short-term physical aggression. Estimates of physical aggression occurring within a week of hospitalization ranged from 5-99%, with an average score of 59.9 (*SD* = 22.2). Prediction estimates for this measure were negatively skewed (*skewness* = - 0.46; *kurtosis* = -0.40), suggesting a slight bias within all conditions toward giving higher estimates of short-term physical aggression.

Long-term verbal aggression. Estimates of verbal aggression occurring within 3 months post-discharge ranged from 5-100%, with an average score of 65.9 (*SD* = 25.2). Ratings

on this measure were negatively skewed (*skewness* = - 0.66; *kurtosis* = -1.43), suggesting a slight bias toward higher estimates of long-term verbal aggression in all conditions.

Long-term physical aggression. Estimates of physical aggression occurring within 3 months post-discharge ranged from 4-100%, with an average score of 42.1 (*SD* = 22.2). Prediction estimates on this measure were positively skewed (*skewness* = 0.46; *kurtosis* = 0.003), suggesting a slight bias toward lower estimates of long-term physical aggression all conditions.

Long-term serious violence. Estimates for long-term serious violence ranged from 1-85%. The average rating of long-term serious violence was 23.4 (*SD* = 19.1), the lowest of all of the violence prediction measures. Ratings on this measure were positively skewed (*skewness* = 1.20; *kurtosis* = 1.21), suggesting there was bias in all conditions toward giving lower ratings of potential long-term serious violence within a three-month period following discharge.

Violence Predictions, Race, and Instruction Salience

A two-way analyses of variance test was conducted to examine the impact that Race, Bias salience, and their interaction had on the five predictions of violence. Table 3 lists findings for the relationship between predictions of future violence by Race, Bias salience and the Race x Bias salience interaction. The results of these effects are shown in Table 3 and summarize below.

Short-term verbal aggression. It was first hypothesized that participants exposed to case vignettes involving a Black psychiatric patient would give higher estimates of short-term verbal aggression. As can be seen in Table 3, there was no significant main effect for race on ratings of short-term verbal aggression. Estimates of short-term verbal aggression were similar for case vignettes involving both White and Black psychiatric patients.

It was hypothesized that providing participants with instructions reminding them of potential biases in decision-making would decrease their estimates of short-term verbal aggression, regardless of race. As can be seen in Table 3, no evidence was found to support this hypothesis. There was no significant difference in short-term verbal aggression estimates for those who either did or did not receive instructions about potential decision-making bias.

It was also hypothesized that race and instruction salience together would significantly impact ratings of short-term verbal aggression, such that participants exposed to case vignettes describing a Black psychiatric patient but with no instructions reminding them of potential bias in decision-making would give higher overall estimates of short-term verbal aggression. Contrary to this hypothesis, no significant interaction effect was found between the two independent variables and short-term verbal aggression. Thus, participants gave similar estimates of short-term verbal aggression for all of the four race-instruction salience conditions.

Short-term physical aggression. A univariate analysis was also used to determine the impact that race, instruction salience, and their interaction had on ratings of short-term physical aggression. It was predicted that participants would give higher ratings of short-term physical aggression for case vignettes detailing a Black psychiatric patient. No statistical evidence was found to support this hypothesis. As can be seen in Table 3, the race of the patient did not significantly affect estimates of short-term physical aggression.

Table 3: Univariate ANOVAs in the five dependent variables compared between the four independent conditions

	Black N= 40		**White N= 50**		**Race**		**Bias Salience**		**Race x Bias Salience**	
	Nonsalient *M(SD)*	Salient *M(SD)*	Nonsalient *M(SD)*	Salient *M(SD)*	*F*	*P*	*F*	*P*	*F*	*P*
Predictions										
Short-term verbal aggression	83.5(22.2)	83.8(13.6)	80.3(16.0)	86.3(18.1)	0.01	0.93	0.78	0.38	0.50	0.48
Short-term physical aggression	63.5(21.4)	61.2(23.9)	53.8(19.1)	60.6(24.0)	0.86	0.36	0.18	0.67	0.86	0.36
Long-term verbal aggression	67.5(28.4)	58.8(19.8)	70.9(19.7)	65.8(29.0)	0.63	0.43	1.20	0.28	0.10	0.75
Long-term physical aggression	46.4(22.3)	39.7(25.2)	42.3(19.4)	41.0(22.7)	0.09	0.76	0.60	0.44	0.29	0.59
Long-term serious violence	29.2(20.4)	22.5(19.1)	19.1(14.0)	23.1(21.1)	1.03	0.31	0.07	0.79	1.63	0.21

It was hypothesized that participants in the instruction salience conditions would show lower scores of short-term physical aggression compared to those who did not receive the instructions. Contrary to this hypothesis, there was no significant effect of instruction salience on estimates of physical aggression. Thus, participants reminded of potential bias in decision-making did not differ from participants who were not explicitly reminded of decision-making bias in their estimates of short-term physical aggression.

It was also hypothesized that an interaction effect would be found for ratings of short-term physical aggression. As can be seen in Table 3, no significant effect of the interaction of race and instruction salience was found for this measure. Participants presented with case vignettes describing a Black psychiatric patient with no instructions about decision-making bias did not differ in their ratings of short-term physical aggression than those in the other three conditions.

Long-term verbal aggression. It was predicted that race would significantly affect ratings of long-term verbal aggression, such that higher ratings would be given for case vignettes describing a Black psychiatric patient. Contrary to this hypothesis, no significant effect was found for race on this measure. There were no significant differences in predictions of long-term verbal aggression for Black and White conditions.

Instruction salience was also hypothesized to significantly influence ratings of long-term verbal aggression with higher estimates associated with vignettes that did not contain instructions about decision-making bias. There was a pattern for ratings of long-term verbal aggression to be lower among participants assigned to the “salient” condition for both the White and Black conditions, but it was not statistically significant.

It was also predicted that race and instruction salience together would affect ratings of long-term verbal aggression. Specifically, participants given vignettes describing a Black psychiatric patient with no instructions of decision-making bias would give higher estimates of long-term verbal aggression. Contrary to this hypothesis, no significant interaction was found for this measure, suggesting that there were no differences in ratings of long-term verbal aggression among the four conditions.

Long-term physical aggression. It was predicted that racial differences would emerge for long-term physical aggression with higher ratings on this measure being found in the Black conditions. Contrary to this hypothesis, no significant differences in ratings were found between White and Black conditions. Participants viewing vignettes involving Black psychiatric patients did not significantly differ from those who saw a White psychiatric patient in their beliefs regarding the likelihood of a physical act occurring within three months after discharge.

It was predicted that significant differences in ratings of long-term physical aggression would emerge according to bias salience. Specifically, it was believed that participants who did not receive the added instructions about bias potential would give higher ratings on this measure than those who did receive the instructions. No significant differences were found on this variable as participants with and without bias instructions gave similar ratings of long-term physical aggression.

It was also hypothesized that a race and bias salience would have a combined effect on ratings of long-term physical violence. Specifically, participants in the Black/Non-salient condition would give higher ratings on this measure than participants in all other conditions. No significant Race x Bias salience interaction was found for long-term violence predictions.

Long-term serious violence. Finally, it was predicted that ratings of long-term serious violence would differ by race, with cases involving a Black psychiatric patient being assigned significantly higher estimates of potential long-term serious violence. Contrary to this hypothesis, no racial effect was found on this prediction measure. Participants did not differ in their predictions of long-term serious violence for Black and White case vignettes.

It was predicted that ratings of long-term serious violence would vary depending on the presence or absence of instructions regarding potential bias in decision-making. Specifically, it was believed that cases with no instructions would be assigned higher estimates of long-term violence potential. No significant differences in ratings on this measure were found. The presence or absence of instructions did not significantly alter ratings of long-term serious violence potential.

This study was also interested in exploring the effect that race and instruction salience would have on predictions of future serious violence. As can be seen in Table 3, a trend was evident for the interaction on ratings of long-term serious violence. Specifically, participants assigned to the Black/Non-Salient condition gave ratings of serious violence risk that were roughly 10 percentage points higher (or roughly half of a standard deviation) than participants who were assigned to the White/Non-Salient condition. As it was suspected that the use of the two-way ANOVA may have made it difficult to detect an effect given the relatively small study sample size, a supplemental analysis was conducted to determine if there was a significant difference between the Black/Non-Salient and White/Non-Salient conditions for serious violence ratings. An independent samples T-test comparing only these two groups revealed that there was non-significant trend for participants in the Black/Non-Salient condition to give higher ratings of

potential long-term serious violence than participants in the White/Non-Salient condition, ($t(35) = -1.78$, $p = .084$).

Manipulation checks

Two manipulations were used for this study, race and bias salience. In order to evaluate the strength of the these two manipulations, participants were asked to indicate via multiple choice the race of the individual described in the vignette (choose between White, Black, Hispanic, Other) as well as whether or not they received instructions informing them to be careful of pre-existing biases in decision-making. For the race manipulation 78% of the participants in the White conditions acknowledged recognition of a White patient (20% indicated a different race and 2% did not answer), while 87.5% of the participants in the Black conditions acknowledged recognition of a Black patient (5% indicated a different race and 7.5% did not answer). For the bias salience manipulation, 81.6% of the participants in the Non-salient conditions indicated that they did not see the bias instructions (13.2% indicated that they did and 5.26% did not answer), 79.6% of the participants in the Salient conditions indicated that they did recognize the bias instructions (18.4% indicated that they did not and 2.04% did not answer). These findings suggest that each condition passed the manipulation checks indicating strong effects.

Further analysis was conducted to explore the potential effects associated with looking solely at participants who passed the manipulation checks. This re-analysis brought the findings closer to significance for the following variable relationships: Bias salience and Short-term Verbal Aggression, $F(1) = 2.77$, $p = 0.10$, Race and Serious Long-term Violence, $F(1) = 2.35$, $p = 0.13$. Specifically, re-analysis revealed a non-significant, yet stronger tendency of participants who passed the bias instruction manipulation to give lower ratings of short-term verbal

aggression when not given an instructional reminder of potential bias (Non-salient: *M*= 83.2, *SD*= 18.8; Salient: *M*= 84.7, *SD*= 17.0). A (non-significant) pattern was also found suggesting that participants who passed the race manipulation were more likely than the larger participant sample to give higher ratings of future serious violence to black psychiatric patients (White: *M*= 20.2, *SD*= 14.8; Black: *M*= 26.4, *SD*= 20.1). Again however, these two findings moved closer to significance, but did not reach a level of statistical significance.

Violence Predictions and Participant Demographics

The relationship between participant demographics and predictions of violence risk in the study sample was also examined. Table 4 lists ratings of violence risk for the 5 study dependent variables by sample demographic characteristics. Findings for each category of demographic variables are summarized below.

Gender. A significant relationship was found between participant gender and ratings of short-term physical aggression, $t(82) = -2.254$, $p = .027$. As can be seen in table 4, female participants ($M = 62.7$, $SD = 21.0$) gave significantly higher ratings of short-term physical aggression than male participants ($M = 49.3$, $SD = 23.1$). There was also a non-significant trend in ratings of long-term verbal aggression, with male participants ($M = 74.5$, $SD = 23.9$) giving higher estimates of long-term physical aggression relative to females ($M = 64.8$, $SD = 24.6$), $t(79) = 1.391$, $p = .168$.

Race and Age. No significant differences in prediction ratings were found among participant race/ethnicity. However, non-significant but notable differences were found when combining racial categories. As can be seen in table 4, Hispanic/Latino(a) participants gave the highest ratings on four of the five measures of future violence relative to all other races/ethnicities. Hispanic/Latino(a) participants gave noticeably higher ratings than all other

races combined on measures of long-term verbal aggression (Hispanics: M = 88.3, SD = 10.4; Others: M = 65.2, SD = 25.5) and long-term serious violence (Hispanics: M = 48.8, SD = 25.9; Others: M = 22.06, SD = 18.2). It was also found that Black/African American participants gave the lowest ratings of long-term serious violence (M = 15.8, SD = 9.43), relative to all other races combined (M = 23.7, SD = 19.7). There was no significant correlation found between participant age and any of the violence prediction ratings.

Training. The study was also interested in the effect that participant training would have on predictions of violence. For the purpose of analysis, study participants were placed into the following two categories: advanced doctoral students (i.e. doctoral students in their fourth year of training and up) and mental health professionals (i.e. post-doc/non-licensed psychologist, licensed psychologist/psychiatrist, medical resident). Of the two categories of training, a non-significant pattern was observed for ratings of short-term physical aggression, $t(74) = 1.307$, $p = .195$. As can be seen in table 4, advanced doctoral students ($M = 62.2$, $SD = 20.0$) had notably higher ratings of short-term physical aggression when compared to mental health professionals ($M = 53.5$, $SD = 25.4$).

Table 4: Ratings of violence risk by participants' demographic characteristics

Variable		**Short-term Verbal Aggression** *M(SD)*	**Short-term Physical Aggression** *M(SD)*	**Long-term Verbal Aggression** *M(SD)*	**Long-term Physical Aggression** *M(SD)*	**Long-term Serious Aggression** *M(SD)*
Gender	Male	80.9(22.7)	49.3(23.1)	74.5(23.9)	44.0(24.6)	22.6(20.5)
	Female	84.6(16.8)	62.7(21.0)	64.8(24.6)	41.5(21.5)	23.8(19.1)
Race/Ethnicity	Black/African American	91.3(14.4)	66.3(30.4)	61.7(29.3)	45.0(5.77)	15.8(9.43)
	Asian/Asian American	76.9(14.6)	53.4(32.3)	62.3(36.6)	42.5(31.1)	29.6(28.1)
	White/European American	83.8(18.8)	59.6(20.0)	66.1(24.7)	40.4(21.2)	21.2(16.8)
	Hispanic/Latino(a)	80.0(26.5)	66.7(15.3)	88.3(10.4)	50.0(0.00)	48.8(25.9)
	Multiracial/Multicultural	91.0(6.52)	56.0(24.6)	63.0(12.6)	46.0(17.8)	23.2(17.6)
Training	Advanced doctoral students	84.7(15.0)	62.2(20.0)	67.0(26.8)	44.6(24.1)	25.6(18.8)
	Mental health professionals	81.6(21.4)	55.3(25.4)	62.4(24.5)	39.0(19.8)	22.4(20.8)
Inpatient Experience	Yes	83.8(18.8)	58.5(22.1)	67.9(23.7)	41.0(21.1)	24.0(20.0)
	No	83.6(14.6)	63.3(22.9)	59.1(29.8)	43.8(25.0)	21.6(16.9)
Risk Assessment Experience	Yes	83.6(17.2)	58.7(24.1)	66.7(26.3)	42.8(22.9)	23.8(19.4)
	No	84.2(19.6)	61.7(17.6)	64.0(23.2)	39.3(20.0)	22.5(19.2)

Inpatient and risk assessment experience. The study was also interested in exploring whether previous experience on an inpatient setting and/or experience with violence risk assessments could significantly influence decisions of future violence. Though no significant effects were observed for inpatient experience, a pattern emerged between inpatient experience and long-term verbal aggression, $t(80) = 1.35$, $p = .182$, with participants with previous inpatient experience giving higher ratings of long-term verbal aggression ($M = 67.9$, $SD = 23.7$) than those reporting no inpatient experience ($M = 59.1$, $SD = 29.8$). Having previous risk assessment experience was not found to significantly impact violence predictions.

Race and Treatment Decisions

This study was also interested in exploring the relationship between race and various treatment decisions. The following treatment decisions were investigated: diagnosis, most likely cause of hospitalization, immediate treatment recommendations, and suitability for individual therapy.

Race and Diagnosis. Participants were asked to choose between three options of mental disorders for the psychiatric patient described in the vignette: bipolar, schizophrenia, and intermittent explosive disorder. Seventy-one percent of participants diagnosed the patient with schizophrenia. There was no significant racial difference in diagnosis of schizophrenia (Black = 28, White = 35).

Race and Cause of hospitalization. To examine the attributions individuals made regarding the patient's behavior, participants were asked to rank the following causes of hospitalization: irritation/agitation, treatment non-compliance, impulsivity and aggression, delusional thinking, inability to communicate needs. The majority of participants ranked impulsivity and aggression as the number one cause of the patient's hospitalization. It was

predicted that a racial difference would emerge such that participants in the Black conditions would rank impulsivity and aggression as the primary cause more often than participants in the White conditions. Contrary to this prediction, there was no racial difference in beliefs regarding the reasons for the patient's behavior and psychiatric admission.

Race and Immediate Treatment Recommendations. The study was also interested in exploring the affect of race on the immediate treatment options that participants would recommend for the patient. The following treatment options were listed: Individual therapy, group therapy, psychotropic medication, seclusion from other patients, one-to-one monitoring by staff, long-term hospitalization, and partial hospitalization. Ninety-six percent of participants recommended psychotropic medication as an immediate treatment option for the patient. A significant racial difference in recommendations for seclusion was found, X^2 (1) = 3.92, p = 0.047) such that participants assigned to the Black conditions were more likely to recommend seclusion than those in the White conditions. No significant racial differences were found for the other immediate treatment recommendations.

Race and Suitability for Individual Therapy. Participants were asked to decide whether the patient in the vignette was suitable for individual therapy. The overwhelming majority of participants believed that the patient was a suitable candidate for individual therapy (84%). There were no significant differences in the two racial conditions for this treatment decision.

Discussion

The present study was first interested in exploring potential patterns in clinical decisions of future violence. Several trends in decision-making were observed. Overall, there were significant disparities in predictions of violence, with participants being more likely to give

higher likelihood ratings of future violence for three prediction measures: short-term verbal aggression, short-term physical aggression, and long-term verbal aggression. Participants gave lower ratings for two violence predictions, long-term physical aggression and long-term serious violence. Furthermore, participants in all conditions were significantly more likely to rate the individual in the vignette as having a lower chance of committing a serious violent act within three months of being discharged from the hospital than all other acts of violence.

Secondly, and most important, the study was interested in examining the role that race and bias salience has on predictions of future violence. Overall, findings revealed that race and bias salience had little effect on four of the five measures of violence prediction. Participants who saw a case vignette detailing a Black psychiatric patient did not differ from those who saw a White psychiatric patient in their predictions of short-term verbal aggression, short-term physical aggression, long-term verbal aggression, or long-term physical aggression. Similarly, no significant differences in these four violence prediction measures were found for individuals that did or did not receive instructions reminding them of potential biases in decision-making. For the fifth measure of future violence, long-term serious violence, a notable pattern emerged. Though race and bias salience alone had little effect on predictions of long-term serious violence, the interaction of the two variables was found to influence this measure (though findings did not reach statistical significance). Specifically, participants who were exposed to a vignette detailing a Black psychiatric patient without being given instructions about potential biased decision-making were more likely to give higher ratings of potential long-term serious violence than all other participants. While findings were not statistically significant, the magnitude of the difference (roughly 10 percentage points greater assessed risk), suggests that there may have been a real difference that was not detected due to low statistical power.

In addition to exploring the impact that race and bias salience has on violence predictions, the study was also interested in exploring the influence that participant characteristics have on violence predictions. Several patterns were observed among the demographic variables. Females and advanced doctoral students gave significantly higher ratings of short-term physical aggression, relative to males and mental health professionals. Males, Hispanic/Latinos(as), and individuals with previous inpatient experience tended to give higher ratings of long-term verbal aggression. Additionally, Hispanic/Latino(a) participants were also found to give higher ratings of long-term serious violence.

Another aspect explored in this study was whether or not race would function to influence treatment decisions regarding diagnosis, cause of hospitalization, immediate treatment recommendations, and suitability for individual therapy. Of these decisions, a significant racial difference was found in decisions regarding immediate treatment options. Findings indicate that participants viewing case vignettes detailing a Black psychiatric patient were significantly more likely to recommend seclusion as an option for treating the individual than those who viewed a case vignette of a White psychiatric patient. This finding, when coupled with the above mentioned trend showing higher ratings of serious violence risk for Black psychiatric patients, suggests that the study may provide some support for the view that race is being used as a factor in assessing serious risk.

Despite findings in the literature suggesting a significant racial bias in predictions of violence, the current study found only partial evidence suggesting that race is a factor in the evaluation of future violence. Though race did not significantly augment predictions of short-term and long-term verbal and physical aggression, it did have a marginal effect on decisions regarding long-term serious violence potential, particularly in cases where there were no

instructions about biased decision-making. This finding of a relationship between long-term serious violence predictions and race lends itself well to the existing literature on violence predictions. First, as mentioned previously, clinicians are more accurate in predicting physical violence in the short-term rather than in the long-term (McNeil & Binder, 1995). This finding suggests that physical violence occurring in the long-term is more difficult to predict than violence occurring within a more immediate time frame. Indeed, this conclusion is supported by the findings illustrated in this study. As mentioned previously, participants overall gave considerably lower ratings for predictions of long-term physical aggression and long-term serious violence. Prediction ratings for long-term serious violence were the lowest of all measures, and were particularly low when the psychiatric patient was Black. It can be speculated that because participants at baseline have difficulty making long-term predictions of violence, adding race may further affect the decision-making process. In other words, it is possible that long-term violence is more difficult to predict and thus more sensitive to extraneous variables such as race. Conversely, it can be suggested that short-term predictions are less affected by variables such as race because clinicians in general prove to be more accurate when making these types of decisions.

Second, and in line with the above-mentioned suggestion, the role of race may be made salient only when discussing issues of serious violence. As stated previously, it was posited that the potential to over-predict violence for Black psychiatric individuals resulted from faulty clinical decision-making; decision-making predicated on the stereotype that Black individuals were more prone to violence, and thus more dangerous than their racial counterparts. Based on the findings in this current study, it can be speculated that this stereotype is activated more in decisions involving serious acts of violence and less in other contexts. However, it should be

noted that this was the only prediction measure in which the word “violence” was used; all other prediction measures in this study used the word “aggression.” Though it is difficult to assess which heuristics and beliefs are being activated when primed by race, it is strongly suggested in this study that Black psychiatric patients may be more closely associated with serious acts of violence rather than general acts of verbal or physical aggression. The finding in this study showing a significant increase in seclusion recommendations for Black psychiatric patients further supports this assumption. Though no significant relationship between race and seclusions rates have been found in existing research (Spector, 2001), the findings in this study of more frequent recommendations for seclusion and the higher estimates of future serious violence suggests that Black inpatients are seen as being more physically dangerous and thus more deserving of coercive measures of psychiatric treatment..

Though a pattern toward assigning higher ratings of potential long-term serious violence was evident, a more definitive and global conclusion regarding the strength of a racial effect cannot be made from the current findings. Race was found to affect only one of the five prediction measures; and only when comparisons were made regarding bias salience. There are several reasons why a more global effect of race was not found. One possible explanation is that the manipulations used in the study may not have been strong enough to influence decision-making. It is well documented in the literature that clinicians continue to use race as a predictor for violence, despite evidence showing that race does not correlate with acts of violence (Monahan et al., 2001). As mentioned previously, several studies on prediction accuracy reveal that race was a common factor in false positive decisions of future violence. Specifically, Blacks were erroneously predicted to be more violent, though no significant racial differences in actual violence exist. These findings led to the present study’s interest in experimentally testing the

isolated role of race in decision-making. Borrowing from the methodology used by Lewis, Croft-Jeffreys, and David (1990), an attempt was made to prime racial beliefs by including in the vignette a subtle one-time mention of the psychiatric patient's race. It was believed that including race would potentially activate stereotypes regarding Blacks and violence. However, this was only likely the case for specific and not global types of violence. It is possible that indicating the race alone was not enough to prime stereotypically beliefs regarding race. In Lewis, Croft-Jeffrey, and David (1990), both race and gender were explored and primed. The authors found that clinicians rated vignettes describing Black male psychiatric patients as having the highest potential for future violence. These findings suggest that race and gender together, specifically Black male, more strongly prime stereotypes of violence. Gender was not manipulated in this study and thus its potential additive effect on stereotyped thinking was not explored.

An interesting finding, which may also explain the lack of a main racial effect, is the unequal distribution of participants into the White/Salient condition. As illustrated previously, there were 30 participants in the White/Salient condition who completed the study relative to 20 participants in each of the other three groups. It was also reported that 19 participants (17%) attempted the survey but did not complete it. Given that the study employed a random assignment methodology whereby all potential participants had an equal chance of being assigned to a condition, it is possible that participants may have "selected out" of the other three conditions. It is speculated that participants may have 'selected out' of the other conditions because these conditions evoked more discomfort; a discomfort possibly related to the racial prime. This is despite efforts to conceal the purpose of the study. The White/Salient condition in theory was least likely to evoke discomfort due to race, so this might explain the unequal

distribution of participants in the 4 conditions. When individuals select out of a study, it compromises the equal distribution of participants into conditions. The participant demographic patterns in each group lend further support to this claim. The White/Salient condition also had higher numbers of individuals with less risk assessment experience, suggesting perhaps that they "selected out" of the other three conditions. It is possible that participant dropout rates may have weakened the study's ability to detect stronger and more global racial effects.

The additional findings regarding the relationship between participant demographics and violence prediction measures are also worth noting. First, analysis of the gender effect revealed that women were significantly more likely than men to believe that the described patient would be physically aggressive in the immediate future. It is possible that men were more reluctant to appraise the described patient (a male) as being physically violent, due perhaps to a possible in-group bias (Kawakini, Dion, & Dovidio, 1998). Another notable, but non-significant finding among the demographic variables was that Hispanic participants, though they accounted for only 5% of the sample population, recorded the highest ratings on four of the five prediction measures (e.g., almost 20 points higher than all other races on measures of long-term verbal aggression and long-term serious violence). Though beyond the scope of this study, such a finding suggests that possible moderating effects may exist regarding the race of the clinician making the judgment. The third demographic finding of interest is that of training and experience.

Limitations

There were several limitations evident with the current study. Perhaps the most fundamental limitation of this study is the size of the participant sample. The snowball participant recruitment method described earlier, though comprehensive in scope and proceeding over 9 months, resulted in 90 participants for this study, far below the target recruitment goal of

200 participants. The low number of participants significantly limited the number of participants assigned to each condition, thus reducing the power of each hypothesized effect. It is believed that increased numbers of participants would strengthen the trends in ratings of future violence and, more importantly, allow for more definitive comparisons to be made between the four conditions. In addition to the lower-than-expected sample size, the snowball sampling method may have also resulted in a biased participant sample. Because snowball sampling relies heavily on recruitment through other participants, it is possible that this may have resulted in a more willing and homogenous participant sample.

Another apparent limitation to this study was the use of a web-based research approach. As this study was interested in exploring the isolated role of race in decision-making, it was imperative to create a study that would allow for race to be manipulated while holding all other variables constant. A web-based research approach was thus ideal for this purpose as it allowed for the necessary experimental parameters to be established in order to test the effect. The web-based research approach also made it more convenient to disseminate the study to students and clinicians through United States and Canada, thus expanding the potential sample size. This approach, however, poses notable limits to the external validity of the findings. Many of the decisions targeted in the study do not reflect the clinical reality of interest. Though clinicians are often called- upon to assess psychiatric patients for violence risk, it is often done so with more patient information on hand (e.g., information regarding patient's discharge and aftercare plans, more observations on patient's behavior around the unit, direct interaction with the patient). Having access to more patient information would undeniably increase both accuracy and confidence in ratings future violence.

Future Directions

The findings from the current study, though limited, add significantly to the existing research on violence risk assessments. As mentioned earlier, only one study to date has attempted to look at the isolated role of race in violence risk assessments. It is clear that the issue of race has been given little attention in this area of clinical practice, though findings have consistently pointed to the existence of racial disparities in predictions. Practices in violence risk assessment would thus benefit from additional studies exploring both the tendency to over-predict violence in Black psychiatric populations and the ways in which this tendency translates into actual racial bias. To do this, future studies should more closely focus on understanding the decision-making process, particularly what aspects are being used to make decisions. Indeed, this was attempted in this current study as participants were asked to identify what they believed was the reason for the patient's hospitalization. Investigating specifically what factors were most important in their respective decisions of violence risk could extend this focus further.

Exploring the relationship between the decision-maker, patient race, and the violence predictions may also shed light on patterns of violence predictions. The lower than expected sample size in this study did not allow for an analysis to be conducted regarding how the race of the participant could moderate decisions of violence. This potential interaction was evidenced by the findings in this study showing variant rating patterns between Hispanic/Latinos(as) participants and the other racial/ethnic participants. It is possible that an interesting interaction effect would emerge when considering dispositional factors such as race.

Furthermore, exploring the impact that specific pre-existing judgments and stereotypes about Blacks may also shed light on the decision-making process. As mentioned previously, it is difficult to investigate beliefs and stereotypes about race, partly because they are likely to exist

on an implicit level and because for many they are uncomfortable to confront. Probing for the participant's pre-existing beliefs, either explicitly through a questionnaire or implicitly through the use of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) may function to predict which participants are likely to evidence higher or lower violence risk ratings.

There are also various recommendations specific to the current study design that can also be explored with future research. For instance, it was speculated that the lack of significant findings of a racial difference in prediction ratings was due to the strength of the study's manipulation. Future studies may seek to explore the effects of altering the manipulations, perhaps by including conditions with varying degrees of race salience. For example, one method might be to create a condition that, instead of identifying the patient's race, uses a name pre-determined to be a stereotypical Black name (less salient condition). Another condition could include more frequent references to the patient's race throughout the vignette (more salient condition). Since no evidence was found to support the isolated effect of the bias-salient instructions, perhaps making participants more aware of the racial bias would alter (reduce) violence risk ratings. For instance, changing the bias-instructions to state the following: please be careful not to allow pre-existing beliefs and biases about *race* factor into your decisions. Strengthening this manipulation would also help shed light on which pre-existing beliefs are in fact being activated during the decision-making process.

Implications

Taken together, the findings from the current study have significant implications for the psychiatric care of Black populations. Black psychiatric individuals are subjected to more discrepant, and in some respects, more coercive psychiatric care than other racial groups. Though this study failed to find support for a global racial bias in violence risk assessments, a marginal

bias for serious violence was evidenced. It can be assumed that these types of risk predictions, predicting the likelihood of a serious violent act occurring once discharged, are the most important of all. They are important because of the implications they pose for concerns of public safety and because of the prejudice that follows such an assessment. As the responsibility often lies solely on clinical judgment and decisions, it is important for clinicians to accurately identify which patients they believe will pose the biggest threats to public safety. However, systematically believing that Black psychiatric individuals are more prone to violence compromises any attempts at making accurate decisions. Furthermore, adhering to such a belief sends the implicit message that this population of individuals with mental illness requires coercive psychiatric care, most namely longer hospital stays and more public scrutiny.

The finding that Black psychiatric patients are viewed as being more prone to violence (serious violence in specific) and are perceived as being more appropriate for seclusion interventions, is particularly problematic for treatment within the hospital setting. It is likely that Black psychiatric patients who are perceived as having a greater propensity toward violence may not be afforded the most therapeutically appropriate interventions within the hospital milieu. These patients may not be provided with effective psychiatric care and thus may be more likely to rely on emergency psychiatric services in the future. By perceiving and treating Black psychiatric patients differently, clinicians are inadvertently limiting the treatment options available to them and disproportionately placing these individuals into facets of societal control (e.g., inpatient hospitalization, criminal justice system). These biased decisions can have far reaching consequences that keep Black individuals hospitalized and dependent on coercive psychiatric services. This could potentially have the inadvertent effect of fuelling the mistrust

between members of this population and the clinical decision-makers that are put in place to treat them.

It thus behooves clinicians and clinicians-in-training to become aware of not only the role of race in decision-making, but also the far-reaching consequences of biased decision-making. Steps must be taken to curb the racial disparities in psychiatric care in general and violence risk assessments in specific. The current study attempted to do just that. And although the recommendation of making individuals aware of their biases ahead of time did not significantly impact violence predictions, similar steps must be taken.

Appendix A

Informed Consent

Clinical Decision-making in Inpatient Settings
John Jay College of Criminal Justice/Graduate Center, CUNY

CONSENT TO PARTICPATE IN A RESEARCH PROJECT

Introduction/Purpose: You are invited to participate in this research study examining clinical decision-making. The purpose of this study is to understand and evaluate how clinicians make decisions regarding individuals in psychiatric inpatient settings.

Procedures: During this study you will be presented with a hypothetical case vignette describing an inpatient with a mental illness and asked to answer several questions regarding your impressions of the individual as well as judgments of future behavior. These questions are similar to those encountered in a typical inpatient setting. This study will take about 15 minutes to complete.

Possible Discomforts and Risks: The study poses no foreseeable risks to participants. The subject matter in this study is typical to what is normally encountered in a standard psychological experiment.

Benefits: The benefits to your participation in this study include that you may find the learning experience enjoyable and that the process may help you to better understand the types of decisions that clinicians routinely make. The results of this research may enhance our understanding of the clinical decision-making process, particularly as it pertains to inpatient settings. The information derived from this project may also lead to professional publications and presentations.

Voluntary Participation: Your participation in this study is completely voluntary and you are free to decline participation or withdraw at any time. If you find that a question being asked or the information presented in the study makes you uncomfortable, you are free to skip that question or discontinue with the study.

Confidentiality: The data obtained from you will be collected electronically via an online survey format. Participants' IP addresses will be tracked solely to ensure that individuals do not participate more than once. This information will be removed once all the data has been collected. No other personal or identifying information will be captured. The collected data will be accessible only to members of the research team and will be securely stored in a computer database.

Contact Questions/Persons: Please feel free to contact my advisor if you would like to discuss any aspect of the study. He can be reached at the following:

Philip T. Yanos, PhD
John Jay College of Criminal Justice, CUNY
Phone: (212) 237-8773
e-mail: pyanos@jjay.cuny.edu

Appendix B

Case Vignette- White/Non-Salient Condition

Instructions: Please read the following summary, which describes an individual that was recently admitted to the psychiatric ward of a general hospital located in a large city. After reading this case, you will be asked various questions regarding your impressions and judgments of future behavior.

Mr. J is a 36 year-old single White male who was recently admitted to an inpatient hospital following complaints by family members of odd and aggressive behavior and treatment non-compliance. According to his mother, Mr. J has been spending the majority of his time during the past few weeks in his room reading religious books and pacing around. She explained that when she does attempt to engage Mr. J, he quickly becomes agitated and verbally abusive, at times making statements such as "God is going to punish you for what you've done" and "the devil inside you must come out." He has also thrown objects and has damaged furniture (e.g., breaking a glass window and a lamp). Mr. J has stopped taking his antipsychotic medication over the last week and has become increasingly agitated.

It is reported that prior to his recent period of decompensation, Mr. J was generally adherent with his medication regimen. Although he was still frequently irritable, he was not aggressive toward others or withdrawn. Mr. J is an active member of his religious community and frequently attends regular services and other spiritual meetings. He considers himself a preacher and would often stop and preach to random people in the streets and on the subway. Mr. J first sought treatment for psychiatric problems when he was in his late 20's. This, however, is his first psychiatric hospitalization. Mr. J has a history of smoking marijuana though he denies current use.

Mr. J has been on the ward for several days. During his time on the ward, Mr. J has had various incidents with staff members and patients. On two separate occasions Mr. J was observed calling a nurse "un-godly," the "devil," and told other patients that they were evil and needed to be punished. During another incident, Mr. J threw his tray of food on the floor after refusing to eat. A brief mental status exam was conducted and the following conclusions were made: generally agitated mood with episodes of verbal and physical aggression; thought process is circumstantial and goal-oriented, though he harbors the religious delusion that people need to be punished; he denied experiencing auditory or visual hallucinations, and also denied suicidal or homicidal ideations.

Case Vignette- Black/Non-salient Condition

Instructions: Please read the following summary, which describes an individual that was recently admitted to the psychiatric ward of a general hospital, located in a large city. After reading this case, you will be asked various questions regarding your impressions and judgments of future behavior.

Mr. J is a 36 year-old single Black male who was recently admitted to an inpatient hospital following complaints by family members of odd and aggressive behavior and treatment non-compliance. According to his mother, Mr. J has been spending the majority of his time during the past few weeks in his room reading religious books and pacing around. She explained that when she does attempt to engage Mr. J, he quickly becomes agitated and verbally abusive, at times making statements such as "God is going to punish you for what you've done" and "the devil inside you must come out." He has also thrown objects and has damaged furniture (e.g., breaking a glass window and a lamp). Mr. J has stopped taking his antipsychotic medication over the last week and has become increasingly agitated.

It is reported that prior to his recent period of decompensation, Mr. J was generally adherent with his medication regimen. Although he was still frequently irritable, he was not aggressive toward others or withdrawn. Mr. J is an active member of his religious community and frequently attends regular services and other spiritual meetings. He considers himself a preacher and would often stop and preach to random people in the streets and on the subway. Mr. J first sought treatment for psychiatric problems when he was in his late 20's. This, however, is his first psychiatric hospitalization. Mr. J has a history of smoking marijuana though he denies current use.

Mr. J has been on the ward for several days. During his time on the ward, Mr. J has had various incidents with staff members and patients. On two separate occasions Mr. J was observed calling a nurse "un-godly," the "devil," and told other patients that they were evil and needed to be punished. During another incident, Mr. J threw his tray of food on the floor after refusing to eat. A brief mental status exam was conducted and the following conclusions were made: generally agitated mood with episodes of verbal and physical aggression; thought process is circumstantial and goal-oriented, though he harbors the religious delusion that people need to be punished; he denied experiencing auditory or visual hallucinations, and also denied suicidal or homicidal ideations.

Case Vignette- White/Salient Condition

Instructions: Please read the following summary, which describes an individual that was recently admitted to the psychiatric ward of a general hospital, located in a large city. After reading this case, you will be asked various questions regarding your impressions and judgments of future behavior. Please be careful not to let pre-existing beliefs or biases factor into your decisions.

Mr. J is a 36 year-old single White male who was recently admitted to an inpatient hospital following complaints by family members of odd and aggressive behavior and treatment non-compliance. According to his mother, Mr. J has been spending the majority of his time during the past few weeks in his room reading religious books and pacing around. She explained that when she does attempt to engage Mr. J, he quickly becomes agitated and verbally abusive, at times making statements such as "God is going to punish you for what you've done" and "the devil inside you must come out." He has also thrown objects and has damaged furniture (e.g., breaking a glass window and a lamp). Mr. J has stopped taking his antipsychotic medication over the last week and has become increasingly agitated.

It is reported that prior to his recent period of decompensation, Mr. J was generally adherent with his medication regimen. Although he was still frequently irritable, he was not aggressive toward others or withdrawn. Mr. J is an active member of his religious community and frequently attends regular services and other spiritual meetings. He considers himself a preacher and would often stop and preach to random people in the streets and on the subway. Mr. J first sought treatment for psychiatric problems when he was in his late 20's. This, however, is his first psychiatric hospitalization. Mr. J has a history of smoking marijuana though he denies current use.

Mr. J has been on the ward for several days. During his time on the ward, Mr. J has had various incidents with staff members and patients. On two separate occasions Mr. J was observed calling a nurse "un-godly," the "devil," and told other patients that they were evil and needed to be punished. During another incident, Mr. J threw his tray of food on the floor after refusing to eat. A brief mental status exam was conducted and the following conclusions were made: generally agitated mood with episodes of verbal and physical aggression; thought process is circumstantial and goal-oriented, though he harbors the religious delusion that people need to be punished; he denied experiencing auditory or visual hallucinations, and also denied suicidal or homicidal ideations.

Case Vignette- Black/Salient Condition

Instructions: Please read the following summary, which describes an individual that was recently admitted to the psychiatric ward of a general hospital, located in a large city. After reading this case, you will be asked various questions regarding your impressions and judgments of future behavior. Please be careful not to let pre-existing beliefs or biases factor into your decisions.

Mr. J is a 36 year-old single Black male who was recently admitted to an inpatient hospital following complaints by family members of odd and aggressive behavior and treatment non-compliance. According to his mother, Mr. J has been spending the majority of his time during the past few weeks in his room reading religious books and pacing around. She explained that when she does attempt to engage Mr. J, he quickly becomes agitated and verbally abusive, at times making statements such as "God is going to punish you for what you've done" and "the devil inside you must come out." He has also thrown objects and has damaged furniture (e.g., breaking a glass window and a lamp). Mr. J has stopped taking his antipsychotic medication over the last week and has become increasingly agitated.

It is reported that prior to his recent period of decompensation, Mr. J was generally adherent with his medication regimen. Although he was still frequently irritable, he was not aggressive toward others or withdrawn. Mr. J is an active member of his religious community and frequently attends regular services and other spiritual meetings. He considers himself a preacher and would often stop and preach to random people in the streets and on the subway. Mr. J first sought treatment for psychiatric problems when he was in his late 20's. This, however, is his first psychiatric hospitalization. Mr. J has a history of smoking marijuana though he denies current use.

Mr. J has been on the ward for several days. During his time on the ward, Mr. J has had various incidents with staff members and patients. On two separate occasions Mr. J was observed calling a nurse "un-godly," the "devil," and told other patients that they were evil and needed to be punished. During another incident, Mr. J threw his tray of food on the floor after refusing to eat. A brief mental status exam was conducted and the following conclusions were made: generally agitated mood with episodes of verbal and physical aggression; thought process is circumstantial and goal-oriented, though he harbors the religious delusion that people need to be punished; he denied experiencing auditory or visual hallucinations, and also denied suicidal or homicidal ideations.

Appendix C

Impressions and Judgments

Please answer the following questions regarding your impressions and judgments of the case vignette.

1. Based on the information provided in the vignette, which of the following disorders would you give as a most likely diagnosis for this patient?
    a. Bipolar Disorder
    b. Schizophrenia
    c. Intermittent Explosive Disorder

2. On a scale from 1-5, rank the following factors that you believe are the causes of his current hospitalization. Rank all factors, with "1" being the *most important factor* and "5" being the *least important factor*.
    a. Irritation/agitation
    b. Treatment-noncompliance
    c. Impulsivity and aggression
    d. Delusional thinking
    e. Inability to communicate needs

3. Do you think that this patient poses a serious risk for suicide?
    a. Yes
    b. No

4. On a scale from 1-10, rate your level of confidence in your decision in question 3 with "1" being *not at all confident* and "10" being *very confident* _____.

5. What do you think is the likelihood that this patient will be verbally aggressive at some point within the next week? _____ %.

6. On a scale from 1-10, rate your level of confidence in your decision in question 5 with "1" being *not at all confident* and "10" being *very confident* _____.

7. What do you think is the likelihood that this patient will be physically aggressive (i.e. throwing and/or damaging objects, assaulting others) at some point within the next week? _____%.

8. On a scale from 1-10, rate your level of confidence in your decision in question 7 with "1" being *not at all confident* and "10" being *very confident* _____.

9. What do you think is the likelihood that this patient will be verbally aggressive at some point within three months after being discharged from the hospital? _____%.

10. On a scale from 1-10, rate your level of confidence in your decision in question 9 with "1" being *not at all confident* and "10" being *very confident* _____.

11. What do you think is the likelihood that this patient will be physically aggressive at some point within three months after being discharged from the hospital? _____ %.

12. On a scale from 1-10, rate your level of confidence in your decision in question 11 with "1" being *not at all confident* and "10" being *very confident* _____.

13. What do you think is the likelihood that this patient will commit a serious violent act at some point within three months after being discharged from the hospital?_____%.

14. On a scale from 1-10, rate your level of confidence in your decision in question 13 with "1" being *not at all confident* and "10" being *very confident* _____.

15. Which of the following would you recommend as the most appropriate immediate treatment option(s) for this patient while he is in the hospital? Check all that apply.
    a. Individual therapy
    b. Group therapy
    c. Psychotropic medication
    d. Seclusion from other patients
    e. One-to-one monitoring by staff
    f. Long-term hospitalization
    g. Partial hospitalization/residential facility

16. Do you think that this patient is a good candidate for individual therapy?
    a. Yes
    b. No

17. On a scale from 1-10, rate your level of willingness to conduct individual therapy with this patient with "1" being *not at all* and "10" being *completely willing* _____.

18. Which of the treatment options would you recommend for this patient once discharged? Check all that apply.
    a. Outpatient psychotherapy services
    b. Medication services
    c. Intensive case management services
    d. No further services are needed

Appendix D

Demographics Questionnaire

Please complete the following questionnaire regarding your own demographic characteristics.

1. Age:

2. Gender
    a. Male
    b. Female
    c. Other (please specify)

3. Which of the following best describes your current level of training?
    a. Fourth year doctoral student
    b. Fifth year doctoral student
    c. Sixth year doctoral student
    d. Seventh year and beyond (doctoral student)
    e. Medical resident
    f. Licensed psychologist/psychiatrist

4. Which of the following best describes the racial/ethnic group with which you identify? Select ALL that apply and, if relevant, please specify cultural/ethnic group.
    a. Black/African American
    b. Asian/Asian American
    c. White/European American
    d. Hispanic/Latino(a)
    e. Pacific Islander
    f. Native American/American Indian/Alaskan Native
    g. Multiracial/Multicultural
    h. Other

5. Have you had any experience working on an inpatient setting?
    a. Yes
    b. No

6. Have you ever done or assisted with a violence risk assessment?
    a. Yes
    b. No

Appendix E

Additional Case Vignette Questions

Please answer the following questions.

1. The patient harbored which of the following delusions?
    a. The belief that his psychiatric hospitalization was part of a CIA conspiracy
    b. The belief that he had the ability to read people's thoughts
    c. The belief that God would punish people for their wrong-doings
    d. The belief that he had supernatural powers

2. Was the patient compliant with his medication during the days prior to his psychiatric admission?
    a. Yes
    b. No

3. The patient was of what race?
    a. White
    b. Black
    c. Hispanic
    d. Asian
    e. Other

4. The patient was approximately what age?
    a. 20-25
    b. 26-31
    c. 32-37
    d. 38-42

5. Did your instructions include the following statement: *Please be careful not to let pre-existing beliefs or biases factor into your decisions*?
    a. Yes
    b. No

Appendix F

Debriefing

Thank you for your participation in this study. The purpose of this study was to examine the impact of race on clinical decision-making, particularly judgments of future risk. Studies have shown that various pre-existing beliefs can function to influence clinical decisions. Of interest in this particular study is whether the race of the client would significantly affect perceptions of future violence for psychiatric inpatients.

To test this, an experimental design was set up in which participants were given a case vignette detailing either a Black or White psychiatric inpatient (all vignettes were the same, with only the race being changed). Some participants were also provided with a statement in the instructions that reminded them not to let pre-existing beliefs influence their decisions. We hypothesized that violence risk decisions would fluctuate depending on the race of the vignette as well as the presence or absence of the statement in the instructions.

As it was essential for some of the information to be withheld at the start of this study, we ask that you do not discuss the contents of this study with others whom may participate. Knowledge about the study may influence their responses and, essentially, invalidate the information obtained from them.

It is possible that the results of this research will be presented at academic conferences and/or published as an article in a journal. Again, your individual responses will be kept confidential during this process. If you are interested in the results of this study or if you have any additional questions or comments, please contact the following individuals:

Stephen Smith, M.A.
John Jay College of Criminal Justice
Graduate Center, CUNY
Phone: (561) 629-3434
Email: ssmith1@gc.cuny.edu

Philip T. Yanos, PhD
John Jay College of Criminal Justice, CUNY
Phone: (212) 237-8773
e-mail: pyanos@jjay.cuny.edu

In the event of any problems resulting from participation in the study, psychological treatment is available at the John Jay College Counseling Information Office at (212) 237-8111.

REFERENCES

Baker, F. M. & Bell, C. C. (1999). Issues in the psychiatric treatment of African Americans. *Psychiatric Services*, 50(3), 362-368.

Bond, C. F., DiCandia, C. G., MacKinnon, J. R. (1988). Responses to violence in psychiatric settings: The role of patient race. *Personality and Social Psychology Bulletin*, 14(3), 448-458.

Chow, J. C., Jaffee, K. & Snowden, L. (2003). Racial/Ethnic disparities in the use of mental health services in poverty areas. *American Journal of Public Health*, 93(5), 792-797.

Chrishon, K. R. (2009). Race and psychiatric diagnostic patterns in inpatient settings: Understanding the contribution of patient, hospital, and county characteristics. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 69(10-B), 6023.

Cohn, E., Bucolo, D., Pride, M., & Sommers, S. (2009). Reducing White juror bias: The role of race salience and racial attitudes. *Journal of Applied Social Psychology*, 39(8), 1953-1973.

Coid, J. W., Kahtan, N., Gault, S., & Jarman, B. (2000). Ethnic differences in admission to secure forensic psychiatric services. *British Journal of Psychiatry*, 177, 241-247.

Convit, A., Jaeger, J., Pin Lin, S., Meisner, M. & Volavka. J. (1989). Prediction of assaultive behavior in psychiatric inpatients: Is it possible? In D. A. Brizer & M. Crowner (Eds), *Current approaches to prediction of violence* (pp. 35-62). Washington, DC: American Psychiatric Press Inc.

Crowner, M. (1989). Environmental concomitants of psychiatric inpatient violence. In D. A.

Brizer & M. Crowner (Eds), *Current approaches to prediction of violence* (pp. 101-120). Washington, DC: American Psychiatric Press Inc.

Cynkar, A. (2007). The changing gender composition of psychology. *APA Monitor, 38,* 46.

Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology,* 56(10), 5-18.

DelBello, M. P., Lopez-Larson, M. P., Soutullo, C. A., & Strakowski, S. M. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology,* 11(1), 95-103.

Dolan, M. & Doyle, M. (2000). Violence risk prediction: clinical and actuarial measures and the role of the Psychopathy Checklist. *British Journal of Psychiatry,* 177, 303-311.

Douglas, K., Ogloff, J., & Hart, Stephen. (2003). Evaluation of a model of violence risk assessment among forensic psychiatric patients. *Psychiatric Services,* Vol. 54 (10), 1372-1379.

Feisthamel, K. P. & Schwartz, R. C. (2006). Racial bias in diagnosis: Practical implications for psychotherapists. *Annals of the American Psychotherapy Association,* 9(2), 11-14.

Flaherty, J. & Meagher, R. (1980). Measuring racial bias in inpatient treatment. *The American Journal of Psychiatry*, 137(6), 679-682.

Garb, H. N. (1997). Race bias, social class bias, and gender bias in clinical judgment. *Clinical Psychology: Science and Practice,* 4(2), 99-120.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology,* 74(6), 1464-1480.

Gudjonsson, G. H., Rabe-Hesketh, S., & Wilson, C. (2000). Violent incidents on a medium secure unit: The target of assault and the management of incidents. *The Journal of Forensic Psychiatry*, 11(1), 105-118.

Hare, R. D. (1991). *The Hare Psychopathy Checklist- Revised*. Multi-Health Systems: Toronto, ON.

Hilton, J. L. & von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology*, 47, 237-271.

Herbeck, D. M., West, J. C., Duffy, F. F, Fitek, D. J., Bell, C. C., & Snowden, L. R. (2004). Variations in use of second-generation antipsychotic medication by race among adult psychiatric patients. *Psychiatric Services*, 55(6), 677- 683.

Honig, A. L. (1982). *Assessing future dangerous behavior: Do the experts agree?* Ann Arbor, MI: University Microfilms International.

Hoptman, M., Yates, K., Patalinjug, M., Wack, R., & Convit, A. (1999). Clinical prediction of assaultive behavior among male psychiatric patients at a maximum-security forensic facility. *Psychiatric Services*, Vol. 50 (11), 1461-1466.

Kassin, S., Fein, S., & Markus, H. R. (2008). *Social Psychology, 7th Edition*. Boston: Houghton Mifflin Company.

Kawakami, K., Dion, K. L., & Dovidio, J. F. (1998). Racial prejudice and stereotype activation. *Personality and Social Psychology Bulletin*, 24(4), 407-416.

Kessler, R. C., Berglund, P, Chiu, W. T., Demler, O., Heering, S., Hiripi, E et al. (2004). The US National Comorbidity Survey replication (NCS-R): Design and field procedures. *International Journal of Methods in Psychiatric Research*, 13, 69-92.

Kuhlman, T., Telintelo, S., & Winget, C. (1982). Restraint use with emergency psychiatric

patients: A new perspective on racial bias. *Psychological Reports*, 51, 343-347.

Kuno, E. & Rothbard, A. B. (2002). Racial disparities in antipsychotic prescription patterns for patients with schizophrenia. *American Journal of Psychiatry*, 159(4), 567-572.

Lawson, W.B. (1986). Racial and ethnic factors in psychiatric research. *Hospital and Community Psychiatry*, 37, 50-54.

Lawson, W. B., Helper, N., Holladay, J. (1994). Race as a factor in inpatient and outpatient admissions and diagnosis. *Hospital Community Psychiatry*, 45, 72-74.

Lewis, G., Croft-Jeffreys, C., & David, A. (1990). Are British psychiatrists racist? *British Journal of Psychiatry*, 157, 410-415.

Lim, R. F. & Bell, C. C. (2008). Cultural competence in violence assessment. In R. I. Simon & K. Tardiff, *Violence assessment and management* (pp. 35-58). Washington, DC: American Psychiatric Publishing.

Mckeithen-Franks, Y. K. (1998). The commitment of mentally ill offenders to a psychiatric facility. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 57(7B), 3929.

McNiel, D. & Binder, R. (1995). Correlates of accuracy in the assessment of psychiatric inpatient's risk of violence. *American Journal of Psychiatry*, 152, 901-906.

McNiel,D. E., Sandberg, D. A., & Binder, R. (1998). The relationship between confidence and accuracy in clinical assessment of psychiatric patients' potential for violence. *Law and Human Behavior*, 22(6), 655-669.

Monohan, J., Steadman, H., Silver., E, Appelbaum, P., Robbins, P., Mulvey, E. et al. (2001).

Rethinking Risk Assessment: The MacArthur Study of Mental Disorder and Violence. New York: Oxford University Press.

Murray, J. & Thomson, M. E. (2010a). Clinical judgment in violence risk assessment. *Europe's Journal of Psychology*, 1, 128-149.

Murray, J. & Thomson, M. E. (2010b). Applying decision-making theory to clinical judgments in violence risk assessment. *Europe's Journal of Psychology*, 2, 150-171.

Nijman, H., Merckelback, H., Evers, C., Palmstierna, T. & Camp, J. (2002). Prediction of aggression on a locked psychiatric admissions ward. *Journal of Scandinavian Psychiatry*, 105, 390-395.

Pfeifer, J. & Ogloff, J. (1991). Ambiguity and guilt determinations: A modern racism perspective. *Journal of Applied Social Psychology*, 21(21), 1713-1725.

Quinsey, V. L., Harris, G. T., Rice, M. E., Cormier, C. A., *In: Violent offenders: Appraising and managing risk*. Quinsey, V. L., Harris, G. T., Rice, M. E., Cormier, C. A., Washington, DC, US: American Psychological Association, 1998. pp. 141-169.

Quinsey, V. L. & Maguire, A. (1986). Maximum security psychiatric patients: Actuarial and clinical predictions of dangerousness. *Journal of Interpersonal Violence*, 1, 143-171.

Ruiz, P., Varner, R. V., Small, D. R., et al. (1999). Ethnic differences in the neuroleptic treatement of schizophrenia. *Psychiatric Quarterly*, 70, 163-172.

Schwartz, R. C. & Feisthamel, K. P. (2009). Disproportionate diagnosis of mental disorders among African American versus European American clients: Implications for counseling theory, research, and practice. *Journal of Counseling and Development*, 87, 295-301.

Segal, S. P., Bola, J. R., & Watson, M. A. (1996). Race, quality of care, and antipsychotic

prescribing practices in psychiatric emergency services. *Psychiatric Services*, 47(3), 282-286.

Simon, R. I. & Tardiff, K. (2008). *Violence assessment and management*. Washington, DC: American Psychiatric Publishing.

Sommers, S. (2006). Racial diversity and group decision making: Identifying multiple effects of racial composition on jury deliberations. *Journal of Personality and Social Psychology*, 90, 597-612.

Spector, R. (2001). Is there racial bias in clinician's perceptions of the dangerousness of psychiatric patients? A review of the literature. *Journal of Mental Health*, 10 (1), 5-15.

Snowden, L. R. (1999). African American service use for mental health problems. *Journal of Community Psychology*, 27(3), 303-313.

Snowden, L. R., Catalano, R., & Shumway, M. (2009). Disproportionate use of psychiatric emergency services by African Americans. *Psychiatric Services*, 60(12), 1664-1671.

Snowden, L. R., Hasings, J. F., & Alvidrez, J. (2009). Overrepresentation of Black Americans in psychiatric inpatient care. *Psychiatric Services*, 60(6), 779-785.

Stangor, C. (2011). *Research Methods for the Behavioral Sciences, 4th Edition*. Belmont, CA: Wadsworth.

Steadman, H. J., Monahan J., Appelbaum P. S., Grisso T., Mulvey E. P, Roth L. H. et al. (1994) Designing a new generation of risk assessment research. In: Monahan J, Steadman HJ (eds) *Violence and mental disorder: developments in risk assessment*. University of Chicago Press, Chicago. 297-318.

Steen, S., Engen, R. L., & Gainey, R. R. (2005). Images of danger and culpability: Racial stereotyping, case processing, and criminal sentencing. *Criminology*, 43(2), 435-467.

Steinert, T. (2002). Prediction of inpatient violence. *Journal of Scandinavian Psychiatry*, 106, 133-141.

Stratowski, S. M., Lonczak, H. S., Sax, K. W. (1995). The effects of race on diagnosis and disposition from a psychiatric emergency service. *Journal of Clinical Psychiatry*, 56, 101-107.

Tardiff, K. (2002). The past as prologue: Assessment of future violence in individuals with a history of violence. In R. Simon & D. W. Shuman (Eds), *Retrospective assessment of mental states in litigation: Predicting the past* (pp. 181-207). Arlington, VA: American Psychiatric Publishing, Inc.

Walkup, J., Wenhui, W., Sambamoorthi, U., Crystal, S., Yanos, P. (2006). Provision of psychotherapy for a statewide population of Medicaid beneficiaries with schizophrenia. *Psychological Services*, 3(4), 227-238.

Webster, C. D., Douglas, K. S., Eaves, D., & Hart, S D.*; In: Impulsivity: Theory, assessment, and treatmen*t. Webster, Christopher D. (Ed.); Jackson, Margaret A. (Ed.); New York, NY, US: Guilford Press, 1997. pp. 251-277.

Webster, C., Harris, G., Rice, M., Cormier, C., & Quinsey, V. Framing the issues: The literature on prediction of violence. *The Violence Prediction Scheme: Assessing Dangerousness In High Risk Men*. New York, NY, 2006.

Whaley, A. (1998). Racism in the provision of mental health services: A social-cognitive analysis. *American Journal of Orthopsychiatry*, 68(1), 47- 57.