Pathologizing Bias: Racial Disparities in The Diagnosis of Schizophrenia

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In 2012, the United States government greatly reduced antipsychotic drug use in nursing homes, with the exception of nursing home residents with schizophrenia (Gebeloff, 2001). Since then, the diagnosis of schizophrenia in nursing homes rose by 70%, even though the disorder is typically diagnosed at a young age. It is believed that nursing home staff are using this loophole to sedate dementia patients, particularly Black patients. Black Americans with dementia are 1.7 times more likely than white Americans with dementia in nursing homes to be diagnosed with schizophrenia (Gebeloff, 2001). This finding is consistent with past research: Black Americans are more likely to be misdiagnosed with schizophrenia and prescribed antipsychotic medications (Gebeloff, 2001). The most prevalent explanation of this phenomenon is that clinicians overemphasize psychotic symptoms in Black people compared to other races. Disparities in mental health care disproportionately subject Black patients to the harmful side effects of misdiagnosis, including incorrect or inadequate medication, therapy, or other forms of treatment. I argue that this phenomenon, the overdiagnosis of schizophrenia in Black people exemplified by the disparity found in nursing homes, suggests an implicit racial bias in the psychiatric industry and in our perception of the disorder at large. While environmental factors may contribute, perceptions of people with schizophrenia as violent, dishonest, or mistrustful reflect stereotypes of Black people, and these biases affect diagnoses of the disorder.

Understanding this phenomenon and its causes and effects requires an understanding of schizophrenia as a disorder and the process of clinical diagnosis. Schizophrenia belongs to a group of disorders called psychotic disorders and is characterized by delusions, hallucinations, disorganized speech and motor behavior (called “positive symptoms” when grouped together) and a group of symptoms called negative symptoms (Patel et al., 2014). Delusions, as defined by the DSM-V, are “fixed beliefs that are not amenable to change in light of conflicting evidence,” for example, a delusion that one is under surveillance by the FBI (“Schizophrenia,” 2013).

Hallucinations are defined as "perception-like experiences that occur without an external stimulus … not under voluntary control," for example, hearing voices ("Schizophrenia," 2013). Disorganized thinking/speech is characterized by a disconnect of ideas when talking severe enough to impair communication. Disorganized motor behavior manifests usually in "a marked decrease in reactivity to the environment" ("Schizophrenia," 2013). Negative symptoms include diminished emotional expression in the face/body, and avolition, or "a decrease in motivated self-initiated purposeful activities" ("Schizophrenia," 2013).

To be diagnosed with schizophrenia using the DSM-V, an individual needs to have at least two of these symptoms for at least one month, and one of the symptoms must be delusions, hallucinations, or disorganized speech. Signs of having schizophrenia must be present for at least six months, and these symptoms must significantly impair the individual's level of functioning ("Schizophrenia," 2013). Schizophrenia also has a "rule-out" condition wherein the clinician must be sure that these symptoms are not caused by another medical condition or substance abuse ("Schizophrenia," 2013). This is especially concerning when considering the implications of misdiagnosis. Like most neurological disorders, the causes of schizophrenia are not entirely understood, but they are believed to be partially genetic and partially environmental: there is a 10% risk for first-degree relatives and 3% for second-degree relatives, as well as a greater risk when exposed to environmental stressors (Patel et al., 2014), which becomes important when considering the disorder's frequency in certain groups in the population. As I discuss in further detail below, schizophrenia is heavily stigmatized. A 2014 study found that in the UK, schizophrenia was viewed by the general public significantly more negatively than anxiety or depression, and people with the disorder were viewed as more dangerous and less likely to recover (Wood et al., 2010). A 2020 study found that graduate student clinicians and supervisors hold more negative views towards schizophrenia and other high-severity psychopathology than low-severity

psychopathology (i.e., ADHD) (Deska et al., 2020). The disorder is frequently misunderstood and vilified, even at the clinical level.

With this understanding of schizophrenia, I will examine the current evidence surrounding the phenomenon that schizophrenia is overrepresented in Black Americans. The previously-mentioned study in nursing homes found that Black Americans were 1.7 times more likely to be diagnosed with schizophrenia (Gebeloff, 2001). This number varies depending on the study: a 2014 review of American research found that Black Americans were three to four times more likely on average to be diagnosed with schizophrenia than white Americans (Schwartz & Blankenship, 2014); a 2012 study reported this number as over three times more likely (Eack et al., 2012); while a 2017 meta-analysis reports around 2.4 times more likely (Olbert, et al., 2018). All of these report a statistically significant overrepresentation of schizophrenia diagnoses in Black Americans.

These studies have theorized about possible factors that could influence their findings. Schizophrenia is known to be caused by both genetic and environmental factors (Patel et al., 2014), and racial bias and possible misdiagnosis of the disorder may also contribute. The simplest hypothesis to explain these findings would be a genetic variation that causes schizophrenia to be more common in Black Americans. While there is a lack of thorough research on this topic, there has been no significant evidence to date that any such genetic factors exist (Eack, et al., 2012). Since this theory has no credence with our current knowledge, it makes sense to move on to theories with more supporting evidence.

A more complicated hypothesis would be that Black Americans have a greater environmental risk factor for schizophrenia than white Americans. Psychosocial factors like childhood trauma, social isolation, discrimination, and economic adversity can contribute to the manifestation of the disorder, especially if the individual is genetically predisposed to schizophrenia (Patel et al., 2014). Biological and environmental factors like complications during pregnancy may also contribute (Patel et al., 2014). Black Americans are more susceptible to these

factors because of systemic racism in the United States. In a 2021 narrative review, the authors establish that Black Americans are more likely than white Americans to face socio-environmental and socioeconomic adversity, and traumatic experiences (for example, abuse, separation from a parent, or domestic violence) than white Americans (Anglin et al., 2021) Black Americans are markedly affected by racial discrimination, police victimization, and gun violence, as well as historical trauma caused by slavery (Anglin et al., 2021). In addition, Black American women are at increased risk for pregnancy complications, even when controlling for sociodemographic factors (Anglin et al., 2021), which could contribute to the prevalence of schizophrenia as well. The narrative review theorizes that these factors are most likely underlying the overrepresentation of schizophrenia diagnoses in Black Americans (Anglin et al., 2021).

There is some evidence to support this theory, but there is very limited extant research. One 2007 study found that Black Americans were about three times more likely to be diagnosed with schizophrenia, but when controlling for indicators of their family socioeconomic status at birth, the likelihood decreased to about two times more likely (Bresnahan, et al., 2007). This indicates that environmental factors account for some of the increased likelihood of schizophrenia diagnosis in the Black population, but not all of it. Furthermore, both immigrants and other ethnic minority groups, who are generally under similar environmental stressors, also have an increased likelihood to be diagnosed with schizophrenia. A 2010 study found that schizophrenia was more frequent in second-generation immigrants than native-born people in general, but the risk was higher in Black immigrants to Canada and Israel. The study also corroborated the finding of increased risk for Black Americans, and it found that Africans living in Africa and the Caribbean did not have an increased risk compared to native-born people in other countries (Dealberto, 2010). These findings suggest that the environmental stresses placed on minorities in general could explain some of the disproportionality of schizophrenia diagnoses, since even white immigrants saw a higher proportion of diagnoses than native-born people (Dealberto, 2010). It should be noted that these

environmental factors are difficult to control for and empiricalize in correlational studies; therefore, there is not sufficient research that takes into account environmental factors when studying racial disparities in schizophrenia diagnosis. I believe that environmental factors likely play a role in these disparities, and that it is necessary to conduct more research exploring this possibility. However, racial bias in clinicians surrounding the perception and diagnosis of schizophrenia in Black people cannot be disregarded as causation.

The historical and ongoing perception of both Black people and people with schizophrenia as violent or dangerous causes Black Americans to be overdiagnosed with the disorder. Psychiatrist Dr. Johnathan Metzl theorizes in his book *Protest Psychosis* that this racialized bias is because of a shift in public opinion during the American Civil Rights era. He uses case studies in a state mental institution in Ionia, Michigan to illustrate that in the 1930s and 1940s, "doctors and nurses did not consider patients with schizophrenia to be disproportionately violent in relation to patients with other diagnoses" and that "doctor's descriptions of Ionia patients as Negro and violent did not correlate disproportionately with schizophrenia" (Metzl, 2010, 66). In other words, Black patients with schizophrenia were not perceived as more violent than other groups at that time (Metzl, 2010, 66). This is not to dismiss the abhorrent treatment Black patients received during this period because of racial bias. Many Black patients were never released from mental hospitals and left to die or subjected to violent subduing by hospital workers (Metzl, 2010, 74-77); rather, these findings establish that the correlation between schizophrenia, violence, and Black patients was not yet present during this time period.

By the 1950s and 1960s, psychiatric reforms including the introduction of tranquilizing antipsychotic medication such as chlorpromazine changed the focus of these institutions from reform towards containing and controlling patients (Metzl, 2010, 81-83). Psychiatrists adopted the first and eventually second editions of *Mental Disorders: Diagnostic and Statistical Manual,* or the DSM-I and DSM-II, to diagnose their patients "objective[ly]" (Metzl, 2010, 98). The DSM-II's use of

masculine pronouns instead of the DSM-I's gender-neutral passive voice and focus on "hostile" subtypes of schizophrenia, as well as the "race politics'' of the 1960s Civil Rights movement that painted Black people as stereotypically "manic [and] crazy" (Metzl, 2010, 97-100), led to an association between the hostile subtypes and Black people, specifically Black men. Most psychiatric disorders had been studied using only white subjects, but in newly-desegregated hospitals, psychiatrists discussed "'white' and 'Negro' forms of particular diseases," using "DSM-II criteria to uncover hostile aspects of black schizophrenia" (Metzl, 2010, 100). The conversation surrounding schizophrenia in the 1960s and 1970s, just as the term was being adopted into use by the public (Metzl, 2010, 113), included frequent use of words like "aggressive" and "violent" to describe Black schizophrenics in research articles (Metzl, 2010, 107), advertising for antipsychotic medications that used African art (Metzl, 2010, 104-105), and an alarmingly high number of news stories depicting Black people with schizophrenia as violent and dangerous (Metzl, 2010, 113). Most strikingly, New York psychiatrists Walter Bromberg and Franck Simon coined a new psychotic disorder called "protest psychosis," where "black liberation movements literally caused delusions, hallucinations, and violent projections in black men" (Metzl, 2010, 100). The FBI even diagnosed North Carolina NAACP leader Robert Williams as schizophrenic in the early 1960s and Malcolm X with "pre-psychotic paranoid schizophrenia" in the 1950s (Metzl, 2010, 122). All of this indicates that the combination of changing diagnostic criteria and public perceptions of Black people and protest movements led psychiatrists to recognize and categorize Black schizophrenia as inherently violent and dangerous, perceiving Black patients as predisposed to this violent form of schizophrenia.

This racialized history and institutional association between schizophrenia and violence still affects the diagnosis today. The modern scientific understanding, until recently, was that schizophrenia causes people who have it to be more violent. Take the opening sentence from a research article published in 2006: "People with schizophrenia make a significant contribution to

violence in our communities" (Mullen, 2006). The paper brandishes striking statistics to back up this claim: a 1984 study found that 11% of homicide offenders and 9% of non-fatal violence offenders had schizophrenia; a 2002 study found that schizophrenia is ten times more common in prisons than expected by chance (Mullen, 2006). The author concludes that these correlations should not be ignored by clinicians, and "the public's fear of the violence of people with mental disorders" is "exaggerated," but not "groundless" (Mullen, 2006).

At face value, these statistics paint a clear correlation between schizophrenia and violence. However, there are many factors that the simple correlations of current research do not take into account. First, people with schizophrenia are much more likely to be victims of violence than perpetrators. A 2005 study reports people with severe mental illnesses such as schizophrenia as four times more likely to be victims of violent crime than the general population (Teplin, et al., 2005). A 2008 statistical review found that 25% of people with severe mental illness were victims of violence compared to only 3% of the general population, while 7% to 8% of people with severe mental illness were perpetrators compared to 2% of the general population (Choe, et al., 2008) It is also important to understand that while fewer than 17% of patients with severe mental illness are hospitalized, nearly half of the studies covered in the statistical review only utilize inpatients in their sample sizes, and the largest and most well-cited studies focus only on involuntarily admitted inpatients. This creates a bias in the sample size, as "imminent dangerousness (to self or others)" or violent behavior is a requirement for involuntary commitment (Choe, et al., 2008). The rates of perpetration of violent crimes in people with schizophrenia are likely much lower than any study would be able to report, and further research controlling for inpatient admittance is necessary. A statistical review from 2009 found that while schizophrenia and psychosis do increase the risk of perpetrating violence, there is no difference in an increased risk of violent behavior between people who have substance use disorders and people who have schizophrenia and substance use disorders; schizophrenia did not create any additional risk (Fazel, et al., 2009). In fact, the

background of correlations of schizophrenia with perpetrations of violence reveals itself when rates of other risk factors are examined in the schizophrenic population: substance abuse, being abused as a child, poverty, and living in a disadvantaged neighborhood are all predictors of perpetrating violent crimes in the United States (Sumner, et al., 2015); as previously discussed, these are all environmental factors that can contribute to the manifestation of schizophrenia (Patel et al., 2014). I believe it is possible that schizophrenia does not *cause* violence by itself, but a variety of variables correlate with both of them, and it is clear that more rigorous studies exploring this relationship are required.

The DSM-II's wording, framing the disorder as violent, caused racial bias in clinicians of the 1950s and 1960s, and this trend continues today with the DSM-V. The DSM-V was published in 2013 and has seen widespread use by clinicians and psychiatrists to diagnose mental health disorders. Violence is mentioned once in the DSM-V entry for schizophrenia: "Hostility and aggression can be associated with schizophrenia," though it is more frequent in younger males and "individuals with a past history of violence, non-adherence with treatment, substance abuse, and impulsivity" ("Schizophrenia," 2013), adding at the end that most people with schizophrenia are not violent ("Schizophrenia," 2013). This is an obvious improvement over the previously-examined DSM-II, but violence is still mentioned. The diagnostic criteria still point the clinician towards a bias against any groups they perceive as violent.

A culmination of historical biases surrounding the disorder, Black Americans, and this residual wording of the DSM-V leads to racial disparities in the diagnosis of schizophrenia due to bias in clinicians. This is displayed in studies that use research diagnoses, where a sample of patients already diagnosed with a psychiatric disorder are interviewed by clinicians to obtain another diagnosis without knowledge of the patients' previous diagnoses, allowing us to study the way clinicians evaluate and diagnose patients. For instance, a 2012 study took a sample of Black and white Americans diagnosed with a major depressive disorder, schizophrenia, schizoaffective

disorder (a psychotic disorder that also includes mood disorder symptoms), or bipolar disorder, and obtained research diagnoses using clinical interviews (Eack, et al., 2012). They found that Black people were more likely to receive a research diagnosis of schizophrenia and that clinical and demographic characteristics did not explain this likelihood (Eack, et al., 2012). They also studied interviewer-perceived honesty, where the interviewer filled a questionnaire indicating how truthful they believed the patient to be. In general, individuals were about 1.5 times more likely to receive a schizophrenia diagnosis if they were perceived as dishonest, and Black people were rated more often than white people as dishonest (Eack, et al., 2012). This interviewer-perceived honesty was the only consistent mediator for the racial disparities in schizophrenia; in other words, it was the only variable that consistently explained the relationship between race and the diagnosis of schizophrenia, while other sociodemographic or clinical variables such as auditory hallucinations or substance abuse did not (Eack, et al., 2012). A study using patients with schizophrenia or major affective disorders (also known as mood disorders, such as bipolar disorder) and similar research diagnosis methods from 2000 found that hallucinations and paranoid/suspicious attitudes were attributed by the clinicians more often to Black patients, while these symptoms in non-Black people were attributed to mood disorders (Trierweiler, et al., 2007). Additionally, the attribution of negative symptoms seemed highly linked to the diagnosis of schizophrenia in Black people (Trierweiler, et al., 2007). As discussed previously, negative symptoms include things like diminished body language, facial expressions, and an affect of the speech ("Schizophrenia," 2013). This evidence suggests that clinicians may perceive Black people as less honest, more paranoid, suspicious, and prone to hallucinations, and make different judgments on their presentation that would contribute to an increase in perceived paranoid symptoms.

In both studies mentioned in the previous paragraph, patients with mood disorders such as bipolar disorder or patients with mood disorder symptoms such as schizoaffective disorder were included in the sample. This may seem odd at first, as both studies were focused solely on

schizophrenia; however, mood disorders and psychotic disorders share an overlap in their symptoms. According to Johns Hopkins Medicine, mood disorders are a classification that refers to all types of depression and bipolar disorders *(Mood Disorders)*. Depressive disorders are characterized by a persistent sad or hopeless mood, while bipolar disorders are characterized by alternating periods of depression and elevated mood, or mania *(Mood Disorders)*. Mood disorders, especially bipolar disorders, have significant overlap with psychotic disorders like schizophrenia. The DSM-V places bipolar disorders in between psychotic disorders and depressive disorders in the manual to recognize their role as a bridge between the two "in terms of symptomatology, family history, and genetics" ("Bipolar," 2013). Patients often have their diagnosis changed from a psychotic disorder to a bipolar disorder over time and vice versa. (Bambole, et al., 2013). While it has been theorized that a model of these disorders as ends on a spectrum would better represent them (Bambole, et al., 2013), with the current diagnostic criteria, a diagnosis of schizophrenia does not include mood symptoms such as depressive or manic moods ("Schizophrenia," 2013).

Research indicates that when diagnosing Black patients, clinicians overemphasize psychotic symptoms and dismiss mood-related symptoms. A 2018 study used medical records and results from a depression screening test from patients diagnosed with schizophrenia and found that Black patients were more likely to screen positive for major depression than white patients (Gara, et al., 2019). In other words, Black patients diagnosed with schizophrenia were more likely to have depressive symptoms, even though a schizophrenia diagnosis does not account for these symptoms. This implies that the mood symptoms in Black patients are being dismissed or ignored by clinicians in favor of psychotic symptoms. This finding is supported by other studies. For example, a 2003 study found that in a sample of patients diagnosed with mood disorders, Black patients interviewed by a clinician who could see the patient's race were more likely to be diagnosed with schizophrenia than by a clinician using a transcript of the same interview who could not see their race (Strakowski, et al., 1997), suggesting that the disparity in diagnoses could be partially explained by

clinicians' racial bias. A 1997 study found that mood symptoms in Black patients identified during the interviews were not recorded during the clinical assessments when compared to white patients (Strakowski, et al., 1997), again suggesting a dismissal of the mood-related symptoms. This evidence grows more concerning when taking into consideration something discussed previously: schizophrenia has a "rule-out" condition in its diagnosis, where all other possible explanations of the symptoms, including mood disorders, must be eliminated before a diagnosis is made ("Schizophrenia," 2013). This evidence surrounding the dismissal of mood symptoms implies clinicians are not carrying out thorough and careful diagnoses when evaluating Black patients. Furthermore, the tendency for clinicians to view Black patients as dishonest and paranoid, and the stereotyping surrounding Black people, schizophrenia, and violence could lead to this overemphasis of psychotic symptoms. While it is evident that more research needs to be done on this topic to more clearly quantify the relationship between Black patients, schizophrenia, and mood disorders, it is possible that the overrepresentation of schizophrenia in Black Americans is explained by an overdiagnosis of schizophrenia and an underdiagnosis of mood disorders.

The bias present in the diagnosis of schizophrenia is just one contributing factor to the mistrust of the Black community of mental healthcare and the high stigma surrounding mental health. A study conducted in 2013 determined that Black Americans are not very open to acknowledging psychological problems and have very low rates of seeking treatment, and this study was also consistent with previous findings (Ward, et al., 2013). There are many causes behind this finding, but I believe one of them is the biased mental health treatment Black people continue to receive. It was found that the sole predictor of increased distrust of mental health care in Black people was unfair treatment by mental health services and staff (Henderson, et al., 2015). This distrust could not be predicted by common causes like involuntary admission or a schizophrenia diagnosis, only biased treatment (Henderson, et al., 2015). Indeed, Black Americans receive less treatment and worse quality healthcare than white Americans in general (Gebeloff, 2001). The

racial disparities in the diagnosis of schizophrenia are just one example of the unfair and biased healthcare Black Americans receive, which prevents them from receiving the treatment they need.

The *New York Times* article which found that Black nursing home residents with dementia were more likely to be diagnosed with schizophrenia as a loophole to sedate patients reports that when schizophrenia diagnosis is incentivized, the disparities are magnified (Gebeloff, 2001). Racial bias in clinicians and diagnostic criteria cause Black people to be diagnosed with schizophrenia more than white people. While it is possible environmental factors contribute, historically Black people have been portrayed as linked to both schizophrenia and violence, and Black schizophrenia was seen as inherently violent. This bias is still present today, as clinicians are more likely to perceive Black patients as mistrustful or paranoid and dismiss mood disorder symptoms, therefore diagnosing them with schizophrenia. This in combination with an overall tendency to treat Black patients unfairly causes Black patients to be more distrustful of mental health care professionals, leading to the perception of mistrust and paranoia by clinicians again. It's cyclical in nature. All the affecting factors, from biased perceptions of presentations of race on an individual level presented as symptoms to diagnostic criteria and environmental stressors caused by institutional racism are all closely tied up. The racial disparities in the diagnosis of schizophrenia cannot be pinned down to one causal factor as they all interact in complex ways. This topic is not widely known or covered, and more research should be done investigating the relationships of factors contributing to racial disparities in diagnosis, and considering what can be done within the psychiatric industry to mitigate this bias.

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