An Analysis through Technological Politics of the Unintentional Bias of the Brief Jail Mental Health Screener within the Albemarle-Charlottesville Regional Jail

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

American citizens constitute five percent of the global population and yet they comprise 20 percent of the world's inmate population (Wagner & Bertram, 2020; Wagner, 2022). At the same time that the U.S. is incarcerating large segments of the population, nearly one in five adult citizens in our nation is suffering from mental illness (U.S. Department of Health and Human Services, 2021). Because of inadequate resources and funding for mental health treatment within prison systems, this mental health crisis is just as rampant among the incarcerated population. According to a 2017 study by the Department of Justice, 64% of inmates in local prisons have a history of mental health problems, and 60% are actively experiencing symptoms (Bronson & Berzofsky, 2017). This statistic shows that America's jails and prisons have become some of America's largest mental hospitals (Ford, 2021). The Albemarle-Charlottesville Regional Jails (ACRJ) are no exception.

Providing adequate treatment to mentally ill inmates would not only improve health care in prisons but would also lower the number of incarcerated Americans. However, before such treatment can be provided, the inmates with mental illnesses must be effectively identified. Previous data demonstrate that there has been a lack of understanding of mental illnesses paired with a negative stigma of vocalizing the need for mental health support in prison systems. One source states that only 32.5 percent of inmates with a serious mental illness were identified at intake, leaving the majority of those in need helpless, without any resources to support them (Teplin, 1990). Jail and prison systems nationwide tried to answer this need through a variety of mental health resources and program initiatives. One of these initiatives – the Brief Jail Mental Health Screener (BJMHS) – was a more thorough intake mental health screening tool to attempt to flag inmates with mental illnesses and connect them with appropriate resources during their incarceration and continuing once they are released.

Within the Charlottesville community, over 60% of released inmates with serious mental illness experience recidivism (Donkoh-Moore et al., 2021). Access to resources and technologies like the BJMHS have aided in efforts that have made significant strides of improvement within ACRJ since it was first implemented a decade ago. However, within the last 5 years, through research conducted at ACRJ, supported by the Jefferson Area Community Criminal Justice Board in conjunction with the UVA Systems Engineering Capstone group, data shows that the BJMHS's efficacy has been less than what was hoped for (Donkoh-Moore et al., 2021). This is not unique to the Charlottesville region. Despite its intended use as a static technical tool, there are significant social, ethical, racial, and gender-based shortcomings that create an insurmountable bias within the process and the use of the data created from the BJMHS.

If we continue to think that the BJMHS only impacts the prison system through its technical function we will miss how it unintentionally works to shape power relations and access to resources among the incarcerated community. A lack of understanding will invariably hinder the technical implementation and the success of mental health resources, causing stagnation in the effort toward ending the mental health crisis within the prison system.

Drawing on Technological Politics, I argue that the current BJMHS system performs questionable social and ethical work within jail systems, by marginalizing minorities and women through inaccurate assessments while privileging others. Technological Politics, a framework developed by Langdon Winner, addresses concerns of power, justice, and care in technological design. According to Winner's article, "Do Artifacts Have Politics?" technological artifacts have "political properties" which can be defined as "arrangements of power and authority in human associations as well as the activities that take place within those arrangements" (Winner, 1980). Technological designs, like the BJMHS, can express and shape relations of power and privilege among groups of people by advantaging some while marginalizing, excluding, or harming

others. Oftentimes, these "politics" are an unintentional effect of design choices that may express implicit bias.

These ethical shortcomings are revealed once using Technological Politics to thoroughly analyze the BJMHS's political properties. To support my argument, I will analyze the way race and background, gender, and religion of the inmate impact the administration and subsequent results from the BJMHS. To do this, I will utilize a decade's worth of data analysis from both the Central Virginia Regional Jail and Albemarle County Regional Jail, accumulated through UVA Capstone research done by Systems Engineers. In addition, I will utilize stakeholder interviews to learn more about inherent biases from Region 10 Community Services (R10), Offender Aid and Restoration (OAR), and the Charlottesville Police Department (CPD).

Background

The ACRJ has used the BJMHS to identify mentally ill inmates and to try to decrease recidivism due to mental illness. The BJMHS consists of eight yes or no questions that a police officer asks the inmate. Once finalized, the tool recommends specific resources that the offender can decide if he/she wants to utilize. The BJMHS serves as a vehicle to identify and provide resources to inmates who suffer from mental illness and might become recidivists due to a lack of support once out of jail. The technology does include a disclaimer, however, that it is "not able to guarantee that the inmate has a mental illness, identify every inmate with a need for mental health services, or identify the specific mental illness a detainee may have (Brief Jail Mental Health Screen, 2021).

Literature Review

A great deal of research exists on the current mental health crisis within jails across the country. Most of this research concerns identifying resources and technologies that can be instituted in order to combat this crisis. In an effort to do this, however, we must acknowledge

the implicit bias in our technologies. The lack of acknowledgment of implicit bias and inherent marginalization found in current research of the BJMHS causes a skewed perspective for writers, readers, and users of the technology. While scholars and psychologists agree that the concept behind BJMHS to help characterize the mentally ill population is sound, little has been done to spread awareness of the inherent bias present in the use of the technology, and more specifically the reasoning behind the marginalization of social groups within the technology. The analysis performed in this paper will advance the understanding of how the BJMHS, a technology that has been viewed as an objective, technical, and static functioning tool, actually shapes power relations and access to resources among the incarcerated community through marginalizing minorities and women.

The medical community generally accepts that diversity in ethnicity, background, and socioeconomic status has a direct effect on an individual's attitude, acceptance, and access to mental health resources. There are many journals on this dynamic and its impact on society. Dr. Lonnie R. Snowden from the University of California, Berkeley School of Welfare analyzes this subjective dynamic in a study published in the American Journal of Public Health. Snowden (2003) conveys the importance of maintaining access to and use of various methods of diagnosis and treatment of mental illnesses to diverse populations:

> Taking account of racial and ethnic differences does not in itself constitute bias. Indeed, some critics argue that responding to racial and ethnic differences is essential, that mental health interventions must be varied to allow for differences in race, culture, and ethnicity. They claim that appropriate treatment necessitates awareness of critical differences between minority individuals and others in beliefs and sensitivities related to mental health, in expression of symptoms, and in treatment preferences. From this perspective, to ignore racial and ethnic differences reflects a kind of bias. (para. 5)

Racial and ethnic disparities are as widespread in the diagnosis and treatment of mental illness as they are in other areas of healthcare. Snowden argues that there are systematic reasons within our nation for these disparities, some being cultural differences, practitioner expectations, and religious teachings.

Because of these differences in backgrounds, mental health administrators and practitioners cannot approach the diagnosis and treatment of mental illness with an attitude of one-size-fits-all. "Reactions to a person on the grounds of perceived membership in a single human category, ignoring other category memberships and other personal attributes" is a recipe for disaster that will end in certain social groups being privileged while others will suffer (Snowden, 2003).

Likewise, over the last decade, the American criminal justice system has begun an open conversation about inmates' access to mental health resources, due to the mental illness crisis in our prison systems. This conversation often discusses the potential of new resources and technologies that will be or have recently been made available for the incarcerated population. Because of the more recent concern with inmate mental health issues, these new resources and technologies are often viewed only as beneficial, groundbreaking, and static. However, due to the new opportunities created in an area that previously had few resources, the expectation of certain technologies like the BJMHS can create unrealistic expectations of the benefits of the impacts of these technologies.

For example, in 2015, Amy Solomon, a senior adviser to the United States Assistant Attorney General, stated that, "We have an unprecedented opportunity to treat substance abuse, mental health, chronic, and communicable health difficulties while people are incarcerated and especially upon release. If we do that, if we can deliver the right treatment to the right people at

the right time, then we can improve public health, we can improve public safety, and we can save taxpayer dollars" (Cloud & Davis, 2015). Although this statement is true, it also shows that the excitement of new technology can overshadow the needed discussion on the importance of treating these new technologies, like the BJMHS, as political entities.

In addition, Cloud and Davis wrote that the connection between healthcare in the criminal justice system through the use of new technologies and resources provided to inmates "preserves the investments jurisdictions make in their justice-involved populations and improves health and safety outcomes for everyone" and that to "expand understanding of the value of [these technologies] across agencies and organizations, stories about bridging public health and public safety are vital for other groups to hear" (Cloud & Davis, 2015). Once again, policymakers and administrators can be immediately enthralled with the idea of new resources, viewing them as static, functional tools. However, mental health resources like the BJMHS are not static; their objectives are centered around a very political concept, mental health and illness. These concepts are subjective to every individual and are not simply objective functional tools. Policymakers must realize that the tools themselves shape power dynamics throughout the incarcerated community.

Significantly, the medical community and the criminal justice system are researching and publishing related topics in the area of mental health. The medical community has focused on the impact of race, gender, and cultural background on mental health resources. The criminal justice community has focused on the development of new mental health resources and technology within prison systems. Despite the potential relationship between their research, however, no connection has been drawn between the two areas. This disconnect between research will continue to advantage certain social groups over others until the social and political biases of the

BJMHS are understood and taken into account. My analysis aims to fill in that gap of understanding.

Conceptual Framework

To analyze the BJMHS' biases and shortcomings, I will use Technological Politics, a framework developed by Langdon Winner, to argue that the technology that is currently being used and its "unbiased" results are inherently political and to provide a more complete understanding of how the BJMHS exposes long-standing biases in prison systems. The technology went beyond the purpose of its technical design to manipulate social power by marginalizing minorities while privileging others. Technological politics examines the inherent political dimensions of technology, whether intended or unintended, which alter the power dynamics between groups of people depending on their demographics (Winner, 1980).

According to Langdon Winner's article "Do Artifacts Have Politics?" technological artifacts have "political properties" which can be defined as "arrangements of power and authority in human associations as well as the activities that take place within those arrangements." These political properties, which are often unavoidable if not inherent, come about regardless of a designer's intention. The condition of modern politics is tightly intertwined with the design of its technical networks, and the studying of a technology's social origins can give insight into "human ends to technical means" (Winner, 1980). Winner defines "political work" as the act of technology empowering some groups while marginalizing others, and this is performed by way of shaping power dynamics and social privileges. Because of this cycle, certain artifacts enact more (or less) justice and care than their surface-level technical work would suggest, so it is necessary to address their potential for impact over previously established power relations.

One way that Winner argues that technologies contain political properties is that they function as a way of settling an issue in a particular community. Therefore, technologies can support existing forms of social order or create new forms of social order. He further expounds that in these cases, "the very process of technical development is so thoroughly biased in a particular direction that it regularly produces results counted as wonderful breakthroughs by some social interests and crushing setbacks by others" (Winner, 1980). Thus, for these technologies, "intentionality behind the design cannot be easily ascribed, but rather these technologies should be weighed in parallel to existing forms of social order" (Winner, 1980). Only then can these technologies be understood in terms of the social and political work they do.

I will draw on Winner's technological politics to support my argument that the BJMHS is a technology that is arguably not intentionally designed to be racially and gender biased; however, it is inevitably a relic of long-standing forms of social order that privilege certain groups over others. In what follows, I will analyze the ways that BJMHS expresses social and political relationships of power by investigating the BJMHS accuracy rates in both false negative and false positive rates for various races and genders and explain the implications of those fluctuating accuracy rates concerning culture, language, and stigma barriers.

Argument

The BJMHS is an 8-question screening tool designed to provide a recommendation for whether an incoming inmate needs further mental health evaluation and treatment. It focuses specifically on mental illnesses such as bipolar disorder, schizophrenia, and major depression.

In this paper, I will rely on Technological Politics to demonstrate how the BJMHS manipulates social groups of the incarcerated through implicit bias within the questionnaire and its administration. I will analyze this through 3 components: the impact of the gender of the

inmate and administrator on the success of the BJMHS, the impact of race and ethnic background of the inmate and the administrator on the success of the BJMHS, and the impact of an inmate's religion on the success of the BJMHS. Although the accuracy and success rates are analyzed through percentages and numerical values, it is important to note that the failure of the BJMHS to accurately screen inmates of all races, genders, and faiths is equally a fatal error in its implementation and use.

Gender of Inmate & Administrator

In order to understand how the BJMHS can be seen as a political artifact, it is necessary to examine the specific social groups that are being marginalized and privileged, and how various social factors influence those dynamics. First, I will demonstrate how both inmates' and administrators' genders have an impact on the accuracy of the BJMHS technology.

Despite its intended objectivity, the BJMHS has different outcomes and success rates between men and women; specifically it more often misclassifies women over men. In a study of a validation of the BJMHS, it was found that in an analysis of over 10,000 inmates that went through the BJMHS, "It correctly classified 73.5 percent of males but only 61.6 percent of females on the basis of SCID diagnoses" (Steadman et al., 2005). Notice that the tool is 12.1 percent less accurate when used to classify women than it is for men. Therefore, it inherently demonstrates a bias when used on female inmates. The study subsequently concluded that the "BJMHS is a practical, efficient tool that jail correction officers can give male detainees on intake screening. However, the screen has an unacceptably high false-negative rate for female detainees" (Steadman et al., 2005). The inherent bias exhibited in the BJMHS had a disparate result depending on the gender of the inmate being screened. The results were reliable when used to screen the male inmate population but the researchers determined that the false-negative rate

for female inmates was unacceptably high and that the BJMHS should not be used to screen women detainees. This reinforces the argument that an inmate's gender has an impact on the accuracy of the BJMHS due to gender bias.

Subsequent studies and validations have been conducted since then with similar findings. For example, an analysis published in 2014 found that female detainees suffering from severe mental illness (SMI) had higher false negative screening rates (34.7%) with the BJMHS than male detainees with SMI (14.6%) (Torrey et al., 2014). Like the 2005 study above, in this study, when the BJMHS was used as a screening tool for female inmates, the likelihood of having a false-negative result increased 20 percent as opposed to its use with the male inmate population. Again, this suggests that an inmate's gender affects the accuracy of the BJMHS.

Despite the evidence in these studies that the BJMHS is not an adequate screening tool that results in accurate results for women, prison systems across the country continue to use it in its same format. Additionally, no modifications have been made to the BJMHS since these studies were conducted (Torrey et al., 2014).

It is unclear from the research whether having a female screener would improve the results of the BJMHS for women inmates. However, in a 2005 validation study of the BJMHS conducted in New York and Maryland, one jail requested to have correctional nurses administer the test because of the belief that nurses often have more experience in mental health diagnoses and discussions than correctional officers. The jail requested that nurses "administer the screener to all inmates or to those who are reluctant to respond to the correctional officers, assuming that all nursing staff members are as well trained" in this area (Steadman et al., 2005). Notice that this particular jail believed that inmates were more comfortable being screened by a nurse. It is important to note that, in the United States correctional system, 86% of correctional nurses are

women, while 14% are men (Correctional Guard Demographics in the US, 2022). In addition, 68.1% of correctional officers are men and 31.9% of correctional officers are women (Correctional Guard Demographics in the US, 2022). Therefore, if the BJMHS is administered by a correctional officer, there is a much higher likelihood that an inmate will be evaluated by a male officer. Therefore, the effect of using nurses more often to administer the BJMHS would statistically result in inmates being screened by women more often. Further research is needed to determine whether this would result in more accurate results for women inmates. Regardless, this has the potential to reinforce the fact that the gender of the administrator of the BJMHS may have an impact on its accuracy rate for inmates.

In sum, according to the studies provided, the gender of an inmate that is administered the BJMHS has a direct impact on the outcome of the technology. Additionally, the gender of the administrator may have an impact as well on the bias and accuracy rates of the BJMHS. Overall, these findings support the argument that the BJMHS is an inherently political artifact with the potential to have more accurate results when screening male inmates over women.

Race and Ethnic Background of Inmate and Administrator

Studies have also shown that the ethnic background and race of an inmate and an administrator have an impact on the success of the BJMHS technology in two ways: (1) inmates with different ethnic backgrounds and cultures have varying viewpoints and stigmas associated with mental health awareness, and (2) inmates tend to feel more comfortable being vulnerable during an evaluation with an administrator of the same ethnicity and/or background.

According to a 2010 study that examined how understandings of mental illness and responses to mental health services vary along ethno-racial lines, “Euro-Americans participants were most aligned with professional disease-oriented perspectives on severe mental illness and

sought the advice and counsel of mental health professionals. African-American and Latino participants emphasized non-biomedical interpretations of behavioral, emotional, and cognitive problems and were critical of mental health services" (Carpenter-Song, et al., 2010). Notice that, according to this study, inmates of European-American backgrounds were more likely to view mental illness as a disease requiring medical treatment, whereas inmates of African-American and Latino ethnicity focused more on mental illness as a non-medical problem while scrutinizing mental health services. Therefore, when the BJMHS is being used on a diverse inmate population, the ability of inmates to identify themselves as having a valid medical issue requiring treatment may depend on their ethno-racial background. Thus, an inmate's preconceived notion and belief about mental health issues services undoubtedly affect the efficacy of the BJMHS as a screening tool.

Similarly, the same study explored the association of stigmas with mental illness across different races. "Although Euro-Americans were aware of the risk of social rejection because of mental illness, psychiatric stigma did not form a core focus of their narrative accounts. By contrast, stigma was a prominent theme in the narrative accounts of African Americans, for whom severe mental illness was considered to constitute private 'family business.' For Latino participants, the cultural category of 'nervios' appeared to hold little stigma, whereas psychiatric clinical labels were potentially very socially damaging" (Carpenter-Song, et al., 2010). Thus, the study shows that Euro-Americans were more willing to self-identify as having a mental illness requiring treatment than African American and Latino inmates. It is clear, therefore, that these groups exhibit different understandings, preconceived notions, and stigmas associated with mental health. These underlying interpretations of mental illness will impact the way in which each group answers questions on the BJMHS. Therefore, this study supports the argument that

the ethnic background and race of an inmate has a clear impact on the efficacy of the BJMHS technology.

Further, according to a 2012 study, detainees are more comfortable being screened for mental illness by an administrator of the same race as the detainee (Prins et al., 2012). In fact, the study found that a disparity in race between the interviewer and the inmate resulted in decreased willingness to self-identify as having a mental illness (Prins et al., 2012). The lack of accurate self-reporting results in minority populations failing to receive access to the treatment and resources that they need. This problem is exacerbated, however, by the national demographics of inmates and staff within the U.S. prison systems.

Nationally, 61.8 percent of staff in jails is white, 21.1 percent is African American, and 13.4 percent is Hispanic (Federal Bureau of Prisons, 2023). Conversely, approximately 43 percent of inmates nationwide are minorities (Federal Bureau of Prisons, 2023). While almost 62 percent of the staff in jails is white, 43 percent of inmates are in minority populations. Therefore, it is statistically unlikely that minorities will be evaluated for mental illness by someone of the same race. In fact, in the 2012 study, it was determined that "African American detainees had less than half the odds of screening-in than White detainees, and Latino detainees had about one-third the odds" (Prins et al., 2012). This study confirmed that, given the racial make-up of prison staff compared to the inmate population, it is less likely that minorities will be evaluated for mental illness by someone of the same race than white inmates. This contrast can cause minorities to feel even more vulnerable, leading to a lower likelihood that they will answer mental health questions honestly (Prins et al., 2012).

For these reasons, it is evident that the ethnic background and race of an inmate and an administrator have an impact on the success of the BJMHS technology. Often an inmate's

willingness to believe that he has a mental illness, or to report that information to others, is influenced by his ethnic background. Also, many inmates feel more comfortable being vulnerable during an evaluation with an administrator of the same ethnicity or racial background. These factors undoubtedly affect the efficacy of the BJMHS, which again demonstrates that this technology acts as a political artifact, expressing and shaping relations of power and privilege among the groups interacting with it.

Religion of Inmate

In addition to the effect of racial and gender differences on the success of the BJMHS, an inmate's religion also impacts the accuracy of the screening. Question 6 on the BJMHS asks, "Have there currently been a few weeks when you felt like you were useless or sinful?" (Brief Jail Mental Health Screen, 2021). The phrasing of this question elicits a subjective response from inmates, depending on their religious beliefs. The use of the word "sinful" can evoke drastically different reactions from different persons, and a question about religion that requires a yes or no answer can cause confusion and discount the efficacy of the tool. If an inmate answers "Yes" to this question along with only one other question, the inmate will be screened-in for further evaluation. Despite the intended objective and purely technical function of this technology, the question of whether an inmate thinks he or she has been "sinful" introduces another layer of subjectivity to the BJMHS.

The use of the word sinful creates a religious element to the technology. According to Merriam-Webster, the "current form of the word ‘Sin’ comes from the Middle English sinne, whose meanings of sin were largely concerned with religious matters, for example, 'a transgression of religious law,' or 'an offense against God’” (Merriam-Webster, n.d.). Note that the origin of the word “sin” and “sinful” stem from religious backgrounds pertaining to some

display of transgression to the teachings of God. The use of this religious jargon during what should be an objective, technical, and non-religious screening will inevitably cause biased and skewed results. More specifically, the results of the BJMHS may be biased against inmates who are not religious and who answer the question in the negative, and in favor of religious inmates who are more likely to consider themselves to have sinned. Conversely, a religious inmate may wonder what sinning has to do with mental health services or be concerned that saying that he or she has recently sinned could be construed as an admission of guilt to criminal conduct. In any event, the tool has a high chance of evoking a different response depending solely on an inmate's faith.

I have argued that the use of the word “sinful” on Question 6 of the BJMHS elicits a religious connotation, leading to biased and skewed results of responses and final outcomes of the technology, due to the subjectivity of an inmate’s beliefs. Despite this, some researchers may argue that the use of the word "sin" simply connotes unacceptable behavior in society and that it need not be a religious term. However, this view fails to understand the origin of the word sinful and, even more importantly, that each religion defines and interprets sin differently. According to the Routledge Encyclopedia of Philosophy, "the concept of sin is the concept of a human fault that offends a God and brings with it human guilt. Major theistic religions of Judaism, Christianity, and Islam have differing associations with the word sin. In the Hebrew Bible, sin is understood to be a deviation from the norms of holiness which only exists through a covenant with Yahweh. In the Christian New Testament, Jesus teaches that human wrongdoing offends the one whom he calls Father. The Qur'an portrays sin as opposition to Allah rooted in human pride" (Routledge Encyclopedia of Philosophy, n.d.). Notice how, first, each religion has differing interpretations of what constitutes a sinner and, second, the beliefs associated with the word

differ within each religion. In a similar way, individuals who are not religious or practice a different faith should be expected to have their own respective interpretations and associations of the word. Therefore, the argument that the word “sin” can be maintained as an unbiased and purely objective, non-religious term does not have merit. Once more, although the BJMHS is intended to be used in a technical and static way, the question of whether an inmate thinks he or she has been "sinful" introduces another layer of subjectivity and bias to the BJMHS, leading to inaccurate assessments and inevitable marginalization.

Conclusion

Although the BJMHS has helped identify and focus the provision of mental health resources for the incarcerated, the administration of the 8-question intake form is not enough to correctly and equally match all genders and races of inmates with the resources they need. With false positive rates as high as 63 percent, accuracy gaps as high as 20 percent between men and women, and an overall culture and language barrier through intake of minorities, the current system of the BJMHS is not adequately succeeding in its role to diagnose inmates with mental illness and give them the support they need (Teplin, 1990). We can understand the limitations of the BJMHS through Technological Politics. For the BJMHS to be used in an effective manner, readers and all stakeholders involved must understand the implicit biases that stem from the intake form. Then, once empowered to make a change, stakeholders within ACRJ and prison systems nationwide must begin to make strides to standardize the BJMHS so all genders, races, and religions have equal access to the resources they need.

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