

MULTIPLE JEOPARDY, SERIOUS MENTAL ILLNESS, AND SERVICE ATTENDANCE

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A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Psychology- Master of Arts

2022

ABSTRACT

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For people with Serious Mental Illness (SMI), attendance to behavioral health care services is linked to an increased probability of recovery and a decreased risk for suicide, involuntary hospitalization, incarceration, mental distress, and preventable mortality. Within the population of people with SMI, women and men who are Black, Indigenous, and other People of Color (BIPoC) are most likely to experience barriers to services and are the least likely groups to attend services. Thus, most studies examining behavioral health care attendance trends for people with SMI focus on the relationship between marginalized race and/or sex and barriers to service attendance. However, few studies examine the relationship between barriers and attendance among those who occupy multiple marginalized identity groups. This study seeks to fill that gap. Using Multiple Jeopardy theory, which asserts that membership in multiple marginalized groups increases the risk of experiencing negative life events, this study examines the impact of holding multiple marginalized social group identities and of experiencing barriers to attendance on the probability of attending behavioral health services among people with SMI.

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Introduction

Serious Mental Illness (SMI) is defined by a combination of diagnostic and functional characteristics. Functionally, for someone to qualify as experiencing SMI, their mental health condition must confer serious functional impairment substantially interfering with life (National Institute of Mental Health [NIMH], 2022). Schizophrenia, major depressive disorder, and bipolar disorder are diagnoses commonly linked to SMI. However, someone diagnosed with Post-Traumatic Stress Disorder (PTSD), panic disorder, or other disorders may be diagnosed with SMI if distress substantially interferes with their life (NIMH, 2022).

Compared to the general population, those with SMI experience substantial negative health and social outcomes (Corrigan et al., 2014; Goldman et al., 2018; Mosher & Burti, 1994; Nelson et al., 2014; Orovwuje & Taylor, 2006). These outcomes include substance misuse, social isolation, family disharmony, comorbid chronic health conditions, suicide, and early mortality (de Mooij et al., 2019; Walker & Druss, 2017; Walker et al., 2015). These compounding conditions may explain why the life expectancy of people with SMI is anywhere from 13 to 32 years shorter than that of the general public (de Mooij et al., 2019).

Before recovery from SMI was better understood, negative health and social outcomes, comorbidity, and early mortality were believed to be inevitable SMI outcomes (Drake & Whitley, 2014). Yet, work in recent decades shows 20%-25% of people with SMI achieve clinical recovery (absence of symptoms and return to pre-symptom functioning) and 40%-45% achieve social recovery (low symptom-disruption in social life) (Carla A. Green et al., 2013; Vita & Barlati, 2018). Behavioral health care service utilization is a key facilitator for promoting recovery (Drake & Whitley, 2014). However, 35%-40% of people with an SMI reported not utilizing behavioral health care services in the last year (National Survey on Drug Use and

Health [NSDUH], 2020), and nearly 50% of people with SMI stated that when they needed behavioral health care services, they could not access them because of various barriers that prevented them from attending (NSDUH, 2020).

People traditionally marginalized in the US are least likely to utilize services. Specifically, those who are Black, Indigenous, and other People of Color (BIPoC), low-income, and women are overrepresented among those who do not utilize, and/or face more barriers to, behavioral health care services (Carla A. Green et al., 2013; Harrison et al., 2001; Vita & Barlati, 2018; Warner, 2013). As might be expected from this finding, these groups are also less likely to recover from SMI (Akinhanmi et al., 2018; Ali et al., 2018; Armour et al., 2009; Dubreucq et al., 2021; Grossman et al., 2006; Lo et al., 2014) and are more likely to experience negative health outcomes compared to other groups of people with SMI (e.g., White males, White females, those with SMI living above the poverty line) (Cunningham & Dixon, 2020; de Mooij et al., 2019; Lo et al., 2014; NIMH, 2022; NSDUH, 2020; Weinstein et al., 2013).

Current research examining SMI health care outcomes typically isolate outcomes by race and SMI, sex and SMI, or by socio-economic status and SMI (Carr et al., 2015; Lo et al., 2014; Narrow et al., 2000; NSDUH, 2020; Stambaugh et al., 2016). Examining trends in this way can provide misleading insights and miss segments of people in programmatic initiatives (Bowleg, 2012; Buchanan & Wiklund, 2020; Overstreet et al., 2020). For example, in aggregate, women attend behavioral health care services more than men (NIMH, 2022). Thus, initiatives to increase behavioral health care service utilization primarily target men. Yet, closer inspection of the cross-sections of race and sex illuminates that Women of Color attend services less than White women and White men. Further, Women of Color report more barriers to services than White men and women (NSDUH, 2020). Thus, not all women attend behavioral health care services

more than men (NIMH, 2022) and initiatives addressing barriers to service attendance are missing a large portion of those not attending services (Women of Color). Moreover, these initiatives target men's service utilization as though they are a monolithic group. However, White men utilize services second only to White women. In fact, BIPoC men are the groups of people who utilize services the least. Despite this, many initiatives aimed at increasing service attendance target men as a whole rather than targeting BIPoC men specifically.

Including intersecting identity categories when examining barriers to service utilization among people with SMI may allow investigators to better understand and mitigate negative outcomes related to multiple group membership (Bowleg, 2012; Bowleg & Bauer, 2016; Bowleg, 2021; Buchanan & Wiklund, 2020; del Río-González et al., 2021; Overstreet et al., 2020). Multiple Jeopardy theory (Beal, 1980; King, 1988) contends that membership in multiple minoritized groups exposes a person to an increased risk of experiencing multiple and compounding forms of marginalization and negative outcomes due to multiple, interconnected systems of inequality (Bowleg et al., 2003; Buchanan & Wiklund, 2020; King, 1988). Thus, when people belong to multiple marginalized groups (e.g., woman *and* person of color *and* low income), they face heightened risk for exposure to, and experiences of, negative circumstances.

For example, a recent study found Black and Multiracial low-income mothers experiencing SMI are reluctant to utilize services because of their parental status (Powell et al., 2020). The effects of interlocking systems of inequality like paternalism, classism and ableism may explain this finding. In a paternalistic society, motherhood is regarded as an essential component of being a woman, with motherhood seen as the gender role that 'completes' women (Chrisler et al., 2014; Holton et al., 2009; Huang et al., 2016). Further, in an ableist society, a mother should be physically, economically, and mentally capable of caring for their child

(Daniels, 2019). This renders mothers struggling with SMI as non-ideal mothers (Halsa, 2018; Hasson-Ohayon et al., 2018). Reports find low-income mothers with SMI are afraid to utilize behavioral health care services for fear that clinicians may report them to child protective services (Krumm & Becker, 2006; Park et al., 2006; Seeman, 2012; Wittkowski et al., 2014). Ironically, this barrier to service attendance may allow symptoms to worsen, increasing the likelihood of having their children removed (Krumm & Becker, 2006; Park et al., 2006; Seeman, 2012; Wittkowski et al., 2014).

Investigations into the relationship between multiple group membership, barriers to care, and behavioral health care service attendance among people with an SMI could unlock new perspectives and opportunities to facilitate recovery for and with marginalized people (Das-Munshi et al., 2017; Das-Munshi et al., 2016). Yet, despite a recent call to investigate SMI health care attendance trends in the vein of Multiple Jeopardy theory (Das-Munshi et al., 2016), there is a paucity of research answering this call. This study seeks to fill that gap by examining how barriers affect the probability of behavioral health care attendance among people experiencing an SMI who occupy membership in multiple marginalized groups.

Literature Review

Serious Mental Illness

Serious mental illness (SMI) is defined by the National Institute of Mental Health as a mental, behavioral, or emotional disorder resulting in serious functional impairment that substantially interferes with one's life (NIMH, 2022). Commonly, schizophrenia, bipolar disorder, schizo-affective disorder, or major depression with or without psychotic features are designated as SMI (NIMH, 2022). However, other disorders (e.g., PTSD, major depression) can be considered SMI if symptoms contribute to serious functional impairment interfering in a person's life (NIMH, 2022).

According to the Substance Abuse and Mental Health Administration's (SAMHSA) latest national survey, approximately 20.4 million people in the United States (US) aged 12 and up experience SMI, representing a 2% increase since the last SAMHSA survey in 2008 (NSDUH, 2020) and adults aged 18 or older constitute 13.1 million of those with SMI (NSDUH, 2020). There are substantial group differences in the prevalence of SMI. Women are nearly twice as likely to be diagnosed with SMI (6.5%) compared to men (3.9%) (NSDUH, 2020). SMI is highest among those that self-identify as Multiracial (9.3%), followed by Whites (5.7%), Latino/a's (4.9%), Blacks (4.7%), Asians (3.1%), and Indigenous Americans (2.6%) (NIMH, 2022; NSDUH, 2020). Further, approximately 30% of people living below the national poverty line are diagnosed with SMI (NSDUH, 2020; SAMHSA, 2015b; Stapleton et al., 2006; Sylvestre et al., 2018).

In the US, all-cause mortality among those with SMI is 2-to-3.5 times higher than the general population (de Mooij et al., 2019; Olfson et al., 2015; Parks et al., 2006; Piatt et al., 2010; Walker & Druss, 2017; Walker et al., 2015). In fact, people experiencing SMI die

anywhere from 13 to 32 years earlier than the general public (de Mooij et al., 2019) and there is evidence that the mortality rate for those with SMI is increasing (Saha et al., 2007; Walker & Druss, 2017; Walker et al., 2015).

The factors contributing to early morbidity and mortality are complex, stemming from a combination of individual and social factors (Liu et al., 2017). As such, the World Health Organization has clustered the risk factors associated with excess mortality into three groups (Liu et al., 2017). First are individual factors that are disease-specific (e.g., genetics, symptom severity, family history, age of onset) and behavior-specific (e.g., lifestyle, substance use). Second are health system factors, including availability and quality of care, financial costs of health care, and medication side-effects. Third are social determinants of health factors, which include public policy, environmental vulnerability, social stigmas, and ideologies. Each of these elements contribute to the morbidity and mortality faced by people with SMI (Liu et al., 2017).

Health Disparities and SMI

The US Healthy People 2020 initiative defines health disparities as a “health difference closely linked with economic, social, or environmental disadvantage” (Healthy People, 2016). Economic disadvantage is related to a lack of wealth, low income, and an inability to afford items related to health or health promotion. Social disadvantage refers to someone’s position on a social gradient influenced by a combination of economic resources, ethnicity, race, religion, gender, sexual orientation, mental health, and/or disability (Braveman, 2014; Braveman et al., 2011; Healthy People, 2016). Environmental disadvantage refers to disadvantage conferred by someone’s neighborhood location. Importantly, these disadvantages are socially created and potentially alterable (Braveman, 2014; Braveman et al., 2011; Healthy People, 2016).

Importantly, 50% of people with SMI reported barriers to attending services like an inability to locate or afford services which prevented them from utilizing services when they needed them (NSDUH, 2019). This renders health disparities difficult to address because an inability to utilize services has been linked with unmanaged, harmful symptom experiences associated with the morbidity and mortality rates mentioned above (NSDUH, 2020; Spivak et al., 2019) and increased likelihood of experiencing unaddressed comorbid health issues like heart disease or cancer rendering early mortality (Cunningham & Dixon, 2020; Dornquast et al., 2017).

Lack of services has been linked to people with SMI being more likely than the general public to commit suicide, experience assault, or die due to preventable accidents, untreated health issues, and/or inappropriate pharmaceutical prescription regimens (Barnes & Paton, 2011; Brown et al., 2010; de Mooij et al., 2019; Firth et al., 2019; Kadra et al., 2018; Liu et al., 2017; Moncrieff, 2018; Muench & Hamer, 2010; Olfson et al., 2015; Sylvestre et al., 2018; Tiihonen et al., 2012; Townley et al., 2018; Vermeulen et al., 2017). Of note, the National Institute of Health (NIH) and National Institute of Mental Health (NIMH) each designate certain illness groups as a health disparities issue. When an illness is designated as a disparities issue, oversight and monitoring of health and health care services/outcomes is expanded. People experiencing SMI face many barriers to health care services and experience worse health outcomes than the general population, and though these issues may be partially attributable to their symptom experiences, it is widely recognized they primarily arise from discrimination and marginalization. Despite evidence supporting SMI as a health disparities issue (Goldman et al., 2018), SMI has not been formally designated as such. This reduces the likelihood of funding for innovations in care and

support aimed at helping people with SMI to receive recovery-oriented services (Das-Munshi et al., 2017; de Mooij et al., 2019; Goldman et al., 2018; Olfson et al., 2015).

Marginalization and Barriers to Care

Marginalization is a multilayered concept defined as a process by which people are peripheralized, deprived of mobility, control over self-will, and/or critical resources; indignified or humiliated; exposed to harmful circumstances; and/or exploited in ways that increase health, social, safety, and political risk (Hall & Carlson, 2016). Those with SMI constitute one of the US's most at risk groups to experience marginalization (Goldman et al., 2018; Rosenberg & Rosenberg, 2006; Rosenberg et al., 2013). Marginalization increases the barriers to services this group must face and is therefore consistently found to be a factor placing those with SMI at greater risk for health and health care disparities.

For example, literature points to the effects of public stigma (a form of marginalization) of SMI symptoms as a potential explanation for why those with SMI struggle finding steady work (Corrigan, 2000; Corrigan et al., 2012). A lack of steady work partially explains why nearly one-third of those with SMI experience homelessness or impoverishment (Sylvestre et al., 2018). For those with SMI, homelessness and impoverishment have been linked with an inability to locate, pay for, and consistently attend behavioral health services. Consequently, these barriers are linked to a surfeit of devastating health disparities including death from preventable diseases (Druss, 2020), exposure to violent crime (Latalova et al., 2014; Schmutte et al., 2021), and an increased likelihood of a fatal police-encounter (Kerr et al., 2010; Livingston, 2016).

Many hoped Medicaid expansion would alleviate the barriers impoverishment and homelessness produced in mental health service attendance (Alegria et al., 2012; Wahlbeck et al., 2017). Although Medicaid increased access to mental health services for many, Medicaid did

not necessarily lead to an increase in mental health service utilization (Golberstein & Gonzales, 2015; Mojtabai, 2005). Findings suggest those who qualify for Medicaid typically face more barriers to services than just poverty, but also face issues like service fragmentation, transportation issues, and geographical isolation (Allen et al., 2017; Willging et al., 2008). Thus, Medicaid insurance can serve as a proxy for other barriers and may not be as effective a facilitator to mental health services as had been hoped.

While the entire group of people with SMI face life-limiting barriers to care associated with marginalization, those with SMI who belong to additional socially disenfranchised groups are more frequently marginalized, face more barriers to care, and subsequently face some of the worst health and health care disparities (de Mooij et al., 2019; Goldman et al., 2018; Liu et al., 2017; Mote & Fulford, 2021). For instance, although BIPoC people are diagnosed with SMI less frequently than Whites, they face more persistent and debilitating symptomology after diagnosis and are more likely to die when compared to Whites with SMI (Lo et al., 2014). Though it is well established that BIPoC people with SMI face more persistent and debilitating symptomology than Whites with SMI, BIPoC's with SMI more often face barriers to recovery such as a reduced likelihood of being referred to recovery-oriented services and culturally appropriate treatment (Asonye et al., 2020; Carpenter-Song et al., 2011; Das-Munshi et al., 2017; Kisely & Campbell, 2015; Metzl & Roberts, 2019; Young et al., 2005). Additionally, women with SMI are more likely than men with SMI to face violent victimization, impoverishment, and homelessness (Carr et al., 2015; Cloyes et al., 2010; Falkenburg & Tracy, 2014; Mizock & Brubaker, 2021; Mizock & Russinova, 2015; Van Deinse et al., 2018). Importantly, race and sex are not themselves risk factors for poorer outcomes; interlocking structural racism and structural sexism influence the experiences and outcomes of BIPoC people and women with SMI.

Racism is a social system where the racial group in power creates a racial hierarchy in which other racial groups are deemed inferior (Yearby, 2021). Structural racism refers to the way society fosters racism through inequitable, mutually reinforcing systems (i.e., criminal justice, health care, housing, education, employment, earnings, benefits, media, etc.) (Asonye et al., 2020; Bailey et al., 2017; Metzl & Roberts, 2019). Systems structured by racism reinforce discriminatory beliefs, values, and the distribution of resources which, together, heighten the numbers of barriers to care for BIPoC people and therefore reduce their likelihood of receiving care, leading to worse health outcomes (Asonye et al., 2020; Bailey et al., 2017; Metzl & Roberts, 2019; Yearby, 2018, 2021).

One way that structural racism increases barriers to care is by geographically situating BIPoC people in regions located away from health care services (Bailey et al., 2017; Krieger, 2014). This may partially explain why BIPoC people with SMI attend fewer services than Whites with SMI (Asonye et al., 2020; NSDUH, 2020). Lack of access to care for SMI is related to increases in debilitating symptomology (Drake & Lewis, 2020; Drake & Popeo, 2020; Fuller DA, 2015; Mote & Fulford, 2021). Increased symptomology without access to care is correlated with police intervention rather than clinical intervention which may partially explain why BIPoC people with SMI are more likely to experience a police encounter that can either lead to death or legal issues (Appel et al., 2020; Asonye et al., 2020; Fuller DA, 2015; Hacker & Horan, 2019; Livingston, 2016; Saleh et al., 2018). BIPoC people report that these legal issues are a barrier to services because they perceive stigma from providers and/or fear clinicians will share confidential information with the courts, thereby compounding their legal challenges (Fuller DA, 2015; Hacker & Horan, 2019; Kolodziejczak & Sinclair, 2018; Livingston, 2016; Mote & Fulford, 2021; Rastogi et al., 2012).

Finally, structural racism is implicated in the inequitable distribution of income across racial groups such that Whites are systematically positioned highest on the economic gradient (Bailey et al., 2018; Bailey et al., 2017; Booth & Crouter, 2001; Krieger, 2014; United States Census Bureau, 2020). BIPoC people (particularly Blacks, Native Americans, and Latino/a's) are systematically offered fewer jobs, and/or offered jobs that have a high injury risk or risk for mistreatment (Bailey et al., 2017; Lee et al., 2020; Pager & Shepherd, 2008). This may explain why BIPoC people with SMI are more likely than Whites with SMI to be impoverished, unemployed, and/or homeless and are more likely to cite these issues as barriers causing non-attendance to services (Asonye et al., 2020; Lo et al., 2014; NSDUH, 2020).

Structural sexism may also play a role in observed SMI health disparities and the subsequent marginalization of women with SMI. Structural sexism is defined as systematic gender inequality in power and resources (Homan, 2019). Though structural sexism has been less systematically investigated than structural racism (Homan, 2019), and even fewer articles examine structural sexism's effects on SMI outcomes, it may play a critical role in observed sex-related health disparities. Findings suggest structural sexism contributes to gender bias in medical institutions (Krieger, 2014), labor market practices (Rivera, 2017; Rivera & Tilcsik, 2016), and social attitudes toward women's bodies that serve to elevate women's risk of experiencing certain forms of violent victimization like rape and assault (Adler, 2009; Aizer, 2010; Braveman & Gottlieb, 2014; Krahé, 2018; Yang et al., 2014), which are also associated with negative mental health consequences and an exacerbation of SMI.

Studies find sex biases in medical institutions hinder women's care as women are systematically less likely than men to receive the most advanced treatments and available diagnostic procedures (Hochleitner et al., 2013; Homan, 2019) and women are more likely than

men to have their physical complaints trivialized or misdiagnosed (Mirin, 2020; Tasca et al., 2012). These findings mirror reports that women with SMI often feel clinicians trivialize and ignore complaints and/or provide inaccurate treatment (Carr et al., 2015; Iniesta et al., 2012; Lo et al., 2014; Narrow et al., 2000; NSDUH, 2020; Stambaugh et al., 2016).

The 2020 US census reports women earn 82% of what males earn (United States Census Bureau, 2020). Additionally, the poverty rate for women (12.9%) is higher than for men (10.6%) (United States Census Bureau, 2020) and women with SMI are nearly 1.5 times as likely to be in poverty compared to men with SMI (WHO, 2014). This may explain why more women than men with SMI cite difficulty affording services as a barrier to their ability to attend services (NSDUH, 2020), why more women than men with SMI are homeless and/or unemployed (Greenberg & Rosenheck, 2008; Khalifeh & Dean, 2010; Latalova et al., 2014), and why 32% of women with SMI are receiving services in prisons and jails compared to 14.5% of men with SMI (Cloyes et al., 2010; Office of Research and Public Affairs, 2021; Robertson et al., 2014).

Structural sexism also effects men (Homan, 2019). Sexism influences men's perceptions of psychological help-seeking as weakness (Homan, 2019). This self-stigmatizing belief may act as a barrier to men seeking mental health help (Addis & Mahalik, 2003; Levant, Kamaradova, & Prasko, 2014; Pederson & Vogel, 2007). Thus, sexism may serve to partially explain why men with SMI utilize services less frequently than women with SMI (NSDUH, 2020). In fact, when men with SMI were surveyed about why they did not utilize services by the NSDUH, they reported they felt they could "handle symptoms on their own" (NSDUH, 2020).

Certain social experiences are also known to confer lasting and significant burdens on people's health. For example, in 1998, a landmark investigation known as the Adverse Childhood Experiences (ACE) Study examined lifetime health consequences of people who were

exposed to any of seven childhood risks. These risks included psychological, physical, or sexual abuse; violence against a mother; or living with household members who were substance misusers, mentally ill or suicidal, or who were ever imprisoned. The study found a graded relationship between exposure to risks and subsequent health consequences. The more risks a person was exposed to in childhood, the more likely they were to report or be at risk for alcohol or drug misuse, depression, a suicide attempt, obesity, heart disease, chronic lung disease, cancer, skeletal fractures, and liver disease (Felitti et al., 1998).

One well studied social issue conferring an array of similar negative consequences for people with SMI is poverty. Estimates indicate that at least 30% of people with SMI experience poverty (Mangurian et al., 2013; Spivak et al., 2019; Sylvestre et al., 2018). Those with SMI experiencing poverty are more likely to have severe psychiatric symptoms (NSDUH, 2020; SAMHSA, 2015b), experience medical care delays (Saleh et al., 2018; SAMHSA, 2015b; Spivak et al., 2019; Sylvestre et al., 2018; WHO, 2014), and are more likely to receive emergency services for treatment as opposed to community treatment (Mangurian et al., 2013; NSDUH, 2020; Olbert et al., 2018; SAMHSA, 2015b).

Poverty acts as a barrier placing people with SMI at a greater risk for non-attendance to services by increasing risk for homelessness (Hirschtritt & Binder, 2017), comorbid substance misuse and/or PTSD (NSDUH, 2020), incarceration (DeMartini et al., 2020; Hall et al., 2019; James, 2006), and contributes to early mortality (de Mooij et al., 2019; Walker et al., 2015). It is also important to recognize each of these issues can have negative consequences of their own. For example, people with SMI who are homeless are at an increased likelihood to interact with law enforcement and 75% of people receiving services in prisons or jails reported homelessness prior to their arrest (Greenberg & Rosenheck, 2008; Hall et al., 2019; Rosenbaum, 2016;

Rosenbaum, 2018; Weinstein et al., 2013). Crucially, BIPOC people with SMI and women with SMI are the groups most likely to be impoverished when compared to other groups of people with SMI (Jeffrey Draine et al., 2002; SAMHSA, 2015b; Spivak et al., 2019).

Overall, most people experiencing SMI face marginalizing life-limiting circumstances. However, BIPOC people with SMI and women with SMI are exposed to such experiences more than others and are subsequently more likely to face barriers in receiving needed care. Consequently, opportunities for recovery from SMI may be predicated on the various structural forces influencing people's illness experiences.

Service Attendance

Historically, it was thought those with SMI could not recover (Warner, 2013). Serious mental illness was considered a chronic and debilitating illness that worsened over the life course, and those with SMI were provided a grim prognosis (Drake & Whitley, 2014). However, over the last several decades research suggests recovery from SMI is possible (Carla A. Green et al., 2013; Rosenberg & Rosenberg, 2006; Warner, 2013). Currently, recovery is defined as an outcome *and* as a process (Beeble & Salem, 2009; Grant et al., 2017; Lim et al., 2017; Vita & Barlati, 2018). Outcomes are related with reductions in symptom experiences. Processes are related to the pursuit of a meaningful life (Carla A. Green et al., 2013; Rosenberg & Rosenberg, 2006; Warner, 2013). Approximately 20-25% of people with an SMI make a complete recovery, defined as an absence of SMI symptoms and return to pre-symptom functioning (i.e., outcome). Around 40-45% of people with an SMI achieve social recovery, defined as low symptom-disruption in their social life (i.e., process) (Green et al., 2020). Importantly, literature suggests attendance to health care services facilitates the recovery process (Beeble & Salem, 2009; Drake & Whitley, 2014; Green et al., 2020; Warner, 2013). In general, people attending services are

nearly twice as likely to experience recovery than those who do not attend services (Drake & Whitley, 2014; Carla A Green et al., 2013).

In aggregate, women with SMI in the US attend services at a rate of 70.5% while men with SMI attend services at a rate of 56.5% (NSDUH, 2020). These aggregate attendance rates can be broken down further to examine within group differences. White women's service attendance rates (73.4%) were the highest of any group, followed by White men (62.4%), Black women (61.3%), Latinos and Latinas (51.5% and 50.0% respectively) and finally, Black men attended services less than any other group at a rate of 48.0% (NSDUH, 2020). Though the latest national survey did not present results from Multiracial people regarding their service attendance due to low precision (NSDUH, 2020), recent literature shows mental health services utilization for multiracial females is second highest behind White women and multiracial male's service utilization is higher than other males, but lower than all groups of women (SAMHSA, 2015a). However, recent evidence suggests the combination of multiracial identity matters for predicting service utilization, and those with Black-American Indian and other specially marginalized identity combinations utilize services less than any other group (Tabb et al., 2016). Trends in service attendance for those who experience SMI and who also live below the poverty line (defined as making less than \$12,880 for a single person and up to \$44,880 for a family of eight) mirror the above data. For those living below the poverty line, 69% of Whites, 63% of Blacks, and 53% of Latino/a's report attendance to services (SAMHSA, 2015b).

Overall, if a person with SMI is BIPoC, their attendance rates are likely to be less than those who are White. People identifying as BIPoC experiencing an SMI cite fear of prejudice and discrimination, distrust of providers, and other structural obstacles as barriers to their ability to attend services (NSDUH, 2020; Olbert et al., 2018; SAMHSA, 2015b). Consequently, BIPoC

individuals generally go longer without attending care and their symptoms worsen which then leads to a heightened likelihood of intervention from police leading to inpatient hospitalization, an ER visit, or incarceration (Breslau et al., 2005; Olbert et al., 2018; Orozco et al., 2013; Sorkin et al., 2011; Young et al., 2005).

Women with SMI also experience disparate social and health outcomes impacting service attendance. Studies show people with physical, developmental, and/or emotional disabilities are three times more likely to experience homicide, rape/sexual assault, robbery, intimate partner violence (IPV), or violent crime (altogether labeled as violent victimization) than the general public (Harrell, 2012; Van Deinse et al., 2018). Among the population with these disabilities, women experience higher rates of violent victimization (5.3%) than disabled men (4.2%), general population men (2.2%), and general population women (1.7%). Among those with disabilities, people with mental illness experience higher levels of violent victimization, and those with SMI experience the highest levels of violent victimization (Harrell, 2012; Van Deinse et al., 2018). In fact, studies estimate that 25% of people with SMI experience violent victimization, 11.8 times greater than the rate in the general population, and women with SMI are the group most likely to experience this violent victimization (Harrell, 2012; Hughes et al., 2012; Van Deinse et al., 2018).

Importantly, reports estimate women with SMI are anywhere from 13 to 19 times more likely to be violently victimized than men with SMI (Choe et al., 2008; Khalifeh & Dean, 2010; Latalova et al., 2014; Mauritz et al., 2013; Van Deinse et al., 2018). Consequently, women with SMI are at greater risk for experiencing homelessness, substance use, poverty, involvement with the justice system, comorbid physical health issues, and chronic symptomology than men with SMI (Carr et al., 2015; Eckert et al., 2002; Robertson et al., 2014).

Multiple Jeopardy and SMI

The experience of people belonging to multiple marginalized groups who are diagnosed with SMI can be described as “acute-on-chronic.” This means certain groups of people with SMI experience unique, immediate (acute) problems produced by layers of longstanding (chronic) oppressive circumstances. Layers of structural inequities have produced adverse social conditions for various groups of people, and when SMI is introduced into the equation, these structural inequities catalyze to produce disastrous outcomes. Though many studies have examined the impact of marginalization on health outcomes for people with SMI by virtue of race or sex, no studies to date have examined how compounding barriers attributable to marginalization influence service attendance outcomes.

Multiple Jeopardy theory accounts for an individual’s complex experiences within the context of the various social factors influencing marginalization experiences. Multiple Jeopardy theory asserts that the more marginalized groups a person belongs to, the more likely they are to be exposed to or experience negative/harmful circumstances (Beal, 2008; Bowleg et al., 2003; Buchanan & Wiklund, 2020; King, 1988). Belonging to a marginalized group increases one’s likelihood of exposure to harm and one’s risk multiplicatively increases based on the number of marginalized identities one holds, such as being Black, female, and impoverished (Beal, 2008; Bowleg et al., 2003; Buchanan & Wiklund, 2020; King, 1988; Settles & Buchanan, 2014). Research supports multiply marginalized group members are at higher risk of negative health consequences, stress, and harm (Bowleg et al., 2003; Harnois, 2015; Marcenko et al., 2012; Schieman & Plickert, 2007; Stein & Test, 1980).

As has been illustrated above, people experiencing SMI have worse health outcomes compared to people in the general population. However, the outcomes within the population of

people with SMI vary depending on group membership. As has been laid out, due to social issues like structural racism and sexism, people with SMI who are BIPOC and/or female are at an increased risk of impoverishment, sustained unemployment, homelessness, and increased risk of police encounters leading to subsequent legal challenges. Consequently, their chances of positive outcomes like attendance to health services, which may lead to recovery, are reduced.

Taken together, the evidence that multiple marginalized group membership plays a role in increasing negative outcomes highlights the importance of complicating our analysis of health and health care disparities to include examination of the ways in which membership in multiple marginalized groups relates to treatment outcomes. By analyzing how experiencing barriers and membership in a marginalized race and/or sex affects group members, one can identify the varying degrees of vulnerability within the SMI population to help people heal equitably.

Currently, when SMI studies account for group membership, they examine one or two characteristics on outcomes (e.g., how sex *and* income status affect health care attendance). SMI research seldom examines the relationship between multiple marginalized group membership and barriers to health care service attendance (e.g., attendance outcomes associated with barriers vis-à-vis race, sex, employment status, housing status, etc.). This study seeks to address that gap by examining how multiple marginalization affects health care attendance among people with SMI.

Proposed Study

The proposed study uses data collected during the 2018-2019 fiscal year by a local community mental health center's program known as ACCESS. The data from ACCESS consists of a diverse group of adults and adolescents requesting behavioral health care services. People requesting services were referred to a mental health facilities in a tri-county area of Michigan. This analysis will focus on adults who requested services for SMI, their race, sex, marginalizing experiences (e.g., childhood abuse, homelessness), and service attendance (attend/did not attend).

This study will first examine the relationship of race and sex on the types of barriers people reported upon intake (e.g., low-income status, homelessness). It will then examine the relationship of race, sex, and accumulated barriers, on the probability of service attendance as well as the combined relationship of race, sex, and barriers on the probability of service attendance.

Guided by Multiple Jeopardy theory, this study will analyze the relationship between socially marginalized race and sex identities and reported barriers, and how marginalized identities and reported barriers combine to affect the probability of behavioral health service attendance for people experiencing SMI. Multiple Jeopardy theory has been underutilized in SMI studies despite findings that those with SMI face compounding marginalization, particularly when those with SMI are also individuals who identify with a marginalized race and/or sex. Understanding this relationship for those with SMI as framed by Multiple Jeopardy allows one to link broader structural factors with behavioral health service attendance. It also illustrates points by which programs like ACCESS can be adjusted to better meet the needs of those with SMI who are marginalized by identity and social experience.

Toward these goals, this study investigates how having a marginalized race and/or sex identity will relate to the number of marginalizing experiences a person reported upon intake and the degree to which marginalized race and sex identity and cumulative reported marginalized experiences influence the probability of someone attending behavioral health care services. Using multiple jeopardy to frame this analysis, this study poses the following hypotheses:

Hypotheses

1. Race will predict reported barriers.
 - a. People marginalized by race in the US (those who are BIPoC) will report higher numbers of barriers when compared to White people.
2. Sex will predict reported barriers.
 - a. Those who are marginalized by sex in the US (women) will report higher numbers of barriers when compared to men.
3. The combination of race and sex will predict barriers.
 - a. BIPoC women will report higher numbers of barriers than other groups (BIPoC men, White men, White women).
4. Race will predict attendance.
 - a. BIPoC people will have a lower probability of attending services than White people.
5. Sex will predict attendance.
 - a. Men will have a lower probability of attending services than women.
6. Race and sex will predict attendance.
 - a. BIPoC men will have a lower probability of attending services than any other group.

7. Barriers will predict attendance.
 - a. As Barrier scores increase, one's probability of attendance decreases.
8. The combination of race, sex, and barriers will predict attendance.
 - a. The combination of race and sex and barriers will better predict probability of attendance above and beyond race, sex, or race and sex, or marginalizing experiences.
 - b. When accounting for barriers, BIPoC women will have a lower probability of attendance than BIPoC men, White men, and White women.

Methods

Procedures

ACCESS is a program at a local community mental health facility that centralizes intake and referral for 30 clinics that offer services for SMI in a tri-county area of Michigan. People could walk into the community mental health center to request services, or they could call the program's number. When deemed appropriate for a service referral, people are asked to report demographic information (race, sex, income, education, occupation) and they were asked to report relevant clinical information (childhood abuse, housing status, corrections involvement, etc.; Table 1). All service requesters had to respond to the questions posed during the intake but could state "decline to report" on any question they were asked. Importantly, people who made subsequent requests for services did not have their demographic information re-assessed. Therefore, people's demographic information did not change depending on their service request.

After completing the survey, service requesters were assigned a clinician for services, a service type for their requested need (e.g., serious mental illness, substance abuse, or developmental disability) and were provided the opportunity to talk with their assigned clinician over the phone during the assessment so they may establish a connection prior to services (warm handoff). ACCESS staff would track the attendance status of the service requester and their attendance status was recorded in ACCESS's Excel logbook.

Sample

A total of 4,042 independent requests for services were made to ACCESS during the 2018-2019 fiscal year. The proposed study addresses SMI service attendance among adults. Therefore, those requesting services for a developmental disability or substance use and those seventeen-years of age and younger were excluded, leaving 2,197 service requests made by

1,435 people (service requesters) and 30 distinct referral locations where a person with SMI could have been referred.

People with SMI ranged from 18 to 83 years of age (mean age = 37.8 years). Seven hundred seventy-nine (54.4%) service requesters reported female sex and 652 (45.6%) reported male sex, with 5 people (0.2%) declined to report their sex. Over half (51.6%) of the service requesters reported White race, followed by 17% reported Black race, then 13.7% reported being multiracial, 0.7% Indigenous, 0.4% Asian, 0.2% Latinx, 0.2% Middle Eastern, 4.3% reporting ‘other’ race, and 11.85% declined to report their race. See Table 1 for a detailed description of the demographic variables used in this study. Occasionally, those with SMI would request services multiple times. Requestors made 1 to 7 requests, with 64.2% of the calls representing first requests, 21.5% of the calls representing second requests, followed by third requests (9.9%), fourth requests (3.0%), fifth requests (0.8%), sixth requests (0.4%), and seventh requests (0.2%).

This study uses two units of analysis, service requester for hypotheses 1-3 and service requester and clinic to assess hypotheses 4-8. The following details two different units of analysis that will be pulled from the sample data to assess the hypotheses of this study.

Service Requester

For this study, a *service requester* is an adult experiencing SMI and who requested SMI services from ACCESS ($n = 1435$).

Clinic

Clinic refers to the service location to which a person was referred ($n = 30$).

Measures

Barriers Index

Upon their first request for services, each person answered questions that helped ACCESS staff gather demographic information, assess their life circumstances, and identify needed referrals. Based on requester reports, I created a Barriers Index (Table 2) and documented the total number of barriers each person reported. The Barriers Index is based on the ACEs study (Felitti et al., 1998), this study identified key factors that, when experienced in childhood, significantly increased negative health outcomes in adulthood. Similarly, the Barriers Index identified theoretically relevant challenges that may affect the probability of attendance to services which may subsequently lead to an increased risk in negative health outcomes.

A service requester could report 0 to 7 barriers, which included high school education or less, unemployment, income at or below \$20,000, institutional residence, homelessness, parental status, legal challenges, and Medicaid insurance status. If people answered “yes” for a given barrier, I dummy coded their answer as “1” and if they answered “No” I dummy coded their answer as “0.” Missing data was labeled “NA” (see the description below of how missing data was assessed and handled). Table 2 details the Barrier Index and the frequency barriers were reported by identity groups.

Missing Data

Requesters were given the option to decline to answer any demographic question they were asked. Due to some requester’s declinations to respond to various questions, 4.9% of the data were missing. To assess and handle this missing data, I used the R program “Amelia” (Honaker et al., 2011; Team, 2013). Parental status had the most missing data (39.3%), followed

by income status (22.9%), legal challenges (22.5%), education (11.8%), race (11.5%), employment status (10%), and sex (0.2%). No other variables contained missing data.

The variables containing the most missing cases (parental status, income status, legal challenges, education, race, and educational status) may be sensitive for people with SMI to respond to and therefore influence the mechanism of missing data (e.g., missing completely at random, missing at random, not missing at random). Parents experiencing SMI are eight times more likely to have child protective services called on them compared to parents without SMI, and clinician bias against parents with SMI partially accounts for higher rates of CPS involvement for this group (Kaplan et al., 2019; Ostrow et al., 2021). Thus, it is reasonable to assume that parents experiencing SMI may be reluctant to report their parental status when requesting clinical services. Additionally, people are less likely to report their socioeconomic status if they have high or low income (Davern et al., 2005; Kim et al., 2007; Moore et al., 2000). Given many with SMI are impoverished, they may be systematically less likely to report their income. People may also be less likely report their education status and employment status if they have lower educational attainment and/or are unemployed (Psaki et al., 2014; Wagstaff et al., 2007). Many with SMI are generally undereducated and/or unemployed, thus, they may be less likely to answer this question. Finally, BIPoC people experience stigma and unfair treatment in therapeutic settings due to their race (Billingsley & Corey, 2018; Burkard & Knox, 2004; Jones et al., 2019). As such, they may be less likely to report their racial identity at intake.

Strong evidence exists to suggest service requesters may have systematically declined to answer certain questions because various barriers are associated with sensitive information. When this is the case, one cannot safely assume the data are missing completely at random (MCAR) (McKnight et al., 2007; Ruben, 1976). Thus, we concluded that the character of

missingness is not MCAR and must be either missing at random (MAR) or not missing at random (NMAR). No diagnostic procedures exist that validly distinguish MAR from NMAR (McKnight et al., 2007; Ruben, 1976). However, Schafer (1997) does provide guidelines by which one can safely assume data is either MAR or NMAR. One of the guidelines suggests that data should not be assumed to be MAR if one cannot collect information to explain why they are missing. We cannot collect information from this sample to explain why data are missing. Therefore, because people may have systematically declined to answer questions due to question sensitivity and we cannot follow up with service requesters to determine why answers are missing, we must treat the data as NMAR (Schafer, 1997; Schafer & Graham, 2002). After determining the missing data as NMAR, I imputed the missing data using multiple imputation (MI) as it provides estimates for missing data (Schafer & Graham, 2002) and is appropriate for, and robust enough to provide satisfactory results with, NMAR data (Verbeke, 1997).

Analytic Plan

Hypotheses 1-3

First, I examined the relationship between identity and reported barriers. As demographic information was only collected once, barriers scores did not change depending upon the number of service requests made. Therefore, I isolated data from a service requester's initial request and used that data to conduct a multiple regression to regress the relationship between identity (race (H1), sex (H2), and race by sex (H3)) and the number of barriers service requesters reported.

Hypotheses 4-8

Next, I examined the effect of identity and the Barriers Index on service requesters' probability of attendance. This data is nested (i.e., service requesters within clinics), as service requesters' attendance status was linked to one of 30 clinics. To account for nestedness, I assessed these hypotheses using a multilevel logistic regression (Menard, 2002, 2010).

Some service requesters made multiple requests for services. I used a continuous latent variable method to calculate the intra-class correlation (ICC) to determine whether multiple requests influenced attendance and would therefore need to be included in the multilevel analysis. The ICC was less than 0.00, indicating variance in attendance attributable to multiple requests for services was negligible indicating that each call made by a service requester could be analyzed as an independent event (Menard, 2002, 2010). Further, because the Barriers Index is a continuous variable, it was grand mean centered, which allowed me to determine the grand average effect of barriers on attendance across all 30 clinics (Sommet & Morselli, 2017). Finally, I constructed the multilevel model with service requester as the level-one unit, clinic as the level-two unit, attendance as the outcome, and race (H4), sex (H5), race by sex (H6), and race, sex, race by sex, and the Barriers Index (H7) as the predictors. These findings revealed several

statistically and practically significant results that illustrate one's probability of attendance to services differed meaningfully when identity and barrier predictors were accounted for, and that these results held true across multiple referral locations.

Results

The number of people representing LatinX, Asians, Middle Eastern, and “other” race groups were too small to allow for accurate interpretation. Therefore, I will not report on their results. Information for these groups are available upon request. Results for Black, White, and Multiracial people will be reported as the number of people representing each group was sufficient to ensure estimates were not inflated.

Hypotheses 1-3

The interaction of race and sex had a statistically significant effect on the number of reported barriers in our sample ($R^2 = 0.05$, $F(13,1241) = 4.611$, $p < 0.000$), suggesting a service requester’s identity is associated with the number of barriers they reported (Table 3). Multiracial men reported the highest number of barriers, reporting an average of ~3.5 total barriers ($b = 0.288$, $T(13,1241) = 2.438$, $p = 0.015$, 95% CI [0.056, 0.52]). Black men reported the second highest number of barriers, averaging ~3.4 barriers ($b = 0.236$, $T(13,1241) = 2.128$, $p = 0.033$, 95% CI [0.01, 0.45]). Next, White men averaged ~3.2 barriers ($b = 0.288$, $T(13, 1241) = 54.395$, $p < 0.000$, 95% CI = [3.12, 3.35]).

Multiracial women reported an average of ~3.2 barriers ($b = 0.01$, $T(13,1241) = 0.058$, $p = 0.95$, 95% CI = [-0.32, 0.34]), White women reported an average of ~3.1 barriers ($b = -0.09$, $T(13,1241) = -1.179$, $p = 0.23$, 95% CI [-0.246163, 0.06132226]), and Black women reported an average number of ~ 3 barriers ($b = -0.27$, $T(13,1241) = -1.753$, $p = 0.079$, 95% CI [-0.5798121, 0.03261084]).

Hypotheses 4-7

First, an intercept model with no predictors was run to estimate the variance in attendance attributable to the clinic a person was referred to. This model estimated the overall probability of

service attendance was approximately 71% across all 30 clinics and the clinic a person was referred to plays a statistically significant role in attendance ($b = 0.87$, $T(16,1919) = 2.73$, $p = 0.0063$) (Sommet & Morselli, 2017). Intraclass coefficient analysis revealed that nearly 30% of the variance in service attendance was attributable to the referral clinic.

Next, four intermediate models (H4-7) were generated and tested to determine whether combining identity and Barriers Index into a single model (H8) improved the explanation of probability of attendance over a model that included only identity or barrier variables. The first intermediate model showed Black and Multiracial people had a lower probability of attending services than White people (H4), as White people had a 72% probability of attendance ($b = 0.98$, $T(8,1927) = 2.72$, $p = 0.006453$), Black people had a 43.5% probability of attendance ($b = -0.26$, $T(8,1927) = -2.05$, $p = 0.040263$), and Multiracial people had a 38.6% probability of attendance ($b = -0.46$, $T(8,1927) = -3.34$, $p = 0.000824$).

The next model found women had a lower probability of attending services than men, running contrary to what was hypothesized (H5). Men had a 68.3% probability of attendance ($b = 0.77$, $T(3,2189) = 2.44$, $p = 0.0145$) while women had a 52% probability of attendance ($b = 0.07$, $T(3,2189) = 0.84$, $p = 0.3983$). Next, the combined effects of race and sex illustrated White men had the highest probability of attendance at 73.1% ($b = 0.99$, $T(15,1920) = 2.681$, $p = 0.007343$), Multiracial women had the second highest probability of attendance at 61.4% ($b = 0.46$, $T(15,1920) = 1.66$, $p = 0.093565$), followed by Black women at 50.4% ($b = 0.01$, $T(15,1920) = 0.07$, $p = 0.944215$), White women 50% ($b = -0.01$, $T(15,1920) = -0.14$, $p = 0.881439$), Black men 43.2% ($b = -0.27$, $T(15,1920) = -0.14$, $p = 0.134450$), the Multiracial men at 33.3% ($b = -0.68$, $T(15,1920) = -3.46$, $p = 0.000539$). The final intermediate model (H7) found as one's Barriers Index score increases beyond 3.09 ($b = 0.83$, $T(3,2194) = 2.63$, $p = 0.008$), the overall

sample's probability of attendance decreased up to ~52% on average ($b = -0.17$, $T(3,2194) = -4.62$, $p < 0.000$).

Hypothesis 8

Finally, a full model including all predictors together (race, sex, race by sex, and grand mean Barriers Index) was created to determine if the full model provided a better explanation of the probability of attendance over models including only identity or the Barrier Index as predictors. A logistic regression maximum likelihood ratio test was used to test the full model against the intermediate models and the full model demonstrated a statistically significantly improved fit over the intermediate models, thus providing a better explanation of the probability of attendance ($\chi^2(4.68:1)$, $N = 3$ [2541.6], $p = 0.03035$).

When barriers were included with identity to determine probability of attendance across all 30 clinics, prediction of attendance improved over solely accounting for race and sex for some groups but remained unchanged for others. Black and Multiracial women's and men's probability of attendance changed while the probability of attendance for White women and men remained the same. Black women's probability of attendance changed from 50.4% to 49.6% ($b = -0.01$, $T(16,1919) = -0.05$, $p = 0.95$). Multiracial women's probability of attendance changed from 61.4% to 61.1% ($b = 0.45$, $T(16,1919) = -0.05$, $p = 0.10$). Multiracial men's probability of attendance changed from 33% to 35% ($b = -0.63$, $T(16,1919) = -3.19$, $p = 0.00$), and Black men's probability of attendance changed from 43% to 44% ($b = -0.24$, $T(16,1919) = -1.33$, $p = 0.18$). White men's probability of attendance remained 73% ($b = 0.98$, $T(16,1919) = 2.67$, $p = 0.00$). White women's probability of attendance remained 50% ($b = -0.02$, $T(16,1919) = -0.21$, $p = 0.82$).

Overall, though the intercept model estimated the probability of service attendance to be approximately 71% across all thirty clinics, it becomes clear that probability of attendance differs depending on a person's identity and the barriers they are experiencing, and accounting for these factors provides a more robust picture of probability of service attendance. Table 4 illustrates results for this analysis.

Discussion

Hypotheses 1-3

In alignment with our first hypothesis, BIPoC people reported the highest average number of barriers (H1). However, contrary to our second hypothesis that women would report a higher average number of barriers, men reported the highest average number of barriers (H2). Also contrary to our hypothesis that BIPoC women would report the highest number of barriers, Black and Multiracial men reported the highest average number of barriers, White men had the third highest average number barriers, and women reported the lowest average number of barriers (H3).

Hypotheses 4-8

As hypothesized, BIPoC people had a statistically significantly lower probability of attending services than White people (H4). However, contrary to our hypothesis that women would have a higher probability of attending services (H5), men had a higher probability attending services over women. Next, in accordance with our hypothesis, we found BIPoC men had a lower probability of attendance than all other groups (H6). Further, as hypothesized, we found that as Barriers Index scores increased, the probability of attendance decreased (H7). Specifically, we found that for every barrier reported above ~3.1 (e.g., 4.1, 5.1, etc.), probability of attendance decreased by approximately 14%. Finally, including the Barriers Index score with identity in a single model provided a statistically significantly better prediction of attendance over models assessing the relationship between just identity or Barriers Index score and attendance. However, our final analysis ran contrary to our hypothesis that BIPoC women would have the lowest probability of attendance and instead found BIPoC men had the lowest probability of attendance (H8).

Compared to White people, BIPoC people reported the highest average number of barriers and had a lower probability of service attendance. This means BIPoC people were less likely to receive treatment for their SMI despite a clear desire for services. BIPoC people are systematically less likely to attend services than Whites, and our findings show that even when they have a initiate treatment, forces may impede their attending services. This issue perpetuates BIPoC people's higher rates of symptom severity, which then perpetuates their higher rates of police encounters, comorbidity, and early death (de Mooij et al., 2019). Our findings imply that structural racism is pervasive in the lives of BIPoC people such that they are systematically exposed to more barriers that prevent them from accessing recovery opportunities more easily captured by White people.

Next, women overall reported a lower average number of barriers than men, yet men had a higher probability of service attendance. However, when closely inspected, White men had a 70% probability of service attendance across all 30 clinics while BIPoC men had up to a 43% probability of attendance, indicating White men's probability of service attendance likely skewed the overall probability of attendance in men's favor over women. In fact, our findings show White men and Multiracial and White women had higher probabilities of service attendance than any group. This finding is in line with national trends that show Multiracial women, White women, and White men utilize services the most while BIPoC men utilize services least (NIMH, 2022; SAMHSA, 2015a).

It is also important to note that White men's, and White and Multiracial women's probability of attendance did not change when accounting for the barriers they reported. Contrary to this, the probability of attendance for Black women and Black and Multiracial men did change when accounting for barriers. This suggests the effects of barriers uniquely differ depending on

identity, and accounting for barriers improves our prediction of service attendance for some groups and not others.

Black women and Black and Multiracial men may have unique lived experiences with barriers that may explain why including barriers in an analysis changed results for them while it did not for other groups. For example, women are systematically positioned in low-wage jobs more than men, and Black women are more frequently positioned in the lowest-wage jobs among women, meaning while all women are oppressed with low paying jobs, Black women work the lowest paying jobs of all women (Washington Center for Equitable Growth, 2017). Further, Black women are the only group in the US who are now more likely to have to work multiple jobs compared to labor statistics from a decade ago (Bureau of Labor Statistics, 2010). Moreover, Black women are more likely than any other group to raise a child as a single mother (US Census Bureau, 2014) meaning they are more likely to face challenges with childcare. Thus, Black women experience socioeconomic and parental status difficulties in ways other groups do not, and this may explain why accounting for barriers changed Black women's service attendance probability.

Next, Black men's exposure to racial discrimination influences how they cope with stress and mental illness. The concept John Henryism has been coined as a style of coping found among primarily Black men in which they are more likely to perceive greater control over the outcome of stressful situations and subsequently spend more energy attempting to cope with psychosocial stressors without enlisting help from others (James, 2002; James, 1994). John Henryism may partially explain why Black men are more likely than other groups with SMI to delay accessing services, face more debilitating symptomology, and to experience a police encounter leading to involuntary clinical treatment (Livingston, 2016). Accordingly, in our

sample, Black men had a statistically significant relationship with the legal challenges barrier. Thus, Black men's unique experience with structural racism and its influence on the types of barriers they are more likely to experience may explain why accounting for barriers also changed Black men's service attendance probability.

Finally, multiracial men reported the highest average number of barriers and had the lowest probability of attendance to services, yet little health research has focused on understanding multiracial identity and health outcomes like it has for people with single-race identification (Charmaraman et al., 2014; Grilo et al., 2022). Research that has done so finds multiracial people experience increased isolation and lower social support than those with a single-race identity (Buchanan & Acevedo, 2004; Kelly, 2016). Importantly, as a whole, people with SMI face a dramatically increased risk of experiencing isolation and lack of social support, issues consistently associated with increased risk for impoverishment (Jeffrey Draine et al., 2002; Spivak et al., 2019), homelessness (Greenberg & Rosenheck, 2008; Padgett et al., 2012; Tsemberis et al., 2003), and legal challenges (Constantine et al., 2012; de Mooij et al., 2019; Greenberg & Rosenheck, 2008; Hall et al., 2019). Accordingly, though scant research exists on multiracial men with SMI, when a man with SMI is Multiracial, their risk for lack of social support and isolation may multiply, partially explaining why the Multiracial men of this sample reported a heightened average number of barriers and had the lowest probability of service attendance. This finding is worrying given the majority (35%) of people with an SMI diagnosis identify as Multiracial (NIMH, 2022).

Finally, Multiple Jeopardy theory asserts that the more marginalized groups a person belongs to, the more likely they are to be exposed to or experience negative/harmful circumstances (Beal, 2008; Bowleg et al., 2003; Buchanan & Wiklund, 2020; King, 1988). This

hypothesis was not supported by our findings. Despite being more systematically marginalized in US society, women, and Women of Color were more likely to attend services than men. Moreover, men explicitly reported a higher average number of barriers than women did. Together, these suggest that Intersectionality Theory (Crenshaw, 1991) may more accurately convey the experiences of people in this sample. Intersectionality considers how structural forces differentially influence outcomes for people depending on a person's identities and notes societal structures create a context whereby people systematically differ in their levels of risk for marginalization by identity (Overstreet et al., 2020). For example, the way structural racism and sexism combine to affect BIPoC men may uniquely affect their probability of service attendance. Structural sexism and racism uniquely effects BIPoC men by enhancing their likelihood of exposure to circumstances harmful to their mental health (e.g., poverty, violence, etc. (Bailey et al., 2017), yet reducing their likelihood of seeking out mental health therapy vis-à-vis John Henryism (Hudson et al., 2016). This unique interaction lowers their probability of attending behavioral health services compared to women. On the other hand, structural racism and sexism combine to expose BIPoC women to higher rates of poor treatment from service providers than others (Bowleg, 2012; Dusenbery, 2018), yet sexist societal gender roles require women to be the emotionally healthy leaders in the family (Rosenfield & Mouzon, 2013; Tedstone Doherty & Kartalova-O'Doherty, 2010) likely influencing the finding that women are less likely than men to cite a belief that they can handle mental illness symptoms on their own (NSDUH, 2020). Therefore, BIPoC women and men experience marginalizing circumstances in unique, non-linear ways such that those who have higher amounts of compounding marginalization will not always have the worst or most negative outcomes. Multiple Jeopardy does not account for how these various structural forces generate unique experiences by identity, and therefore cannot

adequately explain differences in probability of service attendance among different groups of people experiencing SMI.

Limitations and Future Directions

Methodologically, there were several limitations in this study that future research can address. First, barriers were dichotomized as zero or one. However, considering all barriers as though they each had an equal impact on probability of attendance may have limited analysis as some barriers may have had a greater effect on the probability of attendance than others. Future research can conduct a factor analysis on barriers to determine the differences in strength of effect each barrier has on probability of attendance and allot scores accordingly. Second, the intake questionnaire asked questions in a way that limited people's ability to respond and therefore limited what we could analyze. For example, people were asked whether they cared for dependents, but dependents were not adequately defined as being either children or someone else under the person's care. They were also asked then number of dependents they had with ranges of 0-2, 3-5, 5 or more. Therefore, we had to eliminate dependents from the Barriers Index because we could not determine who the dependents were, if they had dependents (give 0-2 was a single category), nor how many dependents a person cared for. Additionally, people were asked whether they had experienced homelessness in their lifetime but did not differentiate whether they experienced homelessness during childhood, young adulthood, some other time, duration of homelessness, or if they were presently homeless. Time period and duration of homelessness produce different outcomes for people with SMI (Sylvestre et al., 2018) and having a more thorough understanding of the duration and timeframe of homelessness would allow for a more nuanced analysis. Next, the health outcomes of multiracial people may vary depending on their combined racial categories (e.g., the experiences of a Black-White person may be different from those who are Latino-White or White-Asian) (Cheng & Lee, 2009). Yet, the intake survey did not allow respondents to disaggregate their multiracial identities, which

disabled a nuanced look at the differences in probability of service attendance within the multiracial sample. Future research should allow respondents to specify multiracial identity categories to improve analysis. Further, future research must examine the reasons multiracial men and women had a dramatically different probability of service attendance.

There were also several sample issues that future research should address. First, women declined to report barriers a total of 1,286 times while men declined to report only 943 times, representing a ~31% difference in missing data between the two groups. In fact, for every barrier containing missing information, women had more missing cases than men. Further, Black women had a higher ratio of missing cases than other women for almost all barriers and were close behind Multiracial women who had the highest ratio of missing cases for legal challenges. This has meaningful ramifications for women as what people report determines which services they receive. The lack of reports from women may have caused them to be referred to services that were not capable of addressing their full range of needs. Future research must examine ways to facilitate responses from women during intake.

Next, vastly more White people than BIPoC people were represented in this sample. This has implications for the generalizability of our findings to BIPoC people. This issue supports other findings that BIPoC people seek out community mental health services less than White people (NSDUH, 2020), meaning samples derived from these locations may perpetuate findings that have a limited meaningfulness for BIPoC people. Therefore, future research must examine the availability/appropriateness of community mental health services for BIPoC people as well as ways of enhancing the ability for BIPoC people to seek out community mental health services.

Conclusion

In sum, race and sex are related to the average number of barriers people reported, and identity and barriers combined to produce differential effects on probability of attendance for BIPoC people. BIPoC women both reported fewer barriers and attended more services than BIPoC men. Further, while White men reported the third highest number of barriers, they still attended services at a higher rate than any other group. These findings suggest that the effect barriers have of people's probability of attendance differ depending on the combination of race and gender. These findings have research and programmatic implications. Research must investigate why barriers differentially affect different groups of people's probability of service attendance and investigate means of helping these groups address these barriers. Next, programs must be developed that enhance the probability of service attendance for BIPoC people. If research and programs do not address these issues, BIPoC people will continue to experience higher rates of worse symptom severity, substance dependence, imprisonment, and early death, extinguishing their potential to live free from the bondage of serious mental illness.

APPENDIX

Table 1:

This table shows demographic data of the sample from a study conducted from 2019- 2022 at Michigan State University.

Variable	Item (%)
Number of Requests	2,197 requests
Service Requesters	1,435 independent service requesters
Clinic	30 distinct clinics
Clinician	104 distinct clinicians
Attended Services	Yes: 964 (43.9) No: 1,233 (56.1)
Sex	F: 779 (54.2) M: 652 (45.4) Not reported: 4 (0.2)
Race	White: 741 (51.6) Black: 244 (17.0) Multiracial: 198 (13.7) LatinX: 3 (0.2) Asian: 6 (0.4) Middle Eastern: 3 (0.2) Other: 63 (4.3) * Declined to Report: 166 (11.85)

* The meaning of Other race was not specified by the community mental health clinic.

Table 2:

This table shows the items included in the Barriers Index.

Reported Barriers	Participant Responses		
	Yes (<i>n</i> / %)	No (<i>n</i> / %)	Missing (<i>n</i> / %)
Unemployment	203 (14.1)	1087 (75)	145 (10)
Income At or Below \$20,000	1,034 (72)	72 (5)	329 (22)
High School Education or Less	981 (68)	284 (19.7)	170 (11.8)
Institutional Residence	117 (8.2)	1,318 (91.8)	0
Homelessness	147 (10.2)	1,288 (89.8)	0
Parental Status	288 (20)	583 (40.6)	546 (39.3)
Legal Challenges	183 (12.7)	928 (68.6)	324 (22.5)
Using Medicaid Insurance	1395 (97.2)	40 (2.8)	0

Note: “Yes’s” were dummy coded 1 and “No’s” were dummy coded 0. Yes’s and No’s were added across rows, and the summed score for each service requester was used to calculate a service requester’s Marginalizing Experiences score. Missing data underwent multiple imputation.

Table 3:

This table shows demographic information associated with the Barriers Index.

Variable	Estimate	Standard Error	T-Value	PR(> T)	Degrees of Freedom	95% Confidence Interval	Average Barriers #
White Men	3.239617	0.05	54.395	< 2e-16 *	1241.88	3.12, 3.35	3.34
Black Men	0.236574	0.11	2.128	0.033528 *	1241.88	0.01, 0.45	3.5
Multirac. Men	0.288685	0.11	2.438	0.014908 *	1241.88	0.05, 0.52	3.52
White Women	-0.09242	0.07	-1.179	0.238483	1241.88	-0.24, 0.06	3.15
Black Women	-0.273601	0.15	-1.753	0.079859	1241.88	-0.57, -.03	3
Multirac. Women	0.009771	0.16	0.058	0.954004	1241.88	-0.32, 0.34	3.24

Table 4:

This table shows the probability of service attendance by examining race and gender identity.

Variable	<i>n</i>	Estimate	Probability of Attendance	Standard Error	Z Value	Pr (> z)
Males						
White	313	0.98	73.1%	0.37	2.67	0.00575*
Black	126	-0.24	44%	0.18	-1.33	0.1814
Multiracial	106	-0.63	35%	0.19	-3.19	0.00141*
Females						
White	428	-0.02	50%	0.12	-0.21	0.82782
Black	118	-0.01	49.6%	0.25	-0.05	0.95982
^a Multiracial	92	0.45	61%	0.27	1.63	0.10203
Grand Mean Barriers	3.1 ^o	-0.10	-14% ^o	0.04	-2.16	0.03043*

^a Due to the small sample size, results for this group should be interpreted with caution as they are likely biased due to sample size.

^o For every increase in Barriers Index score beyond ~3.1, people's probability of service attendance decreased by 14%.

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