GENDER IDENTITY, RACE, AND ETHNICITY DISCRIMINATION IN
ACCESS TO MENTAL HEALTH CARE:
PRELIMINARY EVIDENCE FROM A MULTI-WAVE AUDIT FIELD EXPERIMENT

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NBER Working Paper No. 28164
December 2020
JEL No. C93,I11,I14,I18,J15,J16

ABSTRACT

A broad body of interdisciplinary research establishes that transgender and non-binary individuals face discrimination across many contexts, including healthcare. Simultaneously, transgender individuals face various mental health disparities, including higher rates of depression and anxiety, suicidality, and PTSD. Therefore, understanding the role of discrimination in access to mental health care is essential. However, no previous research quantifies the extent to which transgender and non-binary people face discrimination in mental healthcare markets. We provide the first experimental evidence, using an audit study, of the extent to which cisgender women, transgender women, transgender men, non-binary people, and racial and ethnic minorities (African American and Hispanic individuals) face discrimination in access to mental health services. While data collection is ongoing, we find significant discrimination against transgender or non-binary African Americans and Hispanics in access to mental health care appointments.

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Individuals who identify as transgender and non-binary[1] (TNB individuals) face socioeconomic status and health disparities as well as confront considerable stigma and discrimination[2] in their everyday lives (Badgett et al. 2009; Grant et al. 2011; Hughto, Reisner, and Pachankis 2015; James et al. 2016; Carpenter, Eppink, and Gonzales 2020). Compared to cisgender[1] people in the United States, TNB individuals are more likely to live in poverty, to be food insecure (Russomanno et al. 2019), to have been incarcerated, to have been the victim of an assault (particularly intimate partner violence), to be unemployed (Badgett, Carpenter, and Sansone 2020; Leppel 2020), and to lack health insurance (Carpenter, Eppink, and Gonzales 2020; James et al. 2016; Liszewski et al. 2018; Waters and Yacka-Bible 2017). TNB individuals are significantly more likely to experience mental illness and severe psychological stress: TNB individuals have higher rates of anxiety, depression, substance misuse, and suicidality than non-TNB individuals (Grossman and D'Augelli 2007; Lagos 2018; Meyer et al. 2017; Miller and Grollman 2015; Mustanski et al. 2010; Nuttbrock et al. 2010; Scanlon et al. 2010; Streed et al. 2018; Su et al. 2016). These disparities are stark. In a sample of 1,053 transgender persons, for example, 41 percent report having attempted suicide. This rate is 26 times higher than the general population (Safer et al. 2016).[3]

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[1] Throughout the paper, we will discuss transgender and non-binary (TNB) individuals together; however, these are separate gender identities and our experimental design allows us to differentially test between binary transgender and non-binary individuals. Liszewski et al. (2018) propose useful definitions that we adopt. Someone who is transgender identifies with a gender identity that does not exclusively match their gender assigned at birth. Someone who is transgender may identify as a gender that is different than the one assigned at birth, with both genders, or no gender. Non-binary individuals identify neither as exclusively male nor exclusively female, may identify as something other than male or female, may identify as multi-gendered, or may not identify with any gender. Cisgender individuals have a gender identify that matches their sex assigned at birth.

[2] Following Lahey and Oxley (2018), the term "discrimination" used throughout this paper refers to "differential treatment by demographic characteristics(s)." It does not refer solely to animus or taste-based discrimination. See footnote 11 for discussion of the different types of discrimination.

[3] African American and Hispanic people also face significant health and socioeconomic disparities which we summarize in the background section.

Despite an increased need for general and mental health services, real or perceived gender identity discrimination[4] by mental health care professionals may affect a TNB individual's ability to access (or desire to seek) appropriate mental health care services and treatment. Previous research found that approximately one-fourth of transgender individuals opted not to seek health care when needed for fear of being mistreated due to their gender identity. One-third of transgender individuals report having had a negative experience related to identifying as transgender (James et al. 2016).

Suppose mental health care providers (MHPs) behave in a manner that limits access to mental health services for TNB individuals or discourages them from seeking treatment. In that case, it will worsen mental health disparities in several ways. First, discrimination by MHPs further contributes to minority stress. Second, discrimination delays treatment, negatively impacting health and increasing treatment costs (Boudreau et al. 2004; Himelhoch et al. 2004). Third, difficulties in securing appointments lead many patients to discontinue the search for treatment altogether (James et al. 2016; Lambda Legal 2010). Fourth, discrimination may reduce match quality between the MHP and patient by forcing the patient to select a therapist who is trans-friendly but is otherwise not as suitable for the patient (e.g., less experienced in the patient's area of concern, practices farther away from where the patient lives) (Mizock and Lundquist 2016). Patient-MHP mismatch negatively affects care since a high-quality match is crucial for effective care (Budge and Moradi 2018; Kantrowitz 2016).

There is existing research on discrimination against TNB people and how it affects mental health or access to health care. The most relevant existing studies link the mental health

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[4] Small and Pager (2020) note that economics has generally focused on measurable discrimination (on differences in wages, employment, mortgage rates, or other economic outcomes) rather than perceived discrimination, for "a potential's victim's mental health, depression, stress, and related health outcomes, perceiving that it happened is everything. Perceptions of discrimination can have an effect regardless of whether the perpetrator discriminated or instead seemed to discriminate but did not actually do so." (Small and Pager 2020; 63).

disparities that TNB people face to self-reported measures of discrimination (Bockting et al. 2013; Clements-Nolle, Marx, and Katz 2006; Hendricks and Testa 2012; Miller and Grollman 2015; Perez-Brumer et al. 2015; Reisner et al. 2016; Tebbe and Moradi 2016; Testa et al. 2017). Other studies are surveys that show that TNB individuals are more likely to face discrimination in access to health care (e.g., Grant et al. 2011; James et al. 2016). While informative, these studies do not observe actual discriminatory behavior, do not capture how often this discrimination occurs, and do not often capture whether discrimination occurs specifically in access to mental health care.

We significantly improve upon this limited existing research on discrimination against TNB people in access to health care by measure discrimination in access to mental health care using an audit field experiment. Audit field experiments are considered the "gold standard" for measuring discrimination (Al-Ubaydli and List 2016; Bertrand and Duflo 2017; Gaddis 2018; Neumark 2018) because they allow researchers to study discrimination in actual behavior. They also allow researchers to calculate an unbiased estimate of discrimination by holding all factors other than minority status constant.

This paper provides the first experimental evidence of gender identity discrimination in the mental health care system. We further examine if this discrimination varies by race, ethnicity, the intersection of gender identity and race or ethnicity, and common mental health concern. To do this, we conduct a large-scale experimental field study of mental health care providers throughout the United States. Specifically, we request appointments from mental health providers, including psychologists, counselors, social workers, and psychiatrists, using a popular online website.

In these requests, we randomly assign names to signal race and gender. Specifically, in the first wave of the study, we use masculine and feminine names that signal a prospective patient is African American, Hispanic, or white. In the text of these appointment requests, our fictitious TNB patients disclose their gender identity by including a short statement like: "*I am [a transgender woman]/[a transgender man]/[non-binary] and am looking for a trans-friendly therapist*."[5] We also randomly assign the specific mental health concern that the individual is seeking treatment (anxiety, stress, or depression). In our appointment requests, we provide both a return email address and phone number.

We record several different categories of MHP responses to our appointment inquiries, including the offer of an appointment, a call or consultation offer, offering placement on a waitlist, a referral to a different provider, a rejection, as well as no reply. Based on the first wave of a multi-wave study, our key result is that African American and Hispanic TNB people, particularly Hispanic transgender women and non-binary African Americans, face discrimination in access to mental health care. We also find discrimination against cisgender women, compared to cisgender men, and a preference for prospective patients that mention depression over anxiety or stress. However, these results are not robust to all possible control variables.

Our study will make several contributions to the existing literature on mental health care discrimination and gender identity discrimination when complete. This is the first paper to provide causal estimates of gender identity discrimination in the U.S. health care system. Moreover, our audit study is also one of the few to test for gender identity discrimination in any

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[5] Disclosing gender identity and inquiring about LGBTQ+-friendly providers is a common and recommended practice for TNB individuals seeking mental health services (Kassel 2018).

context (Bardales 2013; Granberg, Andersson, and Ahmed 2020; Levy at al. 2017; Make the Road New York 2010; Rainey, Imse, and Pomerantz 2015).[6]

Our study also improves on the three existing audit field experiments of discrimination in access to mental health care (Kugelmass 2016, 2019; Shin et al. 2016).[7] First, with only the preliminary data from only the first wave of our experiment – 1,000 observations – we already have a much larger sample size than these prior studies, which had sample sizes of between 300 to 400 each. Second, our sample is nationally representative, including MHPs in every state, proportional to their population, and including MHPs from across the state, rather than just selecting individual cities (New York City, Kugelmass 2016) or states (an "East Coast, Mid-Atlantic state," Shin et al. 2016). Third, we follow Kugelmass (2019) and send appointment requests in a more externally-valid way by sending emails through a standard MHP listing and appointment request service.[8] Fourth, we plan to leverage the detailed data in the publicly-posted MHP profiles to understand the sources of discrimination, where and when discrimination occurs the most, and what factors may reduce discrimination (see the final "Next Steps" section). This

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[6] Unfortunately, most of these studies have small sample sizes or are not peer reviewed or intended for peer review (they are reports or honors theses). The notable exception is Granberg, Andersson, and Ahmed (2020). There are also a few studies that are not audit field experiments that also focus on discrimination or disparities faced by transgender people. Van Borm and Baert (2018) conduct a vignette experiment to quantify hiring discrimination against transgender women, compared to cisgender women, in fictional employment hiring scenarios. Van Borm et al. (2020) explore the mechanisms of hiring discrimination against transgender men using a similar vignette study. Reed, Franks, and Scherr (2015) conduct a small vignette study to quantify hiring discrimination against transgender people and to what extent hiring discrimination is based on assumptions about transgender people having mental illness. Geijtenbeek and Plug (2018) study the earnings of transgender people compared to cisgender people, and compared to before and after their administrative gender transition. Schilt and Wiswall (2008) study how workplace experiences change after transitioning. Drydakis (2019) discusses mental health, life satisfaction, and job satisfaction before and after transitioning.
[7] Olin et al. (2016) is another audit field experiment of access to mental health care, but focuses on access to care for youth in New York state and quantifies general access rates and wait times.
[8] Prior studies (Shin et al. 2016; Kugelmass 2016) left voicemails for MHPs to request an appointment, usually intentionally calling at times when they knew the MHP would not pick up the phone to avoid the risk of the MHP picking up the phone (e.g., "Sunday evening", Shin et al. 2016, p. 1196; "at night", Kugelmass 2016, p. 173). While this is an experimentally valid approach, our approach, following Kugelmass (2019), is to send appointment requests through email, through the most comprehensive and popular online therapist database. This avoids the less externally valid approach of calling and leaving voicemails, opting to mirror one of the most common ways that prospective patients find MHPs.

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detailed data is not available or is not used to near this extent in virtually all other audit field experiments.

Lastly, to our knowledge, we are the first study to use experimental methods to examine how race, ethnicity, and gender identity interact to moderate or exacerbate discrimination. This adds to the limited experimental research on intersectional discrimination in general (Bourabain and Verhaeghe 2018; Burn et al. 2020; Lahey and Oxley 2018; Lauster and Easterbrook 2011; Pedulla 2014; Schwegman 2019). There is ample reason to believe that TNB people of color will experience more significant discrimination than their cisgender non-white or white transgender/non-binary peers. In the United States, anti-transgender violence, which includes physical and sexual violence, is highly racialized (Jefferson, Neilands, and Sevelius 2013; Lombardi et al. 2002; Stotzer 2009). For example, 61 percent of lethal anti-LGBTQ+ hate in the U.S. during 2016 resulted in the murder of transgender women of color, rates well beyond their proportion of the general population (Waters and Yacka-Bible 2017).

As we proceed through the next waves of the experiment, we will expand the study and further contribute to the literature. We discuss the details of the multiple extensions of this study in the concluding section of this paper.

At the time of writing this paper, our experiment is ongoing. This working paper presents the results from the first wave of the study, where we contact 1,000 mental health care providers (MHPs) who post their contact information on a popular online platform. We send each MHP an appointment request from one prospective patient, with randomly assigned race or ethnicity (white, African American, or Hispanic), gender identity (transgender, non-binary, or presumed to be cisgender), and common mental health concern (depression, anxiety, or stress).

Background

Mental Health Disparities among Racial, Ethnic, and Gender Minorities

There is a complex relationship between race, ethnicity, and mental health, with sometimes conflicting research on the direction of mental health disparities. For example, Hispanics, African Americans, and Asian Americans report having lower current, last-year, and lifetime rates of major depression and other psychiatric disorders than whites (Miranda et al. 2008; Williams et al. 2007; Williams 2018). However, when African Americans and Hispanics experience a mental disorder, their mental health episode tends to be more severe, persist for longer, and be more debilitating than whites (Breslau et al. 2005). African Americans reporting an episode of depression are more likely to be chronically or persistently depressed, have more severe symptoms of depression, and be less likely to receive treatment (Williams et al. 2007; Williams 2018).

While the relationship between race, ethnicity, and mental health is complex, there is more clear evidence that TNB people have worse mental health, higher rates of major psychiatric disorders, and higher substance misuse rates than the general population. TNB individuals report higher rates of suicidal ideation and attempted suicide, as well as significantly higher rates of clinical depression (Clements-Nolle et al. 2001; Grossman and D'Augelli 2007; Haas et al. 2011; Hoffman 2014; Mustanski et al. 2010; Nuttbrock et al. 2010; Scanlon et al. 2010; Su et al. 2016).

Moreover, there is broad consensus that exposure to chronic and acute stressors—such as poverty, neighborhood violence, or discrimination—can negatively affect mental health (Pearlin et al. 1981, 2005; Turner 2013; Vega and Rumbaut 1991). Racial and gender minorities face higher rates of "traditional" stress than whites. Notably, they are more likely to be unemployed,

uninsured, exposed to neighborhood violence, and involved in the criminal justice system (James et al. 2016; Williams 2018).

Economic precariousness, increased exposure to violence, social stigma, and explicit discrimination creates a unique set of psychological pressures and stresses for racial and gender minorities that is often referred to as "minority stress" (Arbona and Jimenez 2014; Hendricks and Testa 2012; Kelleher 2009; Tebbe and Moradi 2016; Testa et al. 2017). Minority stress correlates with worse mental health outcomes, including higher rates of distress and depression (Lewis, Cogburn, and Williams 2015; Paradies et al. 2015; Pascoe and Richman 2009; Schulz et al. 2006; Wallace, Nazroo, and Becares 2016; Williams and Mohammed 2009).

Specifically, explicit discrimination and other stressors can negatively affect mental health through several different pathways. Discrimination can increase stress, which puts pressure on the body's cardiovascular system and heightens vigilance, i.e., a state of psychological arousal designed to monitor and protect oneself from threats (Williams, Lavizzo-Mourey, and Warren 1994; Sawyer et al. 2012). Heightened violence is positively associated with depressive symptoms and contributes to the African American-white disparity in depression (LaVeist et al. 2014; Testa et al. 2012).

Moreover, structural and institutional racism can give rise to the "stress proliferation process" (Pearlin et al. 2005) in which an initial stressor can initiate or exacerbate stressors in other aspects of life (Williams 2018). Previous research finds evidence of racial discrimination in the labor market (e.g., Bertrand and Mullainathan 2004; Gaddis 2015; Pager and Shepherd 2008), the housing market (e.g., Gaddis and Ghoshal 2020; Hanson and Hawley 2011; Hanson et al. 2016; Murchie and Pang 2018), physical and online stores or marketplaces (e.g., Bourabain and Verhaeghe 2018; Doleac and Stein 2013), and the public sector (e.g., Bergman and McFarlin

2020; Giulietti, Tonin, and Vlassopoulos 2019; Mujcic and Frijters 2020), among other areas and markets.

There is also evidence that TNB individuals face frequent discrimination in the labor market, in secondary and postsecondary schools, when accessing health care, when accessing housing, and in the criminal justice system (Baumle, Badgett, and Boutcher, 2020; BreakOUT! and National Council on Crime & Delinquency 2014; Glick et al. 2019; Grant et al. 2011; Hanssens et al. 2014; James et al. 2016; Levy et al. 2017; Mallory, Hasenbush, and Sears 2015; Romero et al. 2016; Sears and Mallory 2014; Stotzer 2014; Stroumsa 2014). This systematic discrimination and inequality not only causes stress, but it can both cause and contribute to economic insecurity, which is a significant source of stress (Williams 2018).

For TNB individuals and cisgender racial minorities facing acute psychological stressors, counseling and therapy are effective and common strategies for helping with numerous mental health concerns, such as stress, anxiety, depression, and substance misuse. However, suppose providers of these mental health services discriminate against TNB individuals and racial minorities by restricting access to these services. In that case, this discrimination may partially cause and likely exacerbate underlying race and gender identity-related mental health disparities.

Discrimination by Mental Health Care Providers

Mental health care providers supply and regulate access to mental health care services in the United States. There is no universally agreed-upon definition of a "mental health care provider," nor is there a consensus on which provider types make up the United States' mental health workforce (Heisler 2018). Numerous licensed professionals provide mental health care services, including primary care physicians, psychologists, psychiatrists, nurses, mental health and substance abuse counselors, family and marriage counselors, and social workers. Specific

education and licensure requirements can vary from state to state, whereas other licensure requirements are more uniform across states. For example, to be a clinical psychologist requires a doctoral degree in psychology (Ph.D. or Psy.D) and passage of a certification exam (e.g., the Professional Practice in Psychology Exam).

Regardless of their professional training and qualifications, mental health providers (MHP) have a significant degree of professional autonomy. MHPs are significantly more likely to be in solo practice than physicians or other healthcare providers. While only one in five physicians work by themselves, almost half of all MHPs do (Kane and Emmons 2013; Kugelmass 2016, 2019; Michalski, Mulvey, and Kohout 2009). Thus, MHPs face fewer formal and institutional constraints on their ability to make decisions consistent with their explicit or implicit biases.

Previous experimental and observational studies establish that health care providers, including MHPs, make decisions about patients that are shaped by their perceptions of a patient's race, social class, and gender (van Ryn and Burke 2000; Kugelmass 2016, 2019). This research primarily focuses on how race-based explicit or implicit biases affect diagnosis, treatment recommendations, and patient management (Arber et al. 2006; Green et al. 2007; Haider et al. 2011; Kikano et al. 1996; Lutfey et al. 2008, 2010; McKinlay et al. 1997; Stepanikova 2012; van Ryn et al. 2011). These explicit or internalized biases and prejudices result in African Americans and other minorities receiving fewer procedures and poorer quality medical care than whites across virtually every medical intervention (Smedley, Stith, and Nelson 2003).

These disparities may be driven by a personal aversion or a "taste-based animus" against working with gender and racial minorities. Health care providers were found to ascribe negative characteristics to African American patients and lower-class patients. They often perceive

African American patients as less cooperative and more hostile (Abreu 1999; Green et al. 2007; van Ryn and Burke 2000).

Few studies examine if health care providers hold explicitly negative anti-transgender or anti-non-binary views. However, medicine and medical providers have historically treated TNB bodies as abnormal, unhealthy, diseased, and in need of corrective treatment (Davis et al. 2015). The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders considered being transgender a mental disorder from 1980 until 2012 (Heffernan 2012), and the World Health Organization considered identifying being transgender as a mental illness until 2018 (Papenfuss 2019). Many MHPs continue to view TNB people as mentally ill, delusional, or self-destructive because of their gender identity (Mizock and Fleming 2011).

There is also ample evidence to suggest that MHPs seek to cultivate a group of desirable patients by "cream-skimming," or explicitly or implicitly choosing to provide services to a specific group of patients. That is, MHPs could choose to only provide services only to patients based on several non-mutually exclusive characteristics, including gender or race homophily, type of services the patient is seeking (e.g., the severity of the mental illness), or insurance status (i.e., the likelihood of payment, amount of payment, timeliness of payment). For example, there is evidence that therapists prefer to see YAVIS (young, attractive, verbal, intelligent, successful) patients (Teasdale and Hill 2006; Tyron 1986). Previous experimental audit and correspondence studies document cream-skimming based on a patient's socioeconomic status (Angerer, Waibel, and Stummer 2019; Kugelmass 2016; Olah et al. 2013), insurance status (Bisgaier and Rhodes 2011; Olin et al. 2016; Polsky et al. 2015; Rhodes et al. 2014; Werbeck et al. 2019), race (Leech, Irby-Shasanmi, and Mitchell 2019; Sharma et al. 2015, 2018; Wisniewski and Walker 2020), and perceived gender (Olah et al. 2013; Sharma et al. 2015).

Cream-skimming could be rooted in different sources of discrimination, such as taste-based discrimination (i.e., MHPs are transphobic), statistical discrimination (MHPs use minority status to make assumptions about the prospective patient), or implicit bias (unconscious bias).[9] An MHP could exhibit statistical discrimination in appointment allocation in numerous ways. First, MHPs could assume that TNB prospective patients are more likely to have a severe mental health issue, which requires more time and effort to treat and potentially poses greater liability.[10] Alternatively, MHP may perceive TNB individuals as less likely to be insured or being less able to pay standard out-of-pocket rates.[11] Thus, MHPs could perceive TNB patients as less desirable, causing MHPs to respond less favorably to appointment inquiries from TNB prospective patients. If this cream-skimming drives MHP behavior, including elements that boost patient desirability (e.g., ability to pay) should differentially increase positive response rates for TNB prospective patients.

Lastly, mental health care providers may hold implicit, unconscious biases about racial and gender minorities (Devine 1989; Greenwald and Banaji 1995). Devine (1989) notes that it is possible for individuals who are not explicitly prejudiced and deliberately try to avoid stereotypes and prejudice to still make decisions based on internalized biases or stereotypes. Numerous studies find that health care providers hold implicit biases and stereotypes about racial

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[9] Economics typically conceptualizes discrimination in terms of taste-based discrimination (Becker 1971) and statistical discrimination (Arrow 1973; Phelps 1972). Taste-based discrimination, or animus, occurs when MHPs gain disutility from interacting with specific groups of patients (or alternatively, they gain utility from the act of discrimination) (Lahey and Oxley 2018). Statistical discrimination occurs when minority status is used as a proxy for missing information about the prospective patient, such as assuming that minorities have lower socio-economic status, people of color are more likely to have Medicaid, or TNB individuals have more severe conditions.

[10] Numerous studies find that TNB individuals face more severe mental health conditions (Grossman and D'Augelli 2007; Lagos 2018; Meyer et al. 2017; Miller and Grollman 2015; Mustanski et al. 2010; Nuttbrock et al. 2010; Scanlon et al. 2010; Streed et al. 2018; Su et al. 2016), which could lead MHPs to statisticaly discriminate against TNB prospective patients if they prefer patients with less severe conditions.

[11] Several studies find that TNB individuals are less likely to have health insurance (Carpenter, Eppink, and Gonzales 2020; James et al. 2016; Liszewski et al. 2018; Waters and Yacka-Bible 2017) and have lower income (Badgett, Carpenter, and Sansone 2020; Carpenter, Eppink, and Gonzales 2020), which could lead to MHPs statistically discriminating on this basis.

minorities that result in unequal treatment (Green et al. 2007; McKinlay et al. 1996). Few studies document implicit stereotypes about gender identity. However, a recent study found that people tend to express implicit and explicit preferences for cisgender over transgender people (Axt et al. 2020).

Regardless of the cause of any underlying discrimination, if MHPs are less responsive to and less helpful towards racial and gender minorities, this behavior will decrease access and reduce the probability that these individuals receive timely and necessary medical care. Discrimination, including based on gender identity, also violates the American Counseling Association, the American Psychological Association, and the American Medical Association's ethics codes (AMA Council on Ethical and Judicial Affairs 2009; American Counseling Association 2014; American Psychological Association 2016).

Experimental Design

Audit field experiments are the gold standard for detecting and measuring discrimination (Al-Ubaydli and List 2016; Bertrand and Duflo 2017; Gaddis 2018; Neumark 2018). Experimental studies are practically the only method for causally measuring discrimination against groups for which there is very little administrative or survey data, e.g., TNB individuals.[12] In this section, we outline the details of our experimental design. We discuss ethics in audit studies in Appendix B.

Sampling Frame and Power Analysis

We use a popular online therapist search database to collect our sample of auditable mental health care providers. In order to be included in our sample, an MHP: (1) must not specialize exclusively on specific types of patients who are outside of the scope of our

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[12] See Badgett, Carpenter, and Sansone (2020) for a helpful overview of the (often lack of) data on LGBTQ+ individuals in socio-economic and health surveys.

experiment (e.g., children, adolescents, or couples therapy), (2) must not be specialized in a type of therapy (e.g., grief, domestic violence) that would not deal with the common mental health conditions that we signal: anxiety, depression, and stress, (3) must list an individual's profile (e.g., it cannot be the profile of a clinic), (4) must provide an email option through a web form, and (5) must be accepting patients (i.e., we do not contact MHPs that indicate that they are not currently accepting patients). After accounting for these characteristics, we select MHPs proportionately to state populations. Within states, we select MHPs proportionally to the population of each ZIP code.

We collect information about each MHP from their publicly-posted profile to use in future analysis. We will use this to control for variation in MHPs' characteristics that affects MHP responses, thus increasing the precision of our estimates of discrimination. We will also use this data on MHP characteristics to investigate the moderators of discrimination. Specifically, we record the MHPs state, their ZIP code, the number of years in practice, their cost per session, and their titles, licenses, and degrees. We also note whether each MHP specializes in anxiety, depression, and stress. Lastly, we record whether each MHP lists "transgender ally," "non-binary ally," "LGBT-ally," and/or a transgender specialty on their profile. We also saved each MHP's publicly-posted profile so we can extract more data from it later. We discuss our plans for using MHP characteristics and other factors to explore the moderators and sources of discrimination in the final "Next Steps" section in the paper and Table 9.

Patient Profiles and Email Scripts

If a mental health care provider meets the inclusion criteria for this experiment, we send a message to them through an "Email Me" webform. In these inquiries, we use names to signal the fictitious prospective patient's race, ethnicity, and gender. We randomly assign various other aspects of the email to signal gender identity, mental health concern, and, in future waves of our

experiment, insurance status. Figure 1 provides the general structure of our appointment inquiry emails, and Figure 2 summarizes the randomized options that we assign to each email.

Signaling gender identity.

We use names from two previous audit studies (Barlow and Lahey 2018; Gaddis 2017a) to signal race and gender. We present these names in Figure 1, box 2. Each name is either stereotypically masculine (signaling that the sender identifies as a male) or feminine (signaling that the sender identifies as female). We assign transgender and cisgender women (men) a feminine (masculine) first name. Non-binary prospective patients are assigned either feminine names or masculine names, each with a 50 percent probability.[13]

Each MHP will receive one inquiry from one prospective patient who identifies either as transgender (25 percent of the time), non-binary (25 percent of the time), or cisgender (50 percent of the time). Specifically, TNB prospective patients the following statement in their appointment request email: "*I am [a transgender woman]/[a transgender man]/[non-binary] and I am looking for a therapist who is trans-friendly.*" Cisgender prospective patients do not include any statement about gender identity and are thus presumed to be cisgender.

We believe that signaling TNB status in this way is common and externally valid. For a TNB individual seeking mental health services, finding a therapist who will not discriminate against them (i.e., a "trans-friendly" therapist) or stop them from being transgender[14] is essential. Disclosing transgender status and inquiring about trans-friendly services is common and is

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[13] Many non-binary people keep their names assigned at birth, or otherwise have names that are more feminine or masculine, especially since few names are non-gender specific. We considered including some non-gender specific names for non-binary people but decided not to since there is no clear naming convention or way that non-binary people select non-gender specific names. Also, including another set of names would have added another difference between our non-binary prospective patients and our transgender and cisgender prospective patients, which may have made it more different to compare results.

[14] Almost 1 in 10 respondents to the 2015 U.S. Transgender Survey report that at least one MHP has tried to stop them from being TNB (James et al. 2016). Those who have experienced a professional try to stop them from being TNB report worse mental health outcomes, including higher rates of psychological distress and attempted suicide.

recommended by experts who provide advice on how to find trans-affirming care (e.g., Kassel 2018).

Signaling race and ethnicity.

We selected names that clearly signal gender, race (African American or white), and ethnicity (Hispanic) from studies that carefully test how names signal race, ethnicity, and socioeconomic status (Barlow and Lahey 2018; Gaddis 2017a).[15] Figure 2 presents these names. In the next waves of our experiment, we will add Chinese American names, as discussed in our concluding section.

In the first wave of the study, the results of which we present in this paper, we randomly assign an MHP to receive an inquiry containing a white name approximately 50 percent of the time, an inquiry containing an African American name approximately 25 percent of the time, and an inquiry containing a Hispanic name approximately 25 percent of the time.

Signaling mental health concern.

We also randomly assign one of the following mental health conditions: stress, anxiety, or depression. We use these conditions since they are the most common, virtually all MHPs are qualified to treat them, and they do not suggest that the mental health concern is trans-specific. We focus this study on quantifying access to mental health care for common mental health conditions rather than quantifying access to trans-specific care, a separate research question requiring a different research design.

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[15] Using these names helps us confront the criticism that using African-American first names to signal race over-estimate discrimination and confuses racial discrimination for socio-economic status discrimination because some names also have negative socioeconomic status signals (Barlow and Lahey 2018; Darolia et al. 2016; Fryer and Levitt 2004; Gaddis 2017a; 2017b; Ghoshal 2019).

Coding Mental Health Provider Responses

Each appointment request email contained both the fictitious patient's email and phone number. MHPs are thus able to respond via phone, text message, and email. We consider a (non-automated) email, a text message, or a voicemail to be a response.[16]

We coded each MHP response into one of the following seven mutually exclusive outcome categories: appointment offered, call or consultation offer, screening question(s), referral, waitlist, rejection, and no response. These seven, mutually-exclusive categories[17] capture the variation in the quality of response. See Table 1 for each outcome's more detailed definition.

To improve power and increase our results' interpretability, we collapse these categories into a binary variable, called "positive response," that adopts the value one if the MHP's response was normatively positive (the sum of appointment offer and call or consultation offer) and zero otherwise.[18] Categorizing responses as positive or not positive is a standard approach in audit studies (e.g., Kugelmass 2019; Neumark, Burn, and Button 2019), but in future waves of the study, we will conduct an analysis that better explores differences between frequencies in different response categories.

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[16] We record MHP's phone numbers and cross-reference those with any missed calls, but we find only perhaps one instance of an MHP calling without leaving a voicemail.

[17] MHPs of course often provide more than one type of response, such as a referral and a consultation offer. If an MHP's response falls into more than one category, it is coded as the best category. For example, a referral and a consultation offer is coded as consultation offer, and a rejection and a referral is coded as a referral.

[18] This is the same binary categorization as Kugelmass (2019). Our results are generally similar if we use an alternative binary categorization that deems screening questions and referrals to be positive responses as well. We discuss these results in a robustness sub-section within the results section.

Empirical Strategy

We use regression analysis to quantify differences in outcomes. We start first by testing for differences in our broader categories, using the binary "positive" outcome variable and a linear probability model[19] as follows:

$$Positive_i = \beta_0 + \beta_1 TransOrNonBinary_i + \beta_2 AfricanAmerican_i + \beta_3 Hispanic_i$$
$$+ \beta_4 Depression_i + \beta_5 Anxiety_i + \varepsilon_i \qquad [1]$$

$Positive_i$ equals one for positive responses to the appointment inquiry (appointment offer or call or consultation offer), and $TransOrNonBinary_i$, $AfricanAmerican_i$, and $Hispanic_i$ are indicator variables for each randomized status, with the excluded category being cisgender white people. $Depression_i$ and $Anxiety_i$ capture differences in the positive response rate between those who mention depression or anxiety in their appointment request, compared to those who just mention having stress. We also include state fixed effects and fixed effects for the week and day of the week when we sent the appointment request in our preferred specifications. We cluster our standard errors at the patient level since, while each MHP only gets one email, each patient emails appointment requests to up to ten MHPs in their assigned area.

We then extend equation [1] to explore intersectional groups, such as individuals by gender identity (e.g., transgender wo(men) vs. cisgender wo(men) vs. non-binary people) and by race, ethnicity, and gender identity intersectionality (e.g., TNB people of color).

In subsequent analyses, when we have a larger sample size and have collected more data, we will control for MHP characteristics. We anticipate that this would increase precision and show how MHP characteristics correlate with access to appointments in general. We will also conduct a more in-depth analysis of differences in the types of responses, such as using

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[19] Our main results are similar using a probit model (see Table Appendix Table A1). We discuss the minor differences in the robustness sub-section of the results section.

multinomial models to determine if there are differences within our binary categorization that our analysis does not pick up. For example, are TNB individuals more likely to get a call or consultation offer instead of an outright appointment? Or are TNB individuals more likely to get referrals instead of being outright rejected? This analysis will provide a deeper understanding of how MHPs react to prospective patients.[20]

Results from the First Wave of the Experiment

Frequency of MHP Responses by Category

Between January 28, 2020, and May 15, 2020, we sent appointment requests to 1,000 MHPs. Before proceeding, it is important to note that, although our sample size is small, it is only the first wave of a multi-wave study. Thus, these results are preliminary and subject to change based on the results of subsequent waves.

We receive responses to 75.5 percent of our appointment request emails. This response rate is comparable to other email correspondence audit studies (Hanson et al. 2016; Kugelmass 2019). Among these responses, 80 percent of MHPs responded via email, and the remainder left a voicemail (or, in a few instances, a text message only).

In Table 1, we categorize the responses into seven mutually exclusive outcome categories. In particular, we received an appointment offer from one-third of our appointment requests, and we received a call or consultation offer 23.3 percent of the time. We code both as positive responses in our binary coding, so the positive response rate is 56.6 percent. For the responses we code as negative, the most common was receiving no response (24.5 percent), followed by a rejection (6.0 percent), the MHP asking a screening question only (6.0 percent), the MHP offers a referral only (4.8 percent), or the MHP offering to put the prospective patient

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[20] Our results, however, are similar using our alternative binary coding, which also considers screening questions and referrals as positive outcomes. But a multinomial model would allow for a finer study of differences by response categories.

on a waitlist only (2.1 percent). See Table 1 for each outcome's frequency by gender identity, race, and ethnicity.

Differences in Positive Response Rates

We then collapse this more detailed coding of responses into our binary positive response coding (positive responses are appointment, call, or consultation offers) to present raw differences in positive response rates. Table 2 presents positive response rates by gender identity, first for the aggregated groupings of cisgender prospective patients versus TNB prospective patients. Cisgender prospective patients received a positive response 60.6 percent of the time while TNB prospective patients only received a positive response 52.8 percent of the time—a statistically significant 7.8 percentage point difference (*p-value* = 0.013, using a two-sided t-test). We then compare positive response rates by our more refined categorizations of gender identity. Cisgender men have the highest positive response rate (61.6 percent), followed by cisgender women (58.8 percent), transgender women (55.8 percent), non-binary individuals (51.9 percent), and transgender men (50.7 percent). These more refined categorizations have less precision, given our smaller sample size, so only the response rate difference between cisgender and transgender men – where transgender men have a 10.9 percentage point lower response rate – is statistically significant (*p-value* = 0.030).

Table 3 presents positive response rates by race and ethnicity. White prospective patients have the highest positive response rate (58.0 percent), followed by African Americans (55.5 percent) and Hispanics (54.8 percent). None of these differences are statistically significant in this raw data.

Table 4 presents positive response rates for groups by the intersection of race, ethnicity, and gender identity. We find no statistically significant differences in raw response rates between

whites, African Americans, or Hispanics *with* the same transgender/cisgender status. However, we find differences by race and ethnicity across transgender/cisgender status. Cisgender African Americans have a higher positive response rate (60.7 percent) than TNB African Americans (50.0 percent*, p-value* = 0.077), and cisgender whites have a higher positive response rate (61.5 percent) than TNB whites (54.2 percent, *p-value* = 0.096).

However, we find the largest positive response rate differences by comparing TNB African Americans and Hispanics to cisgender whites. TNB African Americans face the lowest positive response rate (50.0 percent) compared to cisgender whites, who face the highest rate (61.5 percent, *p-value* = 0.030). For TNB Hispanics, this response rate is 53.3 percent (p = 0.105). Thus, it appears that the discrimination against TNB prospective patients is largely discrimination against TNB African-Americans and Hispanics.

Regression Analysis of Differences in Positive Response Rates

Table 5 presents regression estimates of the differences in response rate by race, ethnicity, and gender identity derived from the linear probability model specified in equation [1]. Without any control variables, the regression estimates show that prospective patients who signal TNB status have between a 6.5 and 7.5 percentage point lower positive response rate, significant at the 5 percent level (columns (1) and (2)). Without control variables, there is also no difference in response rates between white, African American, and Hispanic prospective patients. These results mirror the raw differences in positive response rates seen in Tables 2 and 3. We also find that those who mention anxiety in their appointment request, rather than stress, have a 10.4 percentage point lower response rate.

Adding state fixed effects (column (3)) changes these estimates significantly.[21] With state fixed effects, the positive response rate is only 3.3 percentage points lower and statistically insignificant for TNB individuals compared to cisgender individuals. Adding state fixed effects reveals discrimination against African American prospective patients, with a 10.9 percentage point lower response rate, statistically significant at the 5 percent level. Adding state fixed effects also removes the estimated positive response rate difference between prospective patients who mention stress versus anxiety.

We then add week-sent and day-of-the-week-sent fixed effects to control for random variation from when we sent the emails (although this is random with respect to prospective patient demography). In our preferred specification with all these controls (column (5)), we find no evidence of differential positive response rates between cisgender and TNB prospective patients. However, on average, we find that MHPs respond to both African American and Hispanic patients about 13 percentage points less often than white patients (significant at the 1 percent and 5 percent levels, respectively). In this preferred specification, we also find that prospective patients reporting depression as the primary mental health concern in an inquiry to the MHP increases the probability of a positive response by 14.6 percentage points relative to the prospective patient mentioning stress.

In Table 6, we disaggregate the broader cisgender and TNB groups. We compare positive response rates between binary transgender men and women, non-binary individuals (with either masculine-coded or feminine-coded names), and cisgender men and women (where cisgender

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[21] This is a function of our temporarily smaller sample size. Patient demographics are randomly assigned by state. The inclusion of state fixed effects controls for between-state differences in response rates, which is a significant source of variation in positive response rates. The inclusion of state fixed effects also means that we put more weight onto within-state differences by patient demographics. We have less within-state variation in patient demographics since, unlike many other audit field experiments, we do not send subjects (MHPs) more than one email.

men are the comparison group). All estimates are from a regression that includes the control variables in our preferred specification (column (5) in Table 5).

Column (1) of Table 6 reports the coefficients from column (5) of Table 5 for comparison. Column (2) considers binary transgender and non-binary individuals separately, column (3) further differentiates binary transgender people to consider transgender women, transgender men, and non-binary individuals separately. Column (4) further differentiates non-binary individuals by if they have feminine-coded or masculine-coded first names. Regardless of how we divide the TNB population, we do not find any differences within TNB subgroups or between TNB subgroups and cisgender individuals. However, we find that cisgender women are about 10.8 percentage points less likely to receive a response than cisgender men.

Table 7 disaggregates cisgender and TNB prospective patients by race and ethnicity to quantify any intersectional discrimination. This delves deeper into a trend we saw in the raw data in Table 4. Column (1) of Table 7 again reports baseline estimates from our preferred specification reported in Column (5) of Table 5. Column (2) reports differences in response rates for specific racial and ethnic groups disaggregated by gender identity. We find that white TNB prospective patients are about 10.0 percentage points *more* likely to receive a positive response than white cisgender prospective patients, although this is only statistically significant at the 10 percent level. However, TNB prospective patients that are African American are 13.3 percentage points less likely to receive a positive response than white cisgender prospective patients (significant at the 5 percent level). Hispanic TNB prospective patients have a 10.3 percentage point lower response rate, but this is not statistically significant. We do not find any differences in positive response rates between cisgender African Americans, cisgender Hispanics, or cisgender whites.

Table 8 disaggregates these results further by exploring the intersection between more specific minority gender identities (transgender women, transgender men, non-binary individuals) and race and ethnicity.[22] Table 8 shows that white transgender men (white transgender women) are 21.1 (16.9) percentage points *more* likely to receive a positive response than cisgender whites (both significant at the 5 percent level). However, Hispanic transgender women are 37.0 percentage points less likely to receive a positive response (significant at the 1 percent level). African American transgender men (African American transgender women) have positive response rates that are 12.4 (7.6) percentage points lower than cisgender whites (not statistically significant).

For non-binary prospective patients, there is no difference in positive response rates between non-binary white and cisgender white prospective patients. However, African American non-binary prospective patients have a 49.1 percentage point lower positive response rate, significant at the 1 percent level. Hispanic non-binary individuals have a 13.8 percentage point lower positive response rate, but this is only significant at the 10 percent level.

Robustness Checks

We first check if our main results are different when using a probit instead of a linear probability model. Table A5 presents Table 5 using a probit instead, with similar results. Then, we move to our more critical robustness check to determine if our method of coding the categorical responses (see Table 1) into binary outcomes is robust to plausible alternative binary codings. In our default specification, we deem positive responses to be explicit appointment offers, or call or consultation offers, the same coding as in Kugelmass (2019). However, two

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[22] We also run a regression similar to what that presented in Table 8, but where we disaggregate cisgender white, African-American, and Hispanic people by if they are cisgender women or cisgender men. However, we do not find neither differences by gender within the same race or ethnicity, nor differences by race or ethnicity with the same gender. There results are available from the authors upon request.

other possible responses are more ambiguous: screening questions and referrals, and we consider an alternative binary coding of positive responses that includes these two as positive.

While a screening question could indicate a barrier to access (Kugelmass 2019), such as providers being differentially more concerned about insurance status for minorities, a screening question does not necessarily mean that the MHP would not eventually offer an appointment. Screening questions may also be more common for minorities if, for example, the MHP asks if the concerns are trans-specific or if the MHP asks if the prospective patient would prefer someone who specializes in trans/race issues. Thus, screening questions, while generally suggestive of barriers in access to appointments, could in some situations fail to capture helpful responses.

Referrals are also likely to indicate a barrier to access (Kugelmass 2019), but it depends on the intent of the referral. Many referrals are essentially appointment rejections, but a way to moderate the negative implications of denying an appointment by providing the prospective patient with an alternative. The question is, then, whether this alternative provider is better for the prospective patient.

We try to avoid these referrals by not suggesting that the common mental health concerns are trans- or race-specific as we seek to quantify discrimination in access to general mental health care for common mental health concerns. However, MHPs may still suggest alternative providers under the view that the TNB prospective patients, or racial or ethnic minority prospective patients, would do better with a specialist. While many MHPs provide these referrals in addition to appointment, call, or consultation offers, some provide a referral only, and a subset of these could still be considered positive outcomes.

After the next wave of data collection, we will start exploring the quality of these referrals to see if the referrals are to lower or higher quality MHPs. Determining the quality of the referred MHP is possible if they also have an online profile or website, which almost all MHPs do. Until we can differentiate better between likely good and likely bad referrals, we test our binary positive outcome coding's robustness by including a referral as a positive response.

Appendix Tables A2 to A8 present all of our results with this alternative positive binary coding, where positive responses are appointment, call, or consultation offers, screening questions, or referrals. Since screening questions occur 6.0 percent of the time and referrals occur 4.8 percent of the time (see Table 1), the alternative positive response rate is 67.1 percent on average, compared to 56.6 percent for our default rate. Our results are similar across all tables except for a few minor differences. We generally find less discrimination against non-binary African Americans using the alternative binary coding. This suggests that non-binary African Americans are relatively more likely to be asked screening questions or given referrals.

With the alternative positive coding, we also find discrimination against Hispanic transgender men when we did not find discrimination with the default positive coding. Under this alternative coding, discrimination is similar against Hispanic transgender women and men. In contrast, with our default positive coding, there is more frequent discrimination against Hispanic transgender women, with no statistically significant evidence of discrimination against Hispanic transgender men. This suggests that Hispanic transgender women (men) are differentially more likely (less likely) to be asked screening questions or given referrals. Our broader result – that discrimination is primarily against TNB African-Americans and Hispanics – is unchanged with this alternative binary coding.

Conclusion and Discussion

To summarize our results from our first wave of the experiment, we generally find no differences in positive response rates between TNB and cisgender prospective patients in our preferred specifications. This lack of a difference occurs because positive response rates may be *higher* for white transgender women and men. However, the significantly more frequent discrimination against African American and Hispanic TNB people (mainly Hispanic transgender women and non-binary African American people) offsets this, such that is little evidence of a difference on average between TNB and cisgender prospective patients. Ignoring intersectionality thus obscures this discrimination against TNB people of color and apparent preference for white binary transgender people. This finding is a warning for other researchers that they should consider incorporating intersectional groups.

We find that African American and Hispanic prospective patients face discrimination on average. However, the significant discrimination against intersectional groups, namely non-binary African Americans and Hispanic transgender women, drives this average difference. We do not find differences in response rates by race or ethnicity for cisgender prospective patients. This may suggest that discrimination against African Americans and Hispanics is primarily against African Americans and Hispanics who are transgender or non-binary only. However, given our small sample size at this time, we cannot rule out meaningful magnitudes of discrimination against cisgender African Americans or Hispanics, which motivates our planned data collection going forward.[23]

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[23] In Table 7, column (2), the coefficient on cisgender African Americans is -0.0241, with a standard error of 0.0659. This imprecise estimate has a 95 percent confidence interval of -0.153 to 0.105. The confidence interval is -0.164 to 0.0998 for cisgender Hispanics. These intervals clearly include meaningful magnitudes of discrimination, which means that the most honest interpretation of our results is that it is inconclusive if cisgender African Americans or Hispanics face discrimination in access to mental health care appointments. Our power analysis filed with our pre-analysis plan discusses how many observations we would need in our final experiment to detect meaningful magnitudes of discrimination.

Interestingly, we also find that cisgender women face lower positive response rates than cisgender men. We also find prospective patients mentioning depression as their mental health concern receive higher positive response rates than prospective patients who mention anxiety or stress. However, this difference is not entirely robust as it does not appear without state fixed effects, which we include in our preferred specifications.

These preliminary results motivate our continued data collection and data analysis to understand better the ways and reasons that discrimination occurs in access to mental health care. We hope to better understand, for example, why white binary transgender women and men may experience higher appointment offer rates and why cisgender women may experience lower positive response rates. Statistical discrimination based on insurance status could perhaps explain the discrimination against cisgender women.[24] The source of the preference for white transgender women and men is less clear, although a simple explanation is that MHPs simply want to work with or care about these groups. We will explore if this preference appears correlated with attitudes on transgender issues or implicit bias against transgender people to see if this preference appears driven by taste-based discrimination in favor of (white) transgender people.

In the final section below, we detail the next steps in this research, including conducting secondary analysis to explore the sources and moderators of discrimination. We also detail our plans for follow-up studies to quantify discrimination based on other factors not explored in this first wave of data collection.

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[24] MHPs could assume that cisgender women are less likely to have private insurance or ability to pay, on average, given that women face lower incomes and wages (Blau and Khan 2017) and slightly lower rates of private health insurance coverage, and higher rates of Medicaid coverage (National Center for Health Statistics 2018).

Next Steps

We will expand this research to investigate the mechanisms behind discrimination. We will study where and why discrimination occurs by taking equation [1] and adding interactions between our minority status variables and moderators of discrimination. Table 9 presents these interaction variables, what they test for, and our hypotheses. For example, we will study if MHP race or ethnicity predicts discrimination, if transgender rights laws affect discrimination, and to what extent discrimination may be taste-based, statistical, or based on implicit bias. We will also explore how COVID-19 and related policies, such as shelter-in-place ordinances, affected mental health care access and discrimination in access to mental health care.

In addition to exploring these moderators and sources of discrimination, we will extend this study in future waves by adding additional experimental arms as follows:

1. We will add prospective patients with Chinese names to quantify discrimination against that them;

2. We will randomize mention of different insurance statuses and methods of payment to quantify if prospective patients with Medicaid face reduced access to mental health care; and

3. We will add prospective patients who vary in sexual orientation to quantify sexual orientation discrimination.

We detail these plans below and welcome any feedback.

Insurance Status, Access to Mental Health Care, and Statistical Discrimination

We will randomly disclose the prospective patient's insurance status or their preferred payment method in the next wave. We will randomly assign insurance status so that 10 percent of the time, the prospective patient will not mention their insurance status or payment method (which is what we did in the first wave, presented in this paper). Prospective patients will

disclose, with a 16 percent probability, that they will pay out-of-pocket but will not mention or request a sliding scale payment option. With a 14 percent probability, the prospective patient will instead disclose paying out-of-pocket but *will* request a sliding scale option (e.g., "*do you offer a sliding scale*?"). Finally, with a 30 percent probability, the prospective patient will disclose paying with Medicaid (private insurance).

There is some research on how insurance status or ability to pay affects access to health care. Several audit field experiments quantify how access to primary care varies by insurance status (Bisgaier and Rhodes 2011; Leech, Irby-Shasanmi, and Mitchell 2019; Olin et al. 2016; Polsky et al. 2015; Rhodes et al. 2014; Sharma, Mitra, and Stano 2015; Sharma et al. 2018). However, only Olin et al. (2016) quantifies access to *mental* health care (although for adolescents in the state of New York only). These audit studies generally find that those with Medicaid face reduced access to health care. We expect that those with Medicaid will face similar barriers in access to mental health care as they do for access to primary care.

In addition to randomizing insurance status to our prospective patients to quantify access to mental health care appointments, we can also use this to study statistical discrimination, as detailed in Table 9. To summarize, MHPs could statistically discriminate against minorities by assuming that they have worse insurance or worse ability to pay. We can quantify this statistical discrimination by testing if minorities face more discrimination when insurance status is not revealed than when it is revealed. If MHPs assume that minorities have a worse ability to pay, then revealing the ability to pay (e.g., private insurance) will differentially boost positive response rates for minorities.

Discrimination Against Chinese Prospective Patients

In the next wave of our experiment, we include names that signal the prospective patient is Chinese American. No study has examined if Asian Americans face discrimination in access to mental health care services. We will disclose Chinese American status with frequent first and last names in the U.S. Chinese community. Half the time, our Chinese American prospective patients will have Chinese first names and last names. The other half of the time, our Chinese American prospective patients will have gender-specific English first names and Chinese last names.

Sexual Orientation Discrimination

In a future wave of the experiment, we will include signals for sexual orientation, likely using a similar approach to how we signal TNB status. That is, lesbian, gay, or bisexual prospective patients would include a statement like "I am gay/lesbian/bisexual and am looking for a gay-friendly therapist." This extension to study sexual orientation discrimination would be the first audit field experiment of discrimination in access to health care for sexual minorities.

COVID-19 and Access to Mental Health Care

Our first wave of data collection (between January 28, 2020, and May 15, 2020) occurred during the first wave of the COVID-19 pandemic, and we plan to continue further data collection. As of writing, cases have reached an all-time high, and there is no expectation of the pandemic ending soon. This provides us with a natural experiment to explore how access to mental health care varies before, during, and after the pandemic and with the pandemic's severity.

Why should access to MHPs change during a pandemic? Like other crises, the intensity of the COVID-19 pandemic—as proxied by infection and mortality rates and shelter-in-place

ordinances—increases depression and suicidal ideation (Killgore et al. 2020; McIntyre and Lee 2020; Pfefferbaum and North 2020; Torales et al. 2020). MHPs can help treat these conditions, but they are likely to face increased demand for appointments. Access could also change through an inability to meet in person under normal circumstances and the movement of MHPs towards greater use of telehealth systems (Madigan et al. 2020; Reay et al. 2020).

We will test three hypotheses: (i) the increase in the COVID-19 intensity, measured as either cases or deaths, reduces access to therapy appointment; (ii) shelter-in-place ordinances reduce access to therapy appointments; and (iii) discrimination against minorities increases with increased COVID-19 intensity and with shelter-in-place ordinances. We hypothesize that discrimination could increase in these cases since prior research links (but not conclusively) increased discrimination to shortages (Baert et al. 2015; Carlsson, Fumarco, and Rooth 2018; Dahl and Knepper 2020; Kroft, Notowidigdo, and Lange 2013).

The integration of COVID-19 data will help us explore in greater detail discrimination against Chinese Americans. Based on surveys early during the COVID-19 pandemic, there was an increase in anti-Asian and anti-Chinese views and events (Litam 2020; Ruiz, Horowitz, and Tamir 2020). We will examine if MHPs are more or less responsive to Chinese Americans throughout the COVID-19 pandemic. We will exploit both geographical and temporal variation in the pandemic's severity to examine how this severity correlates with MHP behavior towards Chinese Americans.

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Figure 1: Structure of the Emails to MHPs

1.) **[EMAIL SUBJECT LINE]**   *Legend: ( ): denotes motivating verbiage, not exact phrasing*
Hi,/Hello,   *[ ]: denotes randomized input*
My name is 2) **[NAME]**. (I'm contacting you because) 3) **[MENTAL HEALTH**
CONCERN] (and would like to talk to a therapist). *If transgender or non-binary:* I am
4) **[GENDER IDENTITY]** and am looking for a therapist who is trans-friendly. 5)
[APPOINTMENT REQUEST].
6) **[VALEDICTION]**
2) **[NAME]**

Figure 2: Randomized Components of the Emails to MHPs

1) <u>**[EMAIL SUBJECT LINE]**</u>	2) <u>**[NAME]**</u>		
-Seeking therapy	*Afr.-Am.*	*Hispanic*	*White*
-Looking for a therapist	*Male-Coded First Names*		
-Therapy inquiry	Darius	Alejandro	Brian
	DeShawn	Luis	Kevin
3) <u>**[MENTAL HEALTH CONCERN]**</u>			
-I've been feeling anxious lately.	*Female-Coded First Names*		
-I've been feeling stressed all the time.	Ebony	Mariana	Amanda
-I think I might be depressed.	Lakeisha	Valentina	Heather
4) <u>**[GENDER IDENTITY]**</u>	*Last Names*		
-a transgender woman	Washington	Hernandez	Anderson
-a transgender man	Jefferson	Garcia	Thompson
-non-binary			

5) <u>**[APPOINTMENT REQUEST]**</u>
-Can we set up an appointment?   -When could I see you?

6) <u>**[VALEDICTION]**</u>
-Sincerely,   -Thanks,   -Best,   -[None]

Notes: Ethnic and race-specific first names are from Barlow and Lahey (2018), Gaddis (2017).

Table 1: Descriptive Statistics of Outcomes

Outcome	Description	Binary Coding			Gender Identity		Race and Ethnicity		
		Default	*Alt.*	*Overall*	*Cisgender*	*Trans or Non-Binary*	*White*	*African American*	*Hispanic*
Appointment Offer	The MHP explicitly offers an appointment.	+	+	33.3%	33.2%	33.4%	33.4%	32.4%	34.0%
Call or Consultation Offer	The MHP offers to speak on the phone but does not offer an appointment.	+	+	23.3%	27.3%	19.6%	24.6%	23.2%	20.5%
Screening Question	The MHP requests additional information but does not offer an appointment.	−	+	6.0%	7.1%	5.0%	5.9%	7.0%	5.0%
Referral	The MHP gives a referral but does not offer an appointment.	−	+	4.8%	3.8%	5.8%	4.9%	5.9%	3.2%
Waitlist	The MHP offers to put the prospective patient on a waitlist.	−	−	2.1%	1.3%	2.9%	2.1%	0.7%	0.4%
Rejection	The MHP rejects the prospective patient and does not offer an alternative provider.	−	−	6.0%	6.5%	5.6%	5.8%	6.6%	5.5%
No Response	No response from the MHP within one week.	−	−	24.5%	20.9%	27.6%	23.0%	24.0%	28.2%
			N	1,000	480	520	500	270	230

Notes: These categorizations are mutually exclusive. For example, a response is coded as an appointment offer even if a referral is also provided. Our default binary coding treats appointment offer and call or consultation offer as the only positive outcomes, while our alternative binary coding also considers screening questions and referrals as positive outcomes.

Table 2. Positive Response Rates by Gender Identity

Response Rates by Trans/Cis Status:	Positive	Negative	Total		
Cisgender	60.6% (291)	39.4% (189)	480		
Transgender or non-binary	52.8% (275)	47.2% (245)	520		
Total	56.6% (566)	43.4% (434)	1,000		
Test of independence, p-value	0.013				

Response Rates by Gender Identity:	Positive	Negative	Total		
Cisgender men	61.6% (191)	38.4% (119)	310		
Cisgender women	58.8% (100)	41.2% (70)	170		
Transgender men	50.7% (71)	49.3% (69)	140		
Transgender women	55.8% (95)	44.2% (75)	170		
Non-binary	51.9% (109)	48.1% (101)	210		

Tests of independence, p-values	Cis men	Cis women	Trans men	Trans women	Non-binary
Cisgender men	…				
Cisgender women	0.551	…			
Transgender men	0.030	0.151	…		
Transgender women	0.222	0.585	0.365	…	
Non-binary	0.028	0.179	0.829	0.441	…

Notes: Responses are coded as positive if the MHP's response was an appointment offer or a call or consultation offer. P-values come from a t-test (two-sided).

Table 3. Positive Response Rates by Race or Ethnicity

	Positive	Negative	Total
White	58.0% (290)	42.0% (210)	500
African American	55.5% (150)	45.5% (120)	270
Hispanic	54.8% (126)	45.2% (104)	230
Total	56.6% (566)	43.4% (434)	1,000

Tests of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.514	…	…
Hispanic	0.415	0.862	…

Notes: Responses are coded as positive if the MHP's response was an appointment offer or a call or consultation offer. P-values come from a t-test (two-sided).

Table 4. Positive Response by Race or Ethnicity, for Cisgender and Transgender or Non-Binary Patients Separately

Response rates for cisgender only:	Positive	Negative	Total
White	61.5% (160)	38.5% (100)	260
African American	60.7% (85)	39.3% (55)	140
Hispanic	57.5% (46)	42.5% (34)	80
Total	60.6% (291)	39.4% (189)	480

Test of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.872	…	…
Hispanic	0.519	0.642	…

Response rates for transgender or non-binary only:	Positive	Negative	Total
White	54.2% (130)	47.8% (110)	240
African American	50.0% (65)	50.0% (65)	130
Hispanic	53.3% (80)	46.7% (70)	150
Total	52.9% (275)	47.1% (245)	520

Test of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.445	…	…
Hispanic	0.873	0.579	…

Transgender or non-binary vs. Cisgender: Tests of independence, p-values	Cisgender white	Cisgender African American	Cisgender Hispanic
Transgender or non-binary white	0.096	…	…
Transgender or non-binary African American	0.030	0.077	…
Transgender or non-binary Hispanic	0.105	…	0.547

Notes: Responses are coded as positive if the MHP's response was an appointment offer or a call or consultation offer. P-values come for a t-test (two-sided).

Table 5: Differences in Positive Response Rates, Results for Aggregated Groups and by Mental Health Concern

	(1)	(2)	(3)	(4)	(5)
Transgender or non-binary	- .07446**	-.0657**	-.0334	-.0084	.0123
	(.0317)	(.0320)	(.0429)	(.0429)	(.0426)
African American	- .0245	-.0226	-.1091**	-.1492**	-.1333***
	(.0374)	(.0374)	(.0432)	(.0419)	(.0404)
Hispanic	-.0195	-.0278	-.0209	-.0911*	-.1302**
	(.0398)	(.0399)	(.0526)	(.0465)	(.0495)
Depression	…	- .0201	.0450	.1366**	.1459**
		(.0385)	(.0502)	(.0587)	(.0576)
Anxiety	…	-.1040**	-.0011	.0139	.0111
		(.0449)	(.0524)	(.0527)	(.0527)
State fixed effects:			X	X	X
Week-sent fixed effects:				X	X
Day-of-the-week-sent fixed effects:					X
N	1,000	1,000	1,000	1,000	1,000
Adjusted R^2	0.0063	0.0076	0.0808	0.0986	0.1070

Notes: Regression estimates based on the linear probability model in equation (1). For comparison, the mean positive response rate for cisgender whites with stress (the comparison group) is 61.5%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Differences in Positive Response Rates, Results by Gender Identity

	(1)	(2)	(3)	(4)
Transgender or non-binary	.0123 (.0426)	…	…	…
…Binary transgender	…	.0289 (.0472)	…	…
…Transgender women	…	…	.0004 (.0624)	.0096 (.0618)
…Transgender men	…	…	-.0200 (.0660)	-.0158 (.0665)
…Non-binary	…	-.0272 (.0690)	-.0607 (.0706)	…
…Non-binary feminine first name	…	…	…	-.0100 (.0873)
…Non-binary masculine first name	…	…	…	-.0892 (.0891)
Cisgender women	…	…	-.1082** (.0527)	-.1086** (.0534)
African American	-.1333** (.0404)	-.1355** (.0399)	-.1505*** (.0412)	-.1459** (.0422)
Hispanic	-.1302** (.0495)	-.1309** (.0509)	-.1183** (.0451)	-.1262** (.0454)
N	1,000	1,000	1,000	1,000
Adjusted R^2	0.1070	0.1076	0.1096	0.1100

Notes: All regressions include the controls in column (5) of Table 5: mental health concern (depression and anxiety relative to the excluded category of stress), state fixed effects, day-of-the-week-sent fixed effects, and week-sent fixed effects. Column (1) repeats the results from column (5) in Table 5 for ease of interpretation. For comparison, the mean positive response rate for the excluded group (cisgender white men) is 66.7%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Differences in Positive Response Rates, Intersectional Results by Trans/Cisgender Status and Race/Ethnicity

	(1)	(2)
Transgender or non-binary	.0123	…
	(.0426)	
…and white	…	.0998*
		(.0574)
…and African American	…	-.1333**
		(.0613)
…and Hispanic	…	-.1025
		(.0625)
Cisgender		
…and African American	…	-.0241
		(.0659)
…and Hispanic	…	-.0321
		(.0673)
All African American	-.1333**	…
	(.0404)	
All Hispanic	-.1302**	…
	(.0495)	
N	1,000	1,000
Adjusted R^2	0.1070	0.1100

Notes: All regressions include the controls in column (5) of Table 5: mental health concern (depression and anxiety relative to the excluded category of stress), state fixed effects, day-of-the-week-sent fixed effects, and week-sent fixed effects. Column (1) repeats the results from column (5) in Table 5 for ease of interpretation. For comparison, the mean positive response rate for the excluded group (cisgender whites) is 61.5%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: Differences in Positive Response Rates, Intersectional Results by Gender Identity and Race/Ethnicity

	(1)
Transgender women	
…and white	.1689**
	(.0743)
…and African American	-.0760
	(.0993)
…and Hispanic	-.3701***
	(.0936)
Transgender men	
…and white	.2105**
	(.0962)
…and African American	-.1239
	(.0978)
…and Hispanic	-.0819
	(.1025)
Non-binary	
…and white	-.0017
	(.0906)
…and African American	-.4913***
	(.1082)
…and Hispanic	-.1380*
	(.0808)
Cisgender	
…and African American	.0167
	(.0712)
…and Hispanic	.0228.
	(.0709)
N	1,000
Adjusted R^2	0.1163

Notes: All regressions include the controls in column (5) of Table 5: mental health concern (depression and anxiety relative to the excluded category of stress), state fixed effects, day-of-the-week-sent fixed effects, and week-sent fixed effects. For comparison, the mean positive response rate for the excluded group (cisgender whites) is 61.5%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Testing for the Sources or Moderators of Discrimination

Interaction Variable	Tests For...	Hypothesis
MHP Characteristics:		
MHP gender, race, or ethnicity (measured by name and profile photo)	MHP-patient demographic matches (homophily).	MHPs of a matching group discriminate less often against that group Concordances ("matches") in race, ethnicity, or gender has been shown to reduce discrimination (Blanchard, Nayar, and Lurie 2007; Cooper et al. 2003; Giulietti, Tonin, and Vlassopoulos 2019; LaVeist, Rolley, and Diala 2003; Parsons et al. 2011; Price and Wolfers 2010; Saha et al. 1999).
MHP age (imperfectly measured through software that processes photos)	Age differences in discrimination.	Older MHPs, all else constant, may hold more prejudice, as is the case for older people in general (e.g., Gonsalkorale, Sherman, and Klauer, 2009; Stewart, von Hippel, and Radvansky, 2009).
MHP experience and training	If more experienced or educated MHPs are more selective.	More experienced MHPs may experience more demand or may otherwise be more selective, which could increase discrimination. However, additional training or education could instead be associated with less discrimination.
MHP specialization in LGBTQ+/trans, race, of ethnicity issues	If these specialists are more likely to accept patients from their target groups.	MHPs that specialize in particular demographic groups' issues will respond much more positively to appointment requests from those groups.
MHP's accepted insurance types and fee for service	If MHPs that accept certain types or amounts of payment discriminate differently.	MHPs that do not accept Medicaid or have higher fees for service are more likely to discrimination (especially statistically discriminate based on assumed insurance status or ability to pay)
Geographically-measured variables:		
Attitudes on (LGBTQ+/Race/Ethnicity) by Census Tract from General Social Survey	Taste-based discrimination.	Discrimination will be higher in more bigoted areas if discrimination is taste-based.
State transgender rights laws (e.g., anti-discrimination laws, religious freedom laws, conversion therapy bans, "bathroom bills")	If discrimination laws affect discrimination against TNB individuals.	Anti-(pro-)discrimination laws are associated with less (more) discrimination.

Interaction Variable	Tests For…	Hypothesis
COVID-19 intensity measured by infection or mortality rates COVID-19 shelter-in-place ordinances	Increased MHPs' market power / scarcity affects discrimination.	COVID-19 increases demand for appointments through adverse impacts on mental health. Shortages may result in increased discrimination, as found in some of the research (Baert et al. 2015; Carlsson, Fumarco, and Rooth 2018; Dahl and Knepper 2020; Kroft, Notowidigdo, and Lange 2013).
Implicit Association Test Scores for Race-IAT and Trans-IAT by County	Implicit discrimination.	Discrimination will be higher when there is more implicit bias against that group in that county.
% Race/Ethnicity by ZIP Code or % LGBTQ+ by county	Contact hypothesis (Allport 1954).	Discrimination is lower with exposure. So, greater contact reduces discrimination (Charles and Guryan 2008; Giulietti, Tonin, and Vlassopoulos 2019).
MHPs per capita (within 10 miles of the patient's ZIP)	If MHP shortages affect discrimination.	Discrimination will increase during a shortage (fewer MHPs per capita), as found in some of the literature (Baert et al. 2015; Carlsson, Fumarco, and Rooth 2018; Dahl and Knepper 2020; Kroft, Notowidigdo, and Lange 2013).
Prospective patient characteristic:		
Insurance status[25]	Statistical discrimination.	(i) if MHPs assume minorities are more likely to have Medicaid, they will face more discrimination when they do not disclose insurance, as MHPs will assume they are more likely to have Medicaid; (ii) if MHPs assume minorities are more likely to have Medicaid, they will face less discrimination when disclosing private insurance than when they do not disclose their insurance status.

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[25] In the next wave of the experiment, we will randomize on five insurance statuses: no mention of insurance status, self-pay with no reference to a sliding scale, self-pay with a reference to paying through a sliding scale, Medicaid, and private insurance.

Appendix A – Robustness Checks

Table A1: Robustness Test--Differences in Positive Response Rates, Results for Aggregated Groups and by Mental Health Concern (Probit Model Marginal Effects)

	Linear Probability Model (1)	Probit Average Marginal Effects (2)
Transgender or non-binary	.0123	.0112
	(.0426)	(.0442)
African American	-.1333**	-.1417**
	(.0404)	(.0404)
Hispanic	-.1302**	-.1280**
	(.0495)	(.0485)
Depression	.1459**	.1515**
	(.0576)	(.0572)
Anxiety	.0111	.0169
	(.0527)	(.0515)
N	1,000	1,000
Adjusted R^2	0.0986	0.0822

Notes. Regression estimates from the specification shown in column (5) of Table 5, where we include state, week-sent, and day-of-the-week sent fixed effects. For comparison, the mean positive response rate for cisgender whites with stress (the comparison group) is 61.5%. Standard errors, clustered at the patient level and average marginal effects standard errors calculated via delta method, both in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A2. Alternative Positive Response Rates by Gender Identity

Response Rates by Trans/Cis Status:	Positive	Negative	Total
Cisgender	71.3% (342)	28.7% (138)	480
Transgender or non-binary	63.1% (328)	36.9% (192)	520
Total	67.0% (670)	33.0% (330)	1,000
Test of independence, p-value	0.006		

Response Rates by Gender Identity:	Positive	Negative	Total
Cisgender men	71.9% (223)	28.1% (87)	310
Cisgender women	70.0% (119)	30.0% (51)	170
Transgender men	58.6% (82)	41.4% (58)	140
Transgender women	67.1% (114)	32.9% (56)	170
Non-binary	62.9% (132)	37.1% (78)	210

Tests of independence, p-values	Cis men	Cis women	Trans men	Trans women	Non-binary
Cisgender men	…				
Cisgender women	0.655	…			
Transgender men	0.005	0.036	…		
Transgender women	0.265	0.561	0.124	…	
Non-binary	0.029	0.145	0.422	0.395	…

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. P-values come from a t-test (two-sided).

Table A3. Alternative Positive Response Rates by Race or Ethnicity

	Positive	Negative	Total
White	68.6% (343)	31.4% (157)	500
African American	67.8% (183)	32.2% (87)	270
Hispanic	62.6% (144)	37.4% (86)	230
Total	67.0% (670)	33.0% (330)	1,000
Tests of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.815	…	…
Hispanic	0.111	0.227	…

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. P-values come from a t-test (two-sided).

Table A4. Alternative Positive Response by Race or Ethnicity, for Cisgender and Transgender or Non-Binary Patients Separately

Response rates for cisgender only:	Positive	Negative	Total
White	72.7% (189)	27.3% (71)	260
African American	72.9% (102)	27.1% (38)	140
Hispanic	63.8% (51)	36.2% (29)	80
Total	67.0% (670)	33.0% (330)	480

Test of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.972	…	…
Hispanic	0.126	0.159	…

Response rates for transgender or non-binary only:	Positive	Negative	Total
White	64.2% (154)	35.8% (86)	240
African American	62.3% (81)	37.7% (49)	130
Hispanic	62.0% (93)	38.0% (57)	150
Total			520

Test of independence, p-values	White	African American	Hispanic
White	…	…	…
African American	0.724	…	…
Hispanic	0.667	0.958	…

Transgender or non-binary vs. Cisgender - Tests of independence, p-values	Cisgender white	Cisgender African American	Cisgender Hispanic
Transgender or non-binary white	0.040	…	…
Transgender or non-binary African American	0.036	0.064	…
Transgender or non-binary Hispanic	0.024	…	0.795

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. P-values come from a t-test (two-sided).

Table A5: Differences in Alternative Positive Response Rates, Results for Aggregated Groups and by Mental Health Concern

	(1)	(2)	(3)	(4)	(5)
Transgender or non-binary	-.0764**	-.0656*	-.0378	-.0328	-.0178
	(.0370)	(.0357)	(.0386)	(.0406)	(.0428)
African American	-.0081	-.0107	-.0617*	-.0847**	-.0753**
	(.0408)	(.0404)	(.0363)	(.0366)	(.0374)
Hispanic	-.0467	-.0565	-.0851	-.1086*	-.1345**
	(.0477)	(.0459)	(.0543)	(.0577)	(.0623)
Depression	…	.0266	. 0695	.1679**	.1688**
		(.0382)	(.0487)	(.0620)	(.0636)
Anxiety	…	-.0585	.0123	. 0557	.0494
		(.0530)	(.0570)	(.0605)	(.0604)
State fixed effects:			X	X	X
Week-sent fixed effects:				X	X
Day-of-the-week-sent fixed effects:					X
N	1,000	1,000	1,000	1,000	1,000
Adjusted R^2	0.0091	0.0143	0.0777	0.0900	0.1070

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. Regression estimates are based on the linear probability model in equation (1). For comparison, the mean alternative positive response rate for the excluded group (cisgender whites with stress) is 72.7%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A6: Differences in Alternative Positive Response Rates, Results by Gender Identity

	(1)	(2)	(3)	(4)
Transgender or non-binary	-.0178	…	…	…
	(.0428)			
…Binary transgender	…	-.0140	…	…
		(.0450)		
…Transgender women	…	…	.0381	.0485
			(.0697)	(.0712)
…Transgender men	…	…	-.0797	-.0751
			(.0610)	(.0625)
…Non-binary	…	-.0267	-.0285	…
		(.0812)	(.0814)	
…Non-binary feminine first name	…	…	…	-.0594
				(.0982)
…Non-binary masculine first name	…	…	…	.0266
				(.1137)
Cisgender women	…	…	-.0157	-.0186
			(.0640)	(.0534)
African American	-.0753**	-.0758**	-.0608	-.0559
	(.0374)	(.0368)	(.0423)	(.0435)
Hispanic	-.1345**	-.1347**	-.1046*	-.1132**
	(.0623)	(.0626)	(.0565)	(.0568)
N	1,000	1,000	1,000	1,000
Adjusted R^2	0.1076	0.0944	0.0964	0.0969

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. All regressions include the controls in column (5) of Table 5: mental health concern (depression, anxiety, stress), state fixed effects, day of the week sent fixed effects, and week sent fixed effects. Column (1) repeats the results from column (5) in Table 5a for ease of interpretation. For comparison, the mean alternative positive response rate for the excluded group (cisgender men white) is 73.3%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A7: Differences in Alternative Positive Response Rates, Intersectional Results by Trans/Cisgender Status and Race/Ethnicity

	(1)	(2)
Transgender or Non-binary	-.0178	…
	(.0428)	
…and white	…	.0840
		(.0668)
…and African American	…	-.0983*
		(.0570)
…Hispanic	…	-.1500**
		(.0748)
Cisgender		
…and African American	…	.0401
		(.0706)
…Hispanic	…	.0007
		(.0781)
All African American	-.0753**	…
	(.0374)	
All Hispanic	-.1345**	…
	(.0623)	
N	1,000	1,000
Adjusted R^2	0.1076	0.0986

Notes: Our alternative positive response rate codes responses as positive if the MHP's response was an appointment offer, call or consultation offer, screening questions, or referral. All regressions include the controls in column (5) of Table 5a: mental health concern (depression, anxiety, stress), state fixed effects, day of the week sent fixed effects, and week sent fixed effects. Column (1) repeats the results from column (5) in Table 5 for ease of interpretation. For comparison, the mean alternative positive response rate for the excluded group (cisgender whites) is 72.7%. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Differences in Alternative Positive Response Rates, Intersectional Results by Gender Identity and Race/Ethnicity

	(1)
Transgender Women	
…and white	.1796**
	(.0802)
…and African American	-.0901
	(.1228)
…Hispanic	-.2362*
	(.1259)
Transgender Men	
…and white	.0806
	(.1267)
…and African American	-.0802
	(.0668)
…Hispanic	-.2360**
	(.1184)
Non-binary	
…and white	-.0203
	(.1031)
…and African American	-.3426**
	(.1324)
…Hispanic	-.1058
	(.1051)
Cisgender	
…and African American	.0551
	(.0788)
…Hispanic	.0414
	(.0803)
N	1,000
Adjusted R^2	0.1047

Notes: For comparison, the mean alternative positive response rate for the excluded group (cisgender whites) is 72.7%. See notes to Table A6. Standard errors, clustered at the patient level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix B: Ethical Considerations

Compared to laboratory experiments (where there is informed consent) and studies that use observational data, field experiments raise unique ethical concerns regarding deception and the time costs imposed on participants. This study requires random assignment and deception to obtain an unbiased estimate of discrimination devoid of any observational effects or social desirability bias (Grohs, Adams, and Knill 2016). However, per our Institutional Review Board-approved protocol,[26] we took several steps to reduce any study participants' risk.

The primary risk to the participants is the time cost imposed on them. However, responding to these inquiries is a normal part of their business activity. Reading and responding to an inquiry takes between one and four minutes. Thus, this cost is minimal. We do not book any appointments.

Furthermore, to ensure that we minimize risks to respondents' anonymity, we only collect information that is (1) essential to the study and (2) willingly placed online by study participants. We do not collect the full addresses of the MHPs, instead collecting ZIP codes of the MHPs.[27] Per IRB guidelines, no identifiable individual-level information will be released. Descriptive statistics will be aggregated at least to the ZIP code level.

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[26] This project was approved by Tulane University's Institutional Review Board (Ref # 2019-1122) and it was pre-registered at the American Economic Association's registry for randomized controlled trials (RCT ID: AEARCTR-0006560).

[27] In Table 9 we note that we will use General Social Survey data at the Census Tract level. To merge this data into our anonymized MHP data, while will provide ZIP codes only, we will use the ZIP code to Census Tract HUD-crosswalk. See https://www.huduser.gov/portal/datasets/usps_crosswalk.html (accessed November.18, 2020).