

**Pre-Analysis Plan For: Gender Identity, Race, Ethnicity, and Health Insurance Discrimination  
in Access to Mental Health Care: Evidence from an Audit Correspondence Field Experiment**

Patrick Button  
Associate Professor,  
Department of Economics,  
Executive Director,  
Connolly Alexander Institute for Data  
Science,  
Tulane University,  
and NBER  
[pbutton@tulane.edu](mailto:pbutton@tulane.edu)  
(Corresponding Author)

Barbara Lundebjerg  
Ph.D. Candidate,  
Department of Economics,  
Tulane University

Ben Harrell  
Assistant Professor,  
Department of Economics,  
Trinity University

Luca Fumarco  
Assistant Professor  
Masaryk University,  
IZA, and CERGE EI Teaching Fellow

Yu Liu  
Ph.D. Candidate,  
Department of Economics,  
Tulane University

January 18, 2026

**Abstract**

We use a correspondence experiment to test if mental health providers (MHPs) (those who do talk therapy, such as therapists and psychologists) discriminate against prospective clients based on gender identity, gender, race, ethnicity, and health insurance or payment type. We send emails requesting appointments to MHPs in the United States. The emails come from fictitious prospective clients who have on-average identical emails, but signal a different gender identity, gender, race, ethnicity, and health insurance status or payment method. We test for differential treatment by MHPs by comparing response quality and response rates. We will then test for statistical discrimination and other explanatory factors by determining how discrimination varies by factors such as local demographics and social attitudes, pro- or anti-trans laws, and MHP characteristics.

JEL Codes: I14, I11, I18, J16, J15, C93.

\*We are thankful for support from the Murphy Institute, the School of Liberal Arts, and the Newcomb Institute at Tulane University. This project was previously supported by an NSF CAREER grant to Patrick Button (#2046642), which was terminated for political reasons in April 2025. We are grateful for emergency grant support from the Alfred P. Sloan Foundation and the Social Science Research Council. The views expressed are our own and not those of any funders. Luca Fumarco acknowledges support from the NPO Systemic Risk Institute (LX22NPO5101). This study was approved by the Tulane University IRB (2019-1122-TU Uptown). This experiment was preregistered at the American Economic Association's registry for randomized controlled trials, with this pre-analysis plan uploaded at the time of registration.

## Experimental Design

### Pre-Registration

The PAP's goal is to pre-specify any decisions, such as how outcome variables are coded and how sample sizes are determined to prevent data mining or p-hacking. A downside of pre-analysis plans are that they restrict the ability for researchers to conduct policy-relevant research, such as doing analysis not originally thought of, or adopting better methodologies or approaches that are learned about later (Olken 2015; Lahey and Beasley 2018; Banerjee et al. 2020). To achieve the benefits of the PAP while avoiding these costs, we followed the best practices for PAPs, as detailed in Banerjee et al. (2020). Specifically, we published a pre-analysis plan on the AEA Registry and will publish a "populated pre-analysis plan" (P-PAP) on there as well.

Our P-PAP, recommended by Banerjee et al. (2020), completes ("populates") our PAP with our results for any of the analysis we specified that we will do, following the methodology and approach we specify in the PAP. The P-PAP is intentionally separate from the main paper. Best practices stress that it is normal, necessary, and often desirable, to deviate from the PAP (Olken 2015; Banerjee et al. 2020). In general, these deviations may occur, for example, if researchers learn about a better approach than what was pre-specified in the PAP, such as a sounder methodology or that the original methodology was not feasible. We summarize our deviations (which are minor) briefly in the main paper, referring the reader to the P-PAP and our online appendix for more information.

### Sample of Mental Health Providers (MHPs)

#### *MHP Inclusion and Exclusion Criteria*

We use a popular online therapist search database to collect our sample of auditable mental health care providers. Almost all providers listed on the database have a mental health practice license (e.g., LMFT, LC) or have clear designation that they are licensure-track, i.e., a student

**Commented [PB1]:** Barb, I revised this paragraph so it matches what we have on the AEA RCT registry thus far. If I recall, we don't have "licensed" as an inclusion criteria since everyone on the platform is licensed or is licensure-track. I decided to add explicit mention of this before we explain the inclusion/exclusion criteria. Please add tracked changes/comments if anything seems incorrect, thanks!

**Commented [BL2R1]:** So after some googling, this isn't necessarily always the case. Also, as mentioned, we didn't necessarily screen based on whether the MHP had a license or not... So I updated the wording to "Almost all"

getting their contact hours under the supervision of a licensed provider. In order to be included in our sample, an MHP:

- (1) must not specialize exclusively on specific types of clients who are outside of the scope of our 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 or depression,
- (3) must list an individual's profile (e.g., it cannot be the profile of a clinic) and the profile must not indicate that they are managed by a third party mental health conglomerate (e.g., Rula, Grow Therapy),
- (4) must provide an email option through a web form,
- (5) must be accepting clients (i.e., we do not contact MHPs that indicate that they are not currently accepting clients).
- (6) must clearly show on their profile that they are not managed by a third party or a large mental health conglomerate like Rula, Grow Therapy, etc.

If a mental health care provider meets the inclusion criteria for this experiment, we put them into one of two samples, either the webform sample or the direct email sample. If they provide an email address, or we can find one from their provided, public, website, then we put the MHP into the “direct email” sample, where we will directly email these MHPs instead of sending them a direct message through the platform. If the MHP does not have an email that we can find, then they are included in our sample and we send them a message on the platform.

#### ***Nationally Representative Sample and Weighting***

While our process to collect MHPs, discussed later, focuses on collecting MHPs proportionally to the distribution of the national population, our sample is unlikely to be exactly

population representative. The implication of this is that our estimates may differ slightly from population-representative estimates if there are heterogeneous effects by region. See Neumark, Burn, Button, and Chehras (2019) for a detailed discussion of this issue in a different audit field experiment. Following Neumark et al. (2019), we estimate our main results both with and without weighting the data by MSA population.<sup>1</sup> Unlike in Neumark et al. (2019), our over- and under-sampling and heterogeneous treatment effects are both likely much less severe, so we do not expect any major differences between our weighted and unweighted estimates.

In addition to weighting the data by the overall population in each MSA, we will also repeat our main analysis of discrimination based on race (ethnicity) by weighting our estimates by the proportion of the Black (Hispanic) population by MSA instead. This will generate population-representative estimates of discrimination against Black (Hispanic) populations based on where they are more likely to live. Compared to weighting by the general population, this approach increases (decreases) weight on our Black (Hispanic) prospective clients who live in areas with proportionally more (fewer) Black people, such as in Louisiana and Alabama versus Iowa and New Hampshire (California and Texas versus Ohio and Montana). We are not aware of any audit field experiments that have done this, so we believe this is a unique contribution.

### ***Sample Size and Power Analysis***

We estimated the sample size we needed to detect meaningful differences in response rates by using response data from our pilot study of 1,000 MHPs (Fumarco et al., 2024). Our power analysis calculations incorporate our two samples:

- 1) Webform sample: one message per MHP, sent on the “Find a Therapist” platform; and

---

<sup>1</sup> To weight by MSA, we will match the MHPs by ZIP code to each MSA and then use MSA population estimates as weights.

- 2) Direct email sample: two emails per MHP, sent at least a month apart, to MHPs with an email address.

Since multiple messages to the same MHP are not independent observations, the power provided by the direct email sample needs to be adjusted by the intra-correlation between clusters (ICC), which captures to what extent messages to the same MHP are statistically independent. By adjusting the direct email sample by a typical value of the ICC (0.2, see Lahey and Beasley, 2018), we estimate that one email message from the direct email sample is equivalent to 0.83 messages in the webform sample. Therefore, our total sample size of messages, once ICC is accounted for, is given by the number of messages in the webform sample plus 0.83 times the number of emails sent in the direct email sample.

We estimated that we needed a sample of 7,916 “independent”<sup>2</sup> messages or sufficient power to detect differences in positive response rates of at least four percentage points between cisgender and TNB prospective clients, each 50% of the sample.<sup>3</sup> <sup>4</sup> For White versus Black or White versus Hispanic, we need 11,496 messages, given that the sample is 40% White, 30% Black, and 30% Hispanic. For Medicaid (23%) versus private insurance (23%), this is 17,209 messages, although we expect the difference in positive response rates between Medicaid and private insurance to be much larger than four percentage points. For example, to detect at least a six percentage point difference, the required sample size would be 7,740 messages.

Commented [BL3]: Does this number need revising since we are adding in a third option of Black/Hispanic?

Commented [BPJ4R3]: Thanks, updated.

---

<sup>2</sup> By “independent” we mean that the messages correct for ICC, so we multiply messages in the direct email sample by 0.83.

<sup>3</sup> We calculated this using G\*Power (Faul et al., 2007) as follows. First, we use the positive response rate for the main non-minority group, cisgender Whites, which was 61.5%. We then determined the number of (independent) observations of TNB and cisgender prospective clients that would be required to detect a four-percentage point difference (61.5% versus 57.5%) using a two-tailed Fisher’s exact test, with Type 1 error rate ( $\alpha$ ) of 0.05 and power ( $1-\beta$ ) of 0.95. This was 3,958 for each group. This number underestimates our statistical power since our primary methodology will be to use regression analysis, which allows us to control for other factors to increase precision.

<sup>4</sup> Calculating power based on percentage point differences is typical for audit field experiments where the primary outcome variable is binary. A four percentage point difference ends up being a Cohen’s D value of 0.0815, meaning that we are able to detect quite small effect sizes.

### ***MHP Profile Data***

We collected information about each MHP from their publicly posted profile. We use this data for two purposes: (1) to test to what extent our estimates are robust to the inclusion of various MHP characteristic control variables, which we fully expect given the randomization, and (2) investigate which types of MHPs discriminate, and in which ways, such as testing how discrimination varies with MHP training, background, and specializations.

### **Constructing Prospective Clients**

To briefly summarize our overall approach of constructing prospective clients and their appointment inquiries, each MHP receives either one (webform sample) or two (direct email sample) appointment request emails. For the direct email sample, where MHPs receive two emails, we space out those emails by at least one month apart. In all these appointment request emails, our prospective clients introduce themselves briefly, mention that they are seeking care for anxiety or depression (randomly assigned), and ask if an appointment is available. Half of the time, the prospective client is transgender or nonbinary (either a trans woman, trans man, or non-binary), which we disclose in one of two ways, and the other half of the time, the prospective client is (presumed) cisgender (women and men, signaled through names). For our direct email sample, where we send two emails per MHP, one email is transgender or nonbinary and the other is presumed cisgender, randomly assigned. Independently, we randomized the race and ethnicity of the prospective client with probability 40% for White, 30% for Black, and 30% for Hispanic. For the direct email sample, we randomized race and ethnicity without replacement, so that race or ethnicity does not repeat within the pair.<sup>5</sup> We also randomized proposed payment method (private insurance, Medicaid, and out of pocket). Figure 1 presents the general structure of our appointment

---

<sup>5</sup> The probabilities for each pair are: (White, Black – 20%), (Black, White, 20%), (White, Hispanic, 20%), (Hispanic, White – 20%), (Black, Hispanic – 10%), (Hispanic, Black – 10%).

inquiry emails, Figure 2 summarizes the randomized options that we assign to each email, including randomized differences in phrasing, Figure 3 provides example emails, and Table 1 summarizes how we randomize our options and pair two prospective clients together to email the same MHP one month apart (email sample only).

### ***Mental Health Concerns***

We randomly assign our prospective clients to disclose having either 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 or race specific. We focus this study on quantifying access to mental health care for common mental health conditions rather than quantifying access to trans-specific or race-specific care, a separate research question requiring a different research design.<sup>6</sup>

We disclose the mental health concern by first using language like “*I’ve been feeling [anxious/depressed] lately.*” We include this statement (with varied phrasing) in all emails. In most prospective client request emails we also add two additional sentences to describe their mental health concern. For example, “Recently, I have been having racing thoughts and worrying more than usual.”. See Figure 2 for other examples and phrasing of our mental health concern signals. Half of the time, the description of the mental health detail will just name some general symptoms of anxiety or depression, like above, , while the other half of the time will include more of a reason “why” someone is reaching out. In this version, the example signal from above would instead be something like “Recently, work has been incredibly stressful, and I have noticed that I have been having racing thoughts and worrying more than usual. Including the work stress as a signal for

---

<sup>6</sup> While many LGBTQ+ clients would be more likely to search for an MHP that is familiar with LGBTQ+ issues, these LGBTQ+-specialist MHPs are undersupplied in many areas, which makes quantifying discrimination in access to general mental health care important.

“why” someone is reaching out now will help to further solidify that the mental health concern is not TNB specific. Our two reasons that we include for the “why” are: work stress or a recent move. Both are fairly common stressors of mental illness, and will be applied 50% of the time regardless of TNB status. Using this phrasing for both TNB and cis-gender individuals will help us determine if TNB individuals without the additional “why” reason receive lower responses due to the assumption from the MHP that the mental health concern is indeed trans-specific.

### ***Signaling Transgender or Non-Binary Status***

Each MHP will receive one inquiry from a TNB prospective client who is either a transgender woman, a transgender man, or non-binary, all with equal probability. The other inquiry is from a prospective client who is presumed to be cisgender, since there is no disclosure of gender identity. Transgender and cisgender women (men) receive female-coded (male-coded) first names, shown in Table 2. We assign non-binary prospective clients either female- or male-coded names with equal probability.<sup>7</sup>

We signal TNB status in three ways, with equality probability for each. Our first approach (TNB Signal 1) follows Fumarco et al. (2023) and add the following sentence to the appointment request email: *“I am [a transgender woman]/[a transgender man]/[non-binary], and while I am not looking for a therapist that specializes in trans issues, I am looking for a therapist who is [trans-friendly]/[a trans ally].”*<sup>8</sup> Our second approach (TNB Signal 2) discloses TNB status

---

<sup>7</sup> 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, given how personal the decision is and how varied non-binary identities are. Also, including another set of names would have added another difference between our non-binary prospective clients and our transgender and cisgender prospective clients, which may have made it more difficult to compare results.

<sup>8</sup> In Fumarco et al. (2023), we just used “trans-friendly” and this time we also sometimes use “trans ally” instead (25% of the time). We do this for two reasons. First, this ensures our results are more generalizable, since the phrasing people would typically use would vary. Second, we want to test the robustness of our results to using slightly different phrasing, since “friendly” and “ally” could have slightly different connotations or expectations.

briefly in a paragraph (see Figure 1) that provides the client’s background and mental health concern, for example “*Here's a bit more about me. I am a 36 year old transgender man. Lately, I've been having racing thoughts and worrying more than usual.*” Importantly, this approach for signaling TNB status does not include any mention of searching for an MHP who is trans-friendly or a trans ally. The third approach is including both TNB Signal 1 and TNB Signal 2 in the same email, so both the direct statement and the “friendly” or “ally” statement. Cisgender prospective clients do not include any statement about gender identity and are presumed to be cisgender. They have appointment request emails that are otherwise on-average identical.

We chose to signal TNB status three different ways for two reasons. First, this makes the results more generalizable as the way that LGBTQ+ status would be disclosed in requests like these would vary in practice, so we capture a wider range of phrasings. Second, this approach allows us to test the robustness of our results to different signals - each of which has pros and cons – an issue that is not unique to this audit study.<sup>9</sup> For example, disclosing LGBTQ+ status in the context of asking if a provider is LGBTQ+-friendly has two benefits. First, it is quite common and is recommended practice.<sup>10</sup> Second, it has the benefit that the disclosure is not seen as unusual as it is justified by the “trans friendly” inquiry. This improves upon most of the prior audit studies of discrimination against minoritized groups, such as LGBTQ+ or disabled people, where minoritized status is not always visible. However, the specific “trans-friendly” request could elicit a more

---

<sup>9</sup> There are pros and cons to any signal for any minoritized group. Even in cases where the signal might be seen as more “natural”, such as using names to signal race or ethnicity, there are still concerns. There is, for example, a vibrant debate over to what extent names, especially African American specific first names, could signal socio-economic status in addition to race (Barlow and Lahey 2018; Darolia et al. 2016; Fryer and Levitt 2004; Gaddis 2017a; 2017b; Ghoshal 2019). Even using photos to signal race, ethnicity, gender, etc., can have problems, where it is difficult to make the photos on-average identical and avoid signaling characteristics other than just the intended characteristics. In the context of minoritized groups where disclosure can often be voluntary, like for some disabilities and some LGBTQ+ people, there is much discussion of if the signals would normally be included and if signals have any unintended consequences, such as signaling some additional characteristics.

<sup>10</sup> See, e.g., <https://www.folxhealth.com/library/how-to-find-a-queer-friendly-health-care-provider> (accessed January 18, 2026).

positive response from the provider, such as providers being more likely to respond to these emails due to social desirability bias. We discuss these issues in detail in Appendix B

### ***Signaling Race and Ethnicity***

Our study includes Black, Hispanic, and (non-Hispanic) White prospective clients. Our primary method of signaling race and ethnicity is through names. Signaling race and ethnicity through names is common in audit field experiments, although it has faced critiques for decades that first names, especially African American first names, could signal socio-economic status in addition to race (see, e.g., Darolia et al. 2016; Fryer and Levitt 2004; Ghoshal 2019; Gaddis 2022). To address this, we improve upon most prior studies by using names from Gaddis (2022) that have been validated to signal race and ethnicity, and that also minimize signals of socio-economic status. Appendix 1 presents our names and additional details on how we select names from Gaddis (2022) such that the names are validated to signal race, ethnicity, and gender, and are unlikely to also signal socio-economic status.

We also avoid the concerns of using names to signal race by sometimes using an alternative method: direct disclosure of race or ethnicity in a larger narrative paragraph (see Figure 1) that provides more details on the client’s background and mental health concern, for example: *“Here’s a bit more about me. I am a 40 year old Black woman. Lately, I’ve been having racing thoughts and worrying more than usual.”* This signal has the benefit of avoiding names, which could potentially signal socio-economic status. Names also only quantify discrimination against a smaller subset of the Black population – those with names that are commonly perceived as Black. While the names we choose have good saliency – those with these Black or Hispanic names are reasonably likely to be identified as Black or Hispanic – this saliency is not perfect, which can attenuate estimates. On the other hand, voluntarily disclosing race or ethnicity may be less common, even in a larger “about me”, compared to transgender status. However, disclosing these

personal details is often recommended practice in seeking affirming talk therapy, given the importance of the client-provider relationship.<sup>11</sup> We discuss this in greater detail in Appendix B.

We randomize our signal or race and ethnicity between using name only, using disclosure only (names do not signal race),<sup>12</sup> or both names and disclosure, with equal probability.<sup>13</sup> This allows us to test the robustness of our signals and to separate the “race or ethnicity” part of the signal from other unintended aspects of the signals (e.g., socio-economic status). More specifically, by randomizing between names only and disclosure only, we can determine if our estimates are sensitive to the method of signaling. By comparing disclosure only to names and disclosure, we can determine how adding names, conditional on signaling race and ethnicity already through disclosure, affects estimates. If names do signal socio-economic status and/or names signal membership in a smaller sub-group of the larger Black population, which may face discrimination differently, then this comparison can pick this up. By comparing names only to names and disclosure, we can determine how adding disclosure, conditional on signaling race and ethnicity already through names, affects estimates. This allows us to test if the disclosure itself leads to differential treatment, independently of it signaling race or ethnicity.

---

<sup>11</sup> Medical research by Voutilainen et. al. (2018) and Allen et. al. (2017) describe the power of the relationship between the MHP and the client in the success of therapy, advising clients who hold any marginalized identity to focus their search on MHPs that are well-versed and/or affirming in their identities. Furthermore, non-academic sources have similar advice. The Human Rights Campaign partnered with Mental Health America put together a packet of questions that are important to ask when looking for MHPs as someone who holds any marginalized identity, often centering the questions on asking about how the MHP approaches clients that share “my [insert racial/LGBTQ+ identity]”, directly encouraging both disclosure of race and gender/sexuality identities during the vetting process. See [https://assets2.hrc.org/files/assets/resources/BIPOC\\_Inclusive\\_Therapist\\_Questions\\_073020.pdf?\\_ga=2.117698831.765552520.1596142780-1787279304.1532711558](https://assets2.hrc.org/files/assets/resources/BIPOC_Inclusive_Therapist_Questions_073020.pdf?_ga=2.117698831.765552520.1596142780-1787279304.1532711558) (accessed July 30, 2022). See also resources for people in the Black community like the following article (<https://www.rewire.org/how-to-talk-to-your-therapist-about-racism/> accessed July 30, 2022) and blog post (<https://jajachen.com/2019/05/06/race-culture-matters/>, accessed July 30, 2022).

<sup>12</sup> When we do not use names to signal race or ethnicity, we use the “presumed White” names (e.g., Daniel, Amy) from Gaddis (2022). These are common names regardless of race or ethnicity, but do not signal membership in a minoritized race or ethnicity group.

<sup>13</sup> For White prospective clients, they always have the same names (see footnote above), but rather we occasionally add a disclosure, 11% of the time overall, and never in cases where the other email in the pair has a disclosure, so as to reduce detection risk.

### ***Pairing Two Prospective Client Emails Per MHP (for Direct Email Sample)***

In the direct email sample, we send each MHP one email from two prospective clients, in random order, about one month apart. Table 1 presents how we match prospective clients together, and which components of their emails are randomized without replacement (matched pairs, each prospective client has different components) versus randomized with replacement (independently randomized, so each prospective client could have the same or different components). We assign most characteristics as matched pairs for two reasons. First, and most importantly, disclosing more than one less common demographic or socio-economics status group (e.g., two trans people, two people requesting sliding scale) may appear unusual and could lead to detection issues, as outlined in Balfe et al. (2022). Second, it maximizes within-MHP variation, adding additional variation to identify discrimination based on these factors.

### **Coding Mental Health Provider Responses and Outcome Variables**

#### ***Primary Outcome Variable***

We coded each (non-automated) MHP response into several outcome categories: appointment offered, call or consultation offer, referral (positive), referral (negative),<sup>14</sup> <sup>15</sup> screening question(s), waitlist (positive), waitlist (negative), rejection, and no response. These nine

---

<sup>14</sup> Referrals could also be a way that discrimination occurs, as a referral could be a nicer or more helpful way of rejecting the prospective client. However, a referral could be a positive response if it is to an MHP that would be a better match. For example, an MHP who is not a trans specialist may suggest a trans specialist if they feel the prospective client has trans-specific concerns. While the phrasing of our appointment request emails seeks to minimize the likelihood that an MHP expects TNB prospective clients to have trans-specific concerns, this is still a possibility. So, our alternative binary codings help account for this.

<sup>15</sup> We divide referrals into two categories: “positive” and “negative”. We deem referrals to be positive if the referral is to an MHP that either: (1) specializes in transgender issues (for TNB prospective clients) or (2) race/ethnicity issues (for Black or Hispanic) clients. We determine this specialization from it being listed in the profile as either a specialization or an issue, if they specifically mention it in their profile narrative paragraphs, or if the referring MHP mentions this specialty.

categories<sup>16</sup> capture the variation in the quality of response. Appendix C provides full details on how we carefully assign MHP responses into these categories.

### ***Coding the “Positive Response” Primary Outcome Variable***

To improve power and increase our results' interpretability, we take the standard approach of collapsing these categories into a binary variable, called “positive response.” Our default measure of positive response is a more nuanced version of Kugelmass (2019) and Fumarco et al. (2023), where a response is positive if it includes an appointment, call, or consultation offer, or a positive referral. Since many response categories are more ambiguous, we also several different alternative codings, which range from very broadly coding categories as “positive” to doing so very narrowly. Appendix C provides additional details.

### ***Secondary Outcome Variables***

Our secondary outcome variables will include:

1. "Follow up" - Did the MHP send a follow-up reply (Y/N)? (No original response coded as N.)
2. Length of response (number of words). (Non-response coded as 0 words)

In addition, we will analyze how time to response varies by re-estimating the default primary outcome variable but using cut-offs of 3 days, 6 days, 9 days, 12 days, 15 days, 18 days, 21 days (default), 23 days, 26 days, 29 days. From this, we can see if there is a pattern whereby certain prospective clients receive responses sooner. This approach avoids bias from estimating results just off of the sub-sample that received responses, which violates randomization.

---

<sup>16</sup> 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, we code a referral and a consultation offer as a consultation offer, and a rejection and a referral as a referral.

We will analyze all these secondary outcomes for our main estimates, only. That is, we do not plan to use these for analysis such as testing factors that might affect discrimination (e.g., therapist characteristics).

Another type of secondary analysis we will do is identify patterns in MHP referrals in general, and if this differs by prospective client characteristics. Appendix C provides additional details, including detailed coding of how we code for various characteristics of positive and negative referrals, beyond just those used to classify referrals as positive or negative for the purposes of coding the primary outcome variable (and its alternatives).

## References

- Ai, Chunrong, and Edward C Norton. 2003. "Interaction Terms in Logit and Probit Models." *Economics Letters* 80 (1): 123–29. [https://doi.org/10.1016/S0165-1765\(03\)00032-6](https://doi.org/10.1016/S0165-1765(03)00032-6).
- Allen ML, Cook BL, Carson N, Interian A, La Roche M, Alegria M. 2017. "Client-Provider Therapeutic Alliance Contributes to Client Activation in Community Mental Health Clinics." *Administrative Policy and Mental Health* 44(4):431-440. <https://doi.org/10.1007/s10488-015-0655-8>.
- Allport, Gordon W. 1954. *The Nature of Prejudice*. *The Nature of Prejudice*. <https://doi.org/10.1037/0708-5591.35.1.11>.
- Ameri, Mason, Lisa Schur, Meera Adya, F. Scott Bentley, Patrick McKay, and Douglas Kruse. 2018. "The Disability Employment Puzzle: A Field Experiment on Employer Hiring Behavior." *ILR Review* 71 (2): 329–64. <https://doi.org/10.1177/0019793917717474>.
- Baert, Stijn, Bart Cockx, Niels Gheyle, and Cora Vandamme. 2015. "Is There Less Discrimination in Occupations Where Recruitment Is Difficult?" *ILR Review* 68 (3): 467–500. <https://doi.org/10.1177/0019793915570873>
- Balfe, Cathy, Patrick Button, Mary Penn, and David Schwegman. 2023. "Infrequent Identity Signals and Detection Risks in Audit Correspondence Studies." *Field Methods* 35 (1): 3-17. <https://doi.org/10.1177%2F1525822X2111057623>.
- Banerjee, Abhijit Vinayak, Esther Duflo, Amy Finkelstein, Lawrence F Katz, Benjamin A Olken, and Anja Sautmann. 2020. "In Praise of Moderation: Suggestions for the Scope and Use of Pre-Analysis Plans for RCTs in Economics." NBER Working Paper 26993. <https://doi.org/10.3386/w26993>.
- Barlow, Rose M., and Joanna N. Lahey. 2018. "What Race Is Lacey? Intersecting Perceptions of Racial Minority Status and Social Class." *Social Science Quarterly* 99 (5): 1680–98. <https://doi.org/10.1111/ssqu.12529>.
- Benson, Kristen E. 2013. "Seeking Support: Transgender Client Experiences with Mental Health Services." *Journal of Feminist Family Therapy*, 25:1, 17-40, [10.1080/08952833.2013.755081](https://doi.org/10.1080/08952833.2013.755081).
- Blanchard, Janice, Shakti Nayar, and Nicole Lurie. 2007. "Client-Provider and Client-Staff Racial Concordance and Perceptions of Mistreatment in the Health Care Setting." *Journal of General Internal Medicine* 22 (8): 1184–89. <https://doi.org/10.1007/s11606-007-0210-8>.
- Burn, Ian, Patrick Button, Luis Munguia Corella, and David Neumark. 2022. "Does Ageist Language in Job Ads Predict Age Discrimination in Hiring?" *Journal of Labor Economics*, 40(3): 613-67. <https://doi.org/10.1086/717730>.
- Button, Patrick, and Brigham Walker. 2020. "Employment Discrimination Against Indigenous Peoples in the United States: Evidence from a Field Experiment." *Labour Economics*, 65(August):101851. <https://doi.org/10.1016/j.labeco.2020.101851>.
- Carlsson, Magnus, Luca Fumarco, and Dan-Olof Rooth. 2018. "Ethnic Discrimination in Hiring, Labour Market Tightness and the Business Cycle - Evidence from Field Experiments." *Applied Economics* 50 (24): 2652–63. <https://doi.org/10.1080/00036846.2017.1406653>.
- Casey, Katherine, Rachel Glennerster, and Edward Miguel. 2012. "Reshaping Institutions: Evidence on Aid Impacts Using a Preanalysis Plan." *Quarterly Journal of Economics* 127: 1755-812. <https://doi.org/10.1093/qje/qje027>.
- Charles, Kerwin Kofi, and Jonathan Guryan. 2008. "Prejudice and Wages : An Empirical Assessment of Becker's The Economics of Discrimination." *Journal of Political Economy* 116 (5): 773–809

- Cooper, Lisa A., Debra L. Roter, Rachel L. Johnson, Daniel E. Ford, Donald M. Steinwachs, and Neil R. Powe. 2003. "Client-Centered Communication, Ratings of Care, and Concordance of Client and Physician Race." *Annals of Internal Medicine* 139 (11): 907–15. <https://doi.org/139/11/907>.<https://doi.org/10.1007/s11606-007-0210-8>
- Dahl, Gordon B., and Matthew M. Knepper. 2020. "Age Discrimination Across the Business Cycle." NBER Working Paper 27581.
- Darolia, Rajeev, Cory Koedel, Paco Martorell, Katie Wilson, and Francisco Perez-Arce. 2016. "Race and Gender Effects on Employer Interest in Job Applicants: New Evidence from a Resume Field Experiment." *Applied Economics Letters* 23 (12): 853–56. <https://doi.org/10.1080/13504851.2015.1114571>.
- Faul, Franz, Edgar Erdfelder, Albert-Georg Lang, and Axel Buchner. 2007. "G\*Power 3: A Flexible Statistical Power Analysis Program for the Social, Behavioral, and Biomedical Sciences." *Behavior Research Methods* 39 (2): 175–91. <https://doi.org/10.3758/BF03193146>.
- Fryer, Roland G. Jr., and Steven D. Levitt. 2004. "The Causes and Consequences of Distinctively Black Names." *Quarterly Journal of Economics* 119 (3): 767–805. <https://doi.org/10.1093/qje/qjt005>.[Advance](https://doi.org/10.1093/qje/qjt005).
- Fumarco, Luca, Benjamin J. Harrell, Patrick Button, David J. Schwegman, and E Dils. 2024. "Gender Identity-, Race-, and Ethnicity-Based Discrimination in Access to Mental Health Care: Evidence from an Audit Correspondence Field Experiment." *American Journal of Health Economics* 10(2): 182–214. <https://doi.org/10.1086/728931>.
- Gaddis, S. Michael. 2015. "Discrimination in the Credential Society: An Audit Study of Race and College Selectivity in the Labor Market." *Social Forces* 93 (4): 1451–59. <https://doi.org/10.1093/sf/sou111>.
- . 2017a. "How Black Are Lakisha and Jamal? Racial Perceptions from Names Used in Correspondence Audit Studies." *Sociological Science* 4: 469–89. <https://doi.org/10.15195/v4.a19>.
- . 2017b. "Racial/Ethnic Perceptions from Hispanic Names: Selecting Names to Test for Discrimination." *Socius* 3: 1–11. <https://doi.org/10.2139/ssrn.2975829>.
- . 2018. "An Introduction to Audit Studies in the Social Sciences." In *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, edited by S. Michael Gaddis. New York: Springer.
- . 2019. "Assessing Immigrant Generational Status from Names: Evidence for Experiments Examining Racial/Ethnic and Immigrant Discrimination." Working paper.
- . 2022. "Signaling Class: Two Survey Experiments Examining Social Class Perceptions from Names Used in Racial Bias Experiments." Working paper.
- Ghoshal, Raj. 2019. "Flawed Measurement of Hiring Discrimination against African Americans." *Sociation* 18 (2): 36–46. [https://sociation.ncsociologyassoc.org/wp-content/uploads/2019/12/hiringdiscrimination\\_final.pdf](https://sociation.ncsociologyassoc.org/wp-content/uploads/2019/12/hiringdiscrimination_final.pdf).
- Gentzkow, Matthew, Bryan Kelly, and Matt Taddy. 2019. "Text as Data." *Journal of Economic Literature*, 57 (3): 535–74. <https://doi.org/10.3386/w23276>.
- Giulietti, Corrado, Mirco Tonin, and Michael Vlassopoulos. 2019. "Racial Discrimination in Local Public Services: A Field Experiment in the US." *Journal of the European Economic Association* 17 (1): 165–204. <https://doi.org/10.1093/jeea/jvx045>.

- Gonsalkorale, Karen, Jeffrey W. Sherman, and Karl Christoph Klauer. 2009. "Aging and Prejudice: Diminished Regulation of Automatic Race Bias among Older Adults." *Journal of Experimental Social Psychology* 45 (2): 410–14. <https://doi.org/10.1016/j.jesp.2008.11.004>.
- Hanson, Andrew, and Zackary Hawley. 2011. "Do Landlords Discriminate in the Rental Housing Market? Evidence from an Internet Field Experiment in US Cities." *Journal of Urban Economics* 70: 99–114. <https://doi.org/10.1016/j.jue.2011.02.003>.
- Hanson, Andrew, Zackary Hawley, Hal Martin, and Bo Liu. 2016. "Discrimination in Mortgage Lending: Evidence from a Correspondence Experiment." *Journal of Urban Economics* 92: 48–65. <https://doi.org/10.1016/j.jue.2015.12.004>.
- Horton, John J., and Prasanna Tambe. 2015. "Labor Economists Get Their Microscope: Big Data and Labor Market Analysis." *Big Data* 3 (3): 130–37. <https://doi.org/10.1089/big.2015.0017>.
- James, Sandy E., Jody L. Herman, Susan Rankin, Mara Keisling, Lisa Mottet, and Ma'ayan Anafi. 2016. "The Report of the U.S. Transgender Survey." Washington, DC: National Center for Transgender Equality. <http://www.ustranssurvey.org/reports>.
- Kassel, Gabrielle. 2018. "How to Find a Legit LGBTQ+ Therapist Who Will Actually Support Your Needs." WELL+GOOD, November 8, 2018, accessed October 25, 2020, <https://www.wellandgood.com/lgbt-therapist/>.
- Kroft, Kory, Matthew J Notowidigdo, and Fabian Lange. 2013. "Duration Dependence and Labor Market Conditions: Evidence from a Field Experiment." *Quarterly Journal of Economics* 128 (3): 1123–67. <https://doi.org/10.1093/qje/qjt015>.
- Kugelmass, Heather. 2019. "'Just the Type with Whom I Like to Work': Two Correspondence Field Experiments in an Online Mental Health Care Market." *Society and Mental Health* 9 (3): 350–65. <https://doi.org/10.1177/2156869318755213>.
- Lahey, Joanna N., and Ryan Beasley. 2018. "Technical Aspects of Correspondence Studies." In *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, edited by S. Michael Gaddis, 81–101. New York: Springer.
- LaVeist, Thomas A., Nicole C. Rolley, and Chamberlain Diala. 2003. "Prevalence and Patterns of Discrimination among U.S. Health Care Consumers." *International Journal of Health Services* 33 (2): 331–44. <https://doi.org/10.2190/TCAC-P90F-ATM5-B5U0>.
- Muralidharan, Karthik, Mauricio Romero, and Kaspar Wüthrich. 2019. "Factorial Designs, Model Selection, and (Incorrect) Inference in Randomized Experiments." NBER Working Paper 26562. <http://www.nber.org/papers/w26562>.
- Namingit, Sheryll, William Blankenau, and Benjamin Schwab. 2017. "Sick and Tell: A Field Experiment Analyzing the Effects of an Illness-Related Employment Gap on the Callback Rate." *Working Paper*.
- Neumark, David. 2001. "The Employment Effects of Minimum Wages: Evidence from a Prespecified Research Design." *Industrial Relations* 40 (1): 121–44. <https://doi.org/10.1111/0019-8676.00199>.
- Neumark, David, Ian Burn, and Patrick Button. 2019. "Is It Harder for Older Workers to Find Jobs? New and Improved Evidence from a Field Experiment." *Journal of Political Economy* 127 (2): 922–70. <https://doi.org/10.1086/701029>.
- Neumark, David, Ian Burn, Patrick Button, and Nanneh Chehras. 2019. "Do State Laws Protecting Older Workers from Discrimination Reduce Age Discrimination in Hiring? Evidence from a Field Experiment." *Journal of Law and Economics*, 62(2):373-402. <https://doi.org/10.1086/704008>.

- Nunley, John M., Adam Pugh, Nicholas Romero, and R. Alan Seals. 2016. "College Major, Internship Experience, and Employment Opportunities: Estimates from a Resume Audit." *Labour Economics* 38: 37–46. <https://doi.org/10.1016/j.labeco.2015.11.002>.
- Olken, Benjamin A. 2015. "Promises and Perils of Pre-Analysis Plans." *Journal of Economic Perspectives* 29 (3): 61–80. <https://doi.org/10.1257/jep.29.3.61>
- Parsons, Christopher A., Johan Sulaeman, Michael C. Yates, and Daniel S. Hamermesh. 2011. "Strike Three: Discrimination, Incentives, and Evaluation." *American Economic Review* 101 (4): 1410–35.
- Price, Joseph, and Justin Wolfers. 2010. "Racial Discrimination Among NBA Referees." *The Quarterly Journal of Economics* 125 (4): 1859–87. <https://doi.org/10.1162/qjec.2010.125.4.1859>.
- Pike, Nathan. 2011. "Using False Discovery Rates for Multiple Comparisons in Ecology and Evolution." *Methods in Ecology and Evolution* 2(3): 278–82. <https://doi.org/10.1111/j.2041-210X.2010.00061.x>.
- Saha, Samnath, Miriam Komaromy, Thomas D. Koepsell, and Andrew B. Bindman. 1999. "Client-Physician Racial Concordance and the Perceived Quality and Use of Health Care." *Archives of Internal Medicine* 159 (9): 997–1004. <https://doi.org/10.1001/archinte.159.9.997>.
- Schwegman, David. 2019. "Rental Market Discrimination Against Same-Sex Couples: Evidence From a Pairwise-Matched Email Correspondence Test." *Housing Policy Debate* 29 (2): 250–72. <https://doi.org/10.1080/10511482.2018.1512005>.
- Stewart, Brandon D., William von Hippel, and Gabriel A. Radvansky. 2009. "Age, Race, and Implicit Prejudice." *Psychological Science* 20 (2): 164–68. <https://doi.org/10.1111/j.1467-9280.2009.02274.x>.
- Tilcsik, András. 2011. "Pride and Prejudice: Employment Discrimination against Openly Gay Men in the United States." *American Journal of Sociology* 117 (2): 586–626. <https://doi.org/10.1086/661653>.
- Vuolo, Mike, Christopher Uggen, and Sarah Lageson. 2018. "To Match or Not to Match? Statistical and Substantial Consideration in Audit Design and Analysis." In *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, edited by S. Michael Gaddis, 119–142. New York: Springer. [https://doi.org/10.1007/978-3-319-71153-9\\_6](https://doi.org/10.1007/978-3-319-71153-9_6).
- Voutilainen L, Henttonen P, Kahri M, Ravaja N, Sams M, Peräkylä A. 2018. "Empathy, Challenge, and Psychophysiological Activation in Therapist-Client Interaction." *Frontiers in Psychology*. Apr 9, 2018:530. <https://doi.org/10.3389/fpsyg.2018.00530>.
- Wisniewski, Janna M., and Brigham Walker. 2019. "Association of Simulated Client Race/Ethnicity With Scheduling of Primary Care Appointments." *JAMA Network Open*, 3(1), pp. e19200010-e1920010. <https://doi.org/10.1001/jamanetworkopen.2019.20010>.
- Yeomans, Michael, Alejandro Kantor, and Dustin Tingley. 2018. "The Politeness Package: Detecting Politeness in Natural Language." *R Journal* 10 (2): 489–502. <https://doi.org/10.32614/RJ-2018-079>.

## Figures

**Figure 1: Structure of the Emails to MHPs**

<p>1) [EMAIL SUBJECT] (Hello),</p> <p>(My name is) 2) [NAME]. (I'm contacting you because) 3) [MENTAL HEALTH CONCERN] (and would like to talk to a therapist).</p>			
<p><i>If TNB Signal 2 and REG Signal 2, add:</i> (Here's more about me.) I am a [36/40] year old...</p> <p>4) [GENDER IDENTITY]</p> <p>5) [RACE, ETHNICITY, AND GENDER].</p> <p>6) [MENTAL HEALTH DETAIL].</p>	<p><i>If TNB Signal 2, add:</i> (Here's more about me.) I am a [36/40] year old...</p> <p>4) [GENDER IDENTITY]</p> <p>6) [MENTAL HEALTH DETAIL].</p>	<p><i>If REG Signal 2, add:</i> (Here's more about me.) I am a [36/40] year old...</p> <p>5) [RACE, ETHNICITY, AND GENDER].</p> <p>6) [MENTAL HEALTH DETAIL].</p>	<p><i>If neither, add:</i> <i>With 50% probability:</i></p> <p style="text-align: center;"><i>Add nothing here.</i></p> <p><i>With 50% probability:</i> (Here's more about me.) I am [36/40] years old.</p> <p>6) [MENTAL HEALTH DETAIL].</p>
<p><i>If TNB Signal 1 and TNB Signal 2, add:</i> (While I am not looking for a trans specialist,) I am looking for a therapist who is [trans-friendly/a trans ally].</p> <p><i>If Cisgender or no TNB Signal 1, no additional text</i></p>		<p><i>If TNB Signal 1 but not TNB Signal 2, add:</i> I am 4) [GENDER IDENTITY] (and, while I am not looking for a trans specialist,) I am looking for a therapist who is [trans-friendly/a trans ally].</p> <p><i>If Cisgender or no TNB Signal 1, no additional text</i></p>	
<p><i>If payment method disclosed (70% probability):</i> 7) [PAYMENT].</p> <p>8) [APPOINTMENT REQUEST].</p> <p>9) [VALEDICTION], 2) [NAME]</p>			

Notes: ( ): denotes motivating verbiage, not exact phrasing. Appendix A presents variations in phrasing that we use for these. [ ]: denotes a randomized input, shown in Figure 2. We use *italics* for explanatory notes. For examples of entire emails, in pairs, see Figure 3.

**Figure 2: Randomized Components of the Emails to MHPs**

<p>1) [EMAIL SUBJECT]</p> <ul style="list-style-type: none"> <li>Looking for a therapist</li> <li>Therapy inquiry</li> <li>Seeking therapy</li> </ul>	<p>2) [NAME]</p> <p>In all cases, we use first and last names. See Tables 2 and 3 for our names.</p>
<p>3) [MENTAL HEALTH CONCERN]†</p> <ul style="list-style-type: none"> <li>I've been feeling anxious lately</li> <li>I think I might be depressed</li> <li>I'm feeling sad all the time</li> </ul>	<p>4) [GENDER IDENTITY]</p> <ul style="list-style-type: none"> <li>I am a transgender man</li> <li>I am nonbinary</li> <li>I am a transgender woman</li> <li>Blank (presumed cisgender)</li> </ul>
<p>5) [RACE, ETHNICITY, AND GENDER]</p> <ul style="list-style-type: none"> <li>I am a Hispanic woman</li> <li>I am a Hispanic man</li> <li>I am a Hispanic [4] GENDER IDENTITY]</li> <li>I am a Black woman</li> <li>I am a Black man</li> <li>I am a Black [4] GENDER IDENTITY]</li> <li>I am a white woman</li> <li>I am a white man</li> <li>I am a white [4] GENDER IDENTITY]</li> </ul>	<p>6) [MENTAL HEALTH DETAIL]†</p> <p>50% of the time:</p> <ul style="list-style-type: none"> <li>Recently, I have been having racing thoughts and worrying more than usual.</li> <li>Recently, I have been losing interest in things that used to excite me and having a hard time getting out of bed.</li> </ul> <p>50% of the time include work stress or recent move phrasing:</p> <ul style="list-style-type: none"> <li>Work has been very stressful, and I have been having racing thoughts and worrying more than usual.</li> <li>I just moved to the area, and I have been losing interest in things that used to excite me and having a hard time getting out of bed.</li> </ul>
<p>7) [PAYMENT]</p> <ul style="list-style-type: none"> <li>I have insurance through (insurance name here)</li> <li>Do you accept (insurance name here)?</li> <li>Do you accept Medicaid?</li> <li>My health coverage is through Medicaid.</li> <li>I don't have insurance right now, so I will be paying out of pocket.</li> <li>I would need to pay out of pocket. Do you accept uninsured clients?</li> <li>I don't have insurance right now, so I will be paying out of pocket. If you offer a sliding scale, that would be great.</li> <li>I would need to pay out of pocket. Do you accept uninsured clients? Do you offer a sliding scale?</li> <li>BLANK (no mention of the insurance)</li> </ul>	<p>8) [APPOINTMENT REQUEST]†</p> <ul style="list-style-type: none"> <li>Do you have appointments?</li> <li>Can we set up an appointment?</li> </ul> <p>9) [VALEDICTION]†</p> <ul style="list-style-type: none"> <li>Sincerely,</li> <li>Thanks,</li> <li>Best,</li> <li>BLANK (no valediction)</li> </ul>

Note: † denotes that we add additional variation to the phrasing options, shown in Appendix A.

**Commented [BL5]:** I'm not too sure how to format these to look nice on the web version of Word, but they look nice and in-line on the desktop app. I'm not sure why those two would be different?

**Commented [BPJ6]:** While we want to vary the language of the mental health concern to avoid detection (namely by the Psychology Today spam filtering system), we should try to make the phrasing for the mental health concerns more uniform.

For example, I am worried that saying "all the time" signals that the stress condition is more severe compared to "lately".

Barb, can you look into all the phrasing we have now (Luca has that) and make it so that while there is variation, they are on average identical? E.g., make sure we don't use "all the time" only for stressed.

**Commented [BL7]:** Need to make new randomization options for our newly phrased TNB "thus TNB friendly therapist" phrasing

**Figure 3: Example Appointment Request Email Pairs**

**Example Pairing 1: TNB signal 1 only, REG signal 1 only**

**Client One's email:**

Subject: Therapy Needed

Hello,

My name is Mateo Gonzalez.

I'm contacting you because I think I might be depressed and would like to talk to someone. I am a transgender man and while I am not looking for a trans specialist, I am looking for a therapist who is trans-friendly. I have insurance through Capital BlueCross.

Can we set up an appointment?

Best,

Mateo Gonzalez

**Client Two's email:**

Subject: Therapy Needed

Good afternoon,

My name is Zachary Becker.

I'm contacting you because I think I may have anxiety and would like to talk to someone. Do you accept Capital BlueCross?

Do you have any appointments available?

Thanks,

Zachary Becker

**Example Pairing 2: TNB Signals 1 and 2, REG signals 1 and 2**

**Client One's email:**

Subject: Seeking Therapy

Hello,

My name is Emily Nielson.

I'm contacting you because I have been feeling anxious lately and would like to talk to someone. Here's more about me. I am a 36 year old transgender woman. Lately, I have been having racing thoughts and worrying more than usual. While I am not looking for a trans specialist, I am looking for a therapist who is a trans ally. Do you accept Medicaid?

Can we set up an appointment?

Thanks for your help,

Emily Nielson

**Client Two's email:**

Subject: Seeking Therapy

Hi,

My name is Valentina Orozco.

I'm contacting you because I have been feeling depressed lately and would like to talk to a professional Here's more about me. I am a 40 year old Hispanic woman. I have been losing interest in the things that used to excite me and having a hard time getting out of bed lately. I have insurance through Capital BlueCross.

When could I get an appointment?

Best,

Valentina Orozco

**Commented [BL8]:** I know that the pairs will have different insurance types - does this mean just different payment phrases (i.e. bullet 1 and 2 under [7] PAYMENT] in figure 2 are both for private insurance but are phrased differently), or completely different plans i.e. one patient has medicaid, one has private, etc.

**Commented [BPJ9R8]:** Per Table 1, we randomly select no mention, private, medicaid, out of pocket, and out of pocket without replacement. So, the two within the pair never have the same health insurance. So, neither the phrasing nor the actual payment method should be the same.

**Tables**

**Table 1: Assignment of Major Email Components Within Each Pair of Prospective Clients (Direct Email Sample)**

<b>Email component</b>	<b>Randomized w/ or w/o replacement?</b>	<b>Probabilities</b>
Transgender or nonbinary (TNB) status and Gender (via name)	Without replacement	One client (presumed) cisgender. Assigned male-coded first name (50%) (cis. men) or assigned female-coded first name (50%) (cis. women) The other is either a transgender woman (33%), a transgender man (33%), or non-binary (33%). For transgender women (men), we assign female-coded (male-coded) names. For non-binary, name is random (50% female-coded, 50% male-coded). We randomize equally between signaling TNB status with TNB Signal 1, TNB Signal 2, or both 1 and 2.
Race or Ethnicity	Without replacement	For pairs with one White client (80% of the time): For the White client, always use “White” name and additionally disclose race (REG Signal 2) 33% of the time only if the other client does not use REG Signal 2.  The other client is Black (50%) or Hispanic (50%). Randomize equally over REG Signal 1 only (name), REG Signal 2 only (disclosure), or both.  When there is no White client in the pair (20%): One client is Black, one is Hispanic. We still randomize equally over REG Signal 1 only, REG Signal 2 only, or both, except we do not allow both clients in the pair to have REG Signal 2.
Health insurance /payment type	Without replacement	Not disclosed (30%), private insurance (23%), Medicaid (23%), pay out-of-pocket (12%), pay-out-of-pocket with a request for sliding scale (12%).
Mental health concern	Without replacement	One client mentions anxiety. The other client mentions depression.

*Notes:* Randomized with (without) replacement means that the two prospective clients who email the same MHP can have (cannot have) the same characteristics. E.g., they can both have feminine names, but both can't be TNB, the same race/ethnicity, have the same payment type, or have the same mental health concern. We also randomize age without replacement (36, 40, no mention) and email subject line. All other factors are randomized with replacement.

**Commented [BL10]:** Is this correct? I recall we wanted to make sure that only one out of the pair of patients uses the direct disclosure statement in order to avoid detection... I am assuming this continues to be true for the Black/Hispanic pairing?

**Commented [BPJ11R10]:** Yes I believe you are correct.

**Commented [BL12]:** Should this say Depression instead of stress?

**Commented [BPJ13R12]:** Yes thank you!

**Table 2: First Names for Prospective Clients**

African American		Hispanic		White	
Female-Coded	Male-Coded	Female-Coded	Male-Coded	Female-Coded	Male-Coded
Aaliyah	Darnell	Alejandra	Alejandro	Amy	Brian
Aisha	DeAndre	Ariana	Antonio	Carrie	Daniel
Ashanti	Delroy	Camila	Armando	Deborah	Hunter
Divine	Jaleel	Daniela	Carlos	Erica	Jay
Heaven	Jamal	Florencia	Diego	Heidi	Luke
Keisha	Jermaine	Gabriela	Emilio	Joan	Robert
Kenya	Kareem	Juanita	Esteban	Katie	Scott
Keyana	Kevon	Lucia	Felipe	Lisa	Seth
Kimani	Lamar	Mariana	Fernando	Stephanie	Steven
Monique	Leroy	Martina	Ignacio	Susan	
Shania	Marques	Raquel	Javier		
Tamia	Marquise	Valeria	Jorge		
Taniya	Rasheed		Pablo		
Tionna	Terell		Pedro		
Tyra	Terrell		Rafael		
	Tyrone		Rodrigo		
			Santiago		
			Valentino		

Notes: These names come from Gaddis (2022), who collected these names, tied to mother's race and education level, from New York state birth records data for all births from 1994 to 2012. For each name, at least 50% of those with those names are born to mothers of that race. To better control for the socio-economic signal of first names, we first use only a subset of Gaddis' names that are not in the top or bottom quartile of mother's education level and we exclude the names that rank the highest (lower) in perceived SES. See Appendix A for additional details..

**Table 3: Last Names for Prospective Clients**

<b>African American</b>	<b>Hispanic</b>	<b>White</b>
Banks	Hernandez	Andersen
Booker	Gonzalez	Becker
Jackson	Orozco	Decker
Jefferson	Velazquez	Hartman
Mosley		Larsen
Washington		McGrath
		Meyer
		Nielsen
		Stein
		Walsh

Notes: These African American, Hispanic, and White names are from Gaddis (2022), who selected these names from U.S. Census Bureau data. For the African American, (Hispanic) [White] names, at least 50% of individuals with this last name are black (Hispanic) [White].

## Appendix A: Additional Details on the Experimental Design

### Additional Phrasing Options for Emails to MHPs

We add additional phrasing variation to our emails to MHPs to help avoid detection and to otherwise differentiate our emails more for the direct email sample, where MHPs get two emails, one month apart. For the webform sample, where RAs type and send these messages manually, each time RAs start to draft a message, they roll dice to pick two different phrases (A to H, below) to change. RAs then edit the phrasing for those two phrasing portions slightly.<sup>17</sup> For our direct email sample, our code randomly selects between email phrasings automatically.

#### A. Phrasing variations for: (Hello)

- Hi
- Hello
- Good morning
- Good afternoon
- Good evening
- Blank (no greeting)

#### B. Phrasing variations for: (My name is)

- I'm
- I am
- My name is

#### C. Phrasing variations for: (I'm contacting you because)

- I am reaching out to you because
- I am writing you because
- I am contacting you because
- I'm reaching out to you because
- I'm writing you because
- I'm contacting you because
- I decided I would contact you because
- I decided I would message you because
- I decided I would email you because
- I thought I would contact you because
- I thought I would message you because
- I thought I would email you because

#### D. Phrasing variations for: [3] [MENTAL HEALTH CONCERN]

---

<sup>17</sup> We intentionally had RAs manually do some randomization and type message content into webforms, rather than copy-pasting. This is because we noticed during testing that we started getting artificially lower response rates for RA work sessions. We determined that this was likely due to a “NoCaptcha”, where the system thought we were bots given how quickly the webforms were populated, since RAs at the time were copy-pasting. The system was simply not transmitting those messages, for most messages sent during certain RA work sessions. Once we switched to manually typing the email content into the webform, this issue was resolved.

**Commented [LF14]:** maybe this fits better inside a table? Same goes for the current Figure 2. Each box in these figures, would simply be a panel of a table. It would look just slightly different. But I do not know whether it would look better.

50% of the time, select one of the following:

- I have been feeling anxious lately
- I've been feeling anxious lately
- I am feeling anxious lately
- I'm feeling anxious lately
- I think I might be dealing with anxiety
- I think I might be suffering from anxiety
- I think I might be experiencing anxiety
- I think I might have anxiety
- I think I may have anxiety
- I think I may be dealing with anxiety
- I think I may be suffering from anxiety
- I think I may be experiencing anxiety
- I have been feeling sad lately
- I have been feeling depressed lately
- I've been feeling sad lately
- I've been feeling depressed lately
- I am feeling sad lately
- I am feeling depressed lately
- I'm feeling sad lately
- I'm feeling depressed lately
- I think I might have depression
- I think I may have depression
- I am feeling sad all the time
- I'm feeling sad all the time
- I think I might be dealing with depression
- I think I might be suffering from depression
- I think I might be experiencing depression
- I think I may be dealing with depression
- I think I may be suffering from depression
- I think I may be experiencing depression

50% of the time, select one of the following:

- Work has been very stressful, and I have been feeling anxious lately
- Work has been very stressful, and I've been feeling anxious lately
- Work has been very stressful, and I am feeling anxious lately
- Work has been very stressful, and I'm feeling anxious lately
- Work has been very stressful, and I think I might be dealing with anxiety
- Work has been very stressful, and I think I might be suffering from anxiety
- Work has been very stressful, and I think I might be experiencing anxiety
- Work has been very stressful, and I think I might have anxiety

- Work has been very stressful, and I think I may have anxiety
- Work has been very stressful, and I think I may be dealing with anxiety
- Work has been very stressful, and I think I may be suffering from anxiety
- Work has been very stressful, and I think I may be experiencing anxiety
- Work has been very stressful, and I have been feeling sad lately
- Work has been very stressful, and I have been feeling depressed lately
- Work has been very stressful, and I've been feeling sad lately
- Work has been very stressful, and I've been feeling depressed lately
- Work has been very stressful, and I am feeling sad lately
- Work has been very stressful, and I am feeling depressed lately
- Work has been very stressful, and I'm feeling sad lately
- Work has been very stressful, and I'm feeling depressed lately
- Work has been very stressful, and I think I might have depression
- Work has been very stressful, and I think I may have depression
- Work has been very stressful, and I am feeling sad all the time
- Work has been very stressful, and I'm feeling sad all the time
- Work has been very stressful, and I think I might be dealing with depression
- Work has been very stressful, and I think I might be suffering from depression
- Work has been very stressful, and I think I might be experiencing depression
- Work has been very stressful, and I think I may be dealing with depression
- Work has been very stressful, and I think I may be suffering from depression
- Work has been very stressful, and I think I may be experiencing depression
- I just moved to the area, and I have been feeling anxious lately
- I just moved to the area, and I've been feeling anxious lately
- I just moved to the area, and I am feeling anxious lately
- I just moved to the area, and I'm feeling anxious lately
- I just moved to the area, and I think I might be dealing with anxiety
- I just moved to the area, and I think I might be suffering from anxiety
- I just moved to the area, and I think I might be experiencing anxiety
- I just moved to the area, and I think I might have anxiety
- I just moved to the area, and I think I may have anxiety
- I just moved to the area, and I think I may be dealing with anxiety
- I just moved to the area, and I think I may be suffering from anxiety
- I just moved to the area, and I think I may be experiencing anxiety
- I just moved to the area, and I have been feeling sad lately
- I just moved to the area, and I have been feeling depressed lately
- I just moved to the area, and I've been feeling sad lately
- I just moved to the area, and I've been feeling depressed lately
- I just moved to the area, and I am feeling sad lately
- I just moved to the area, and I am feeling depressed lately
- I just moved to the area, and I'm feeling sad lately

- I just moved to the area, and I'm feeling depressed lately
- I just moved to the area, and I think I might have depression
- I just moved to the area, and I think I may have depression
- I just moved to the area, and I am feeling sad all the time
- I just moved to the area, and I'm feeling sad all the time
- I just moved to the area, and I think I might be dealing with depression
- I just moved to the area, and I think I might be suffering from depression
- I just moved to the area, and I think I might be experiencing depression
- I just moved to the area, and I think I may be dealing with depression
- I just moved to the area, and I think I may be suffering from depression
- I just moved to the area, and think I may be experiencing depression
- 

E. Phrasing variations for: (and would like to talk to a therapist)

- I would like to talk to a therapist
- I would like to talk to a professional
- I would like to talk to someone
- I want to talk to a therapist
- I want to talk to a professional
- I want to talk to someone
- I could benefit from therapy
- I would benefit from therapy
- I could benefit from talking to a therapist
- I could benefit from talking to a professional
- I could benefit from talking to someone
- I would benefit from talking to a therapist
- I would benefit from talking to a professional
- I would benefit from talking to someone
- I might benefit from talking to a therapist
- I might benefit from talking to a professional
- I might benefit from talking to someone
- I may benefit from talking to a therapist
- I may benefit from talking to a professional
- I may benefit from talking to someone

F. Phrasing variations for: Mental Health Detail (slight edits to [6] above)

- For anxiety:
  - Lately, I have been having racing thoughts and worrying more than usual.
  - Recently, I've been having racing thoughts and worrying more than usual.
  - Lately, I've been having racing thoughts and worrying more than usual.
  - I've been having racing thoughts and worrying more than usual lately.

- I have been having racing thoughts and worrying more than usual lately.
- I have been having racing thoughts and worrying more than usual recently.
- I've been having racing thoughts and worrying more than usual recently.
- For depression:
  - Lately, I have been losing interest in things that used to excite me and having a hard time getting out of bed.
  - Recently, I've been losing interest in the things that used to excite me and having a hard time getting out of bed.
  - Lately, I've been losing interest in the things that used to excite me and having a hard time getting out of bed.
  - I have been losing interest in the things that used to excite me and having a hard time getting out of bed lately.
  - I have been losing interest in the things that used to excite me and having a hard time getting out of bed recently.
  - I've been losing interest in the things that used to excite me and having a hard time getting out of bed recently.
  - I've been losing interest in the things that used to excite me and having a hard time getting out of bed lately.

G. Phrasing variations for: [8] [APPOINTMENT REQUEST]

- Do you have any appointments?
- Do you have any available appointments?
- Do you have any appointments available?
- Can we set up an appointment?
- Can we schedule an appointment?

H. Phrasing variations for: [9] [VALEDICTION]

- Thank you
- Thanks
- Best
- Sincerely
- Kind regards
- Regards
- Cordially
- All the best
- Thanks for your time
- Thanks for your consideration
- Thanks for your time and consideration
- Thanks for your help
- Thank you for your time
- Thank you for your consideration
- Thank you for your time and consideration

- Thank you for your help

### **Additional Details on Names for Prospective Clients**

We select African American, Hispanic, and White first names from Gaddis (2022), who carefully investigated to what extent common racialized names signal socio-economic status (SES). Gaddis' names are popular names from New York state birth records data from 1994 to 2012. The data provides the mother's race and education level, which allows measurement of average maternal education levels by name. Gaddis (2022) then surveys a nationally representative sample to collect data on how individuals perceive the SES of each name. Survey respondents could rate the name as lower class, working class, middle class, upper class, or none. See Gaddis (2022) for additional discussion of this data.

We use a subset of Gaddis' first names that signal race and Hispanic ethnicity but do not have a strong SES status signal, using three criteria. First, we only use names where at least 50% of those with each name were of that race or ethnicity. Second, we remove first names that, according to calculations by Gaddis (2022) are in the top or bottom quartile of mother's education level by race or ethnicity. Third, we use the data that Gaddis (2022) collected on the perceived SES of each name, and we filter out names for each gender and race/ethnicity combination that have the highest and lowest perceived SES scores. Tables 2 and 3 present our lists of first names by race and gender.

We also use last names from Gaddis (2022), who used 2000 Census Data to produce a list of common names whereby those with each African American (Hispanic) [White] names are at least 50% likely to identify as Black (Hispanic) [White]. Table 3 presents these last names.

## Appendix B: Additional Discussion of Signals

### TNB Signal 1: Disclosure with Trans Friendly/Ally Request

Our first method adds the phrase “*I am [a transgender woman]/[a transgender man]/[non-binary], and while I am not looking for a therapist that specializes in trans issues, I am looking for a therapist who is [trans friendly]/[a trans ally].*” We believe this statement is common in practice, making this signal more externally valid. For a TNB individual seeking mental health services, finding a therapist who will not discriminate against them (trans-friendly or allied therapist) or stop them from being transgender is essential.<sup>18</sup> Disclosing transgender status and inquiring about trans-friendly services is common and recommended by experts who provide advice on how to find trans-affirming care (see Kassel (2018), Voutilainen et. al. (2018), and Allen et. al. (2017) and footnote 14).

However, there could be concerns that the request for a trans-friendly or trans-allied therapist, despite being a common and well-motivated request, could send some other unintended signal or otherwise elicit an unintended response. This concern is not unique to our study and is common, and likely more of a concern, in other audit field experiments.<sup>19</sup> Here we discuss two different ways that TNB Signal 1 could signal something other than TNB status or lead to an unintended response. First, TNB Signal 1 could imply that the prospective client needs trans-specific care. Second, TNB Signal 1 could elicit MHPs to react more positively to show that they

---

<sup>18</sup> 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.

<sup>19</sup> Most of these studies signal minority status (e.g., disability, sexual orientation) through a volunteer experience mentioned on the resume and/or cover letter (see, e.g., Tilsik, 2011; Ameri et al., 2018; Namingit, 2017; Button and Walker 2020). For example, Tilsik (2011) signals sexual orientation through a leadership position with a campus gay student organization. However, this experience can signal two additional things: the experience shows leadership experience, and the experience may suggest being more politically progressive. For the control group, Tilsik (2011) uses a similar leadership experience, but with the “Progressive and Socialist Alliance”. Our study avoids having to pick a control group since the natural control groups is no mention of transgender or cisgender status.

are “trans friendly.” For both these concerns, we discuss to what extent they could affect our results and how we deal with them.

### **Possible Bias from Signaling Trans-Specific Issues.**

While our appointment requests mention common mental health concerns (anxiety or depression), with no mention of these being TNB-specific, the MHP could assume that the concern is still TNB-specific, or that the prospective client is really looking for a trans-specialist rather than just someone who is “trans friendly.” In some cases, this could lead to increased referral or rejection rates (either explicitly rejecting the TNB prospective client or being more likely to ignore the email request). While this could be a concern for TNB Signal 2 as well, it may be more of an issue for TNB Signal 1 given the “trans friendly” request.

Some could see this issue of assuming TNB people need a specialist, even for typical mental health concerns, biasing estimates in favor of showing more discrimination. We argue that this situation is a common barrier to care for TNB people, and thus, using this signal of TNB status captures this important barrier to care.<sup>20</sup> We also argue that our approach of coding MHP responses, and the nature of MHP responses as seen in our pilot study (Button et al., 2020), suggest that we correctly categorize MHP responses even if they assume that trans-specific care is required.<sup>21</sup>

<sup>20</sup> Researchers note that assumptions that TNB people need trans-specialists, even in the numerous cases where their concerns are not trans-specific, frequently lead to barriers in access to quality mental health care (see, e.g., Benson 2013). Non-academic evidence also supports this phenomenon, showing that often TNB clients are made to feel like the reason they are suffering from other mental illnesses is their gender identity despite that not being seen by these TNB clients as relevant. See, e.g., <https://19thnews.org/2021/06/transgender-people-mental-health-services-meet-needs-difficult/> and <https://www.vice.com/en/article/59jmza/the-unique-problems-trans-people-face-when-finding-a-therapist> (both accessed July 30, 2022). These barriers to care faced by TNB individuals still persist, despite multiple professional and academic advice articles pointing out the fact that a good amount of TNB folks seeks therapy for reasons unrelated to their gender identity.

<sup>21</sup> The assumption that TNB people require specialists could reduce access to mental health care in two ways. For discriminatory MHPs, they can use the fact that they are not specialists as a pretext for not offering an appointment. This makes it easier for them to reject the client, either explicitly through a rejection response, or implicitly through ignoring the email. We correctly capture this as a negative outcome. For non-discriminatory, non-specialist MHPs,

**Commented [BL15]:** Citation of academic works: Kristen E. Benson (2013) Seeking Support: Transgender Client Experiences with Mental Health Services, *Journal of Feminist Family Therapy*, 25:1, 17-40, DOI: 10.1080/08952833.2013.755081

**Commented [BL16R15]:** I may have been a little too detailed on this footnote, but I wasn't super sure how much information was expecting. Feel free to cut out anything you feel is unnecessary Professor Button!

**Commented [BPJ17R15]:** Yes it was too long but it's better to have extra detail and cut it down than to not have enough information to work with. I cut this down and this is now complete. Thank you for your help!

**Commented [BL18]:** Does this citation need to be updated to the AJHE article that was submitted, instead of it being the working paper?

**Commented [BPJ19R18]:** Yes but only once our paper is accepted for publication.

### **Possible Bias from Motivating MHPs to Respond More Positively.**

The second concern with TNB Signal 1 is that the MHP could be motivated to respond positively after reading the “trans-friendly”/“trans ally” request. This could happen through a form of “social-desirability bias”. The MHP could be motivated to show that they are “trans friendly” by responding more positively than they normally would. Since the “trans friendly” or “trans ally” request is still common and externally valid, this response would be a normal part of the mental health care search. However, since a “trans friendly” request, while common, is not used for all appointment requests by TNB clients in practice, this social-desirability bias could under-estimate discrimination. It is difficult to know how common this reaction would be,<sup>22</sup> which partially motivates our use of TNB Signal 2 in addition to TNB Signal 1.

### **TNB Signal 2: Disclosure in Background Paragraph**

Instead of signaling TNB status through the “trans friendly” request, TNB Signal 2 reveals TNB status in a broader “about me” paragraph in the appointment request email (see Figure 1). In this additional paragraph, the prospective client mentions their age (36 or 40 years old)<sup>23</sup> and then further describes their mental health concern (anxiety or depression) in two additional sentences. TNB prospective clients signal their TNB status through a sentence like: “I am a 36 year old

**Commented [BL20]:** Ask Button if he wants a paragraph/section like this about using both TNB 1 and TNB 2 at the same time.

**Commented [BPJ21R20]:** I don't think that's necessary.

**Commented [BPJ22]:** It's not possible, without messing up other parts of the experiment, for me to only mention age (38 years) for one prospective patient in the pair. To see why, take a look at Figure 1, which shows our email structure. For this reason, I suggest randomizing between 36 and 40, without replacement, so that if it is the case that both mention their age, they don't mention the same age.

---

our pilot study, Button et al. (2020), shows that they typically react to the TNB prospective client requests by offering a referral to a trans-specialist *in addition to* offering an appointment or consultation. These are correctly coded as positive outcomes since they include the appointment or consultation offer. In the rarer case that the non-discriminatory, trans-friendly MHP offered a referral, but no appointment offer, then we do code this as a positive response in our robustness checks that modify the definition of what we consider a positive response. Our results are robust to alternative codings of a positive response that treat referrals as a positive outcome either in all cases or in cases where the referral appears to be in good faith, such as to a specialist.

<sup>22</sup> In our pilot study, we found some evidence that White TNB prospective clients were more likely than White cisgender prospective clients to get *positive* responses, with only TNB prospective clients of color experiencing (significant) discrimination. Since this social-desirability bias should be present for both White and non-White TNB prospective clients, this suggests that our estimated discrimination against African American and Hispanic TNB prospective clients is a lower bound and would be even larger without this possible bias. However, this social-desirability bias from the “trans friendly” request could explain a portion of the positive response to White TNB prospective clients that we sometimes observe.

<sup>23</sup> We center age on the median age in the United States, which is 38.2 +/- 0.1 years, from the 2020 American Community Survey 5-Year Estimates.

*[transgender woman]/[transgender man]/[non-binary person].”* Cisgender prospective clients just say, “I am 36 years old”.

Like TNB Signal 1, we believe this signal is externally valid, since these sorts of “about me” paragraphs are common in appointment request emails.<sup>24</sup> The key benefit of TNB Signal 2 is that it avoids the any additional signals from the “trans friendly” request, discussed above. The downside to TNB Signal 2 is that it is a less salient signal. This is partly by design, as it blends the mention of TNB status into a larger paragraph that provides additional voluntary information about the prospective client. The concern, though, is that the MHP may be less likely to recall TNB Signal 2 than TNB Signal 1, as TNB Signal 2 is more obscured. When signals are less salient, it can attenuate discrimination estimates (Button and Walker, 2020). While TNB Signal 2 could be perhaps less salient, we think the saliency is only slightly different, and the saliency is similar or stronger than numerous other signals of minority status in audit field experiments.<sup>25</sup>

### **Race, Ethnicity, and Gender (REG) Signal 2: Disclosure in Background Paragraph**

However, there are three things to consider about this disclosure signal. First, this signal may be less externally valid because, in actual client requests, clients would always disclose their name, but would only optionally directly disclose their race, ethnicity, or gender. Second, choosing to disclose race, ethnicity, or gender in this way may signal something else, such as perhaps having

---

<sup>24</sup> Multiple resources available for folks who are seeking therapy for the first time advise adding a concise introduction of yourself and your main concern you are seeking therapy for when contacting potential therapists. See, for example, the following: <https://www.stacytaylortherapy.org/post/your-first-contact-with-a-therapist-the-dos-and-don-ts>, <https://www.theshrinkingcouch.com/contacting-a-therapist-practical-tips-on-how-to/>, <https://therapistpages.com/how-to-email-a-therapist-for-the-first-time/>, and <https://weareneveralone.co/blog/how-to-email-a-therapist-for-the-first-time/> (all accessed July 30, 2022).

<sup>25</sup> Numerous audit field experiments studying hiring discrimination through resumes, and include signals on the resumes through, e.g., volunteer experience, unemployment duration (through the end date of the most recent job), or age (through high school graduation year). All these signals are less salient, given that there is much more information on resumes than our appointment request emails. Despite these signals in the literature being less salient, most studies find effects (see Button and Walker, 2020 for a more detailed discussion).

mental health concerns that are more race, ethnicity, or gender specific, although this is much less likely relative to the similar concerns for TNB signal 1 (“trans friendly.”) We handle this potential issue in a similar way to what we discuss for TNB signal 1 above.<sup>26</sup> Third, a disclosure signal may signal race or ethnicity differently than a name signal. E.g., someone who says they are Black could have a U.S. nationality, or an international one (e.g., immigrant from Africa), while someone with an African American name is more likely to be a U.S. national. This may be preferable since it signals race more broadly.

**Commented [PB23]:** The last statement in the footnote is my hunch. We will need to check on this.

Barb: Later in the summer, I'll have you look into this.

**Commented [BL24R23]:** Checking on this, I believe, means looking at the data from the pilot study... Is that correct? If so, do I have access to that?

**Commented [BPJ25R23]:** Let's not worry about this. Too much work just to further increase confidence in the footnote.

---

<sup>26</sup> This includes using alternative methods of coding for a positive response, to deal with the fact that, if the MHP assumes the prospective client has race or ethnicity-specific issues, they may be more likely to suggest a referral to a specialist who focuses on race or ethnicity issues. While we did not use race, ethnicity, and gender signal 2 in our pilot study (Button et al., 2020), we did not see many instances of referrals to a race or ethnicity specialist.

## Appendix C: Details on MHP Response Coding

### Coding Responses into Categories

To generate our five versions of the "positive response" binary variable, we first code responses into categories, noted below, and then use these categories to code which responses are "positive" for the default and alternative versions. These categories are not mutually exclusive as MHPs often offer appointments and referrals.

- i. **Category 1 - Appointment Offer:** The MHP explicitly (or implicitly) indicates that they can take on the prospective client or offers an appointment.
- ii. **Category 2 - Call or Consultation Offer:** The MHP offers to discuss the possibility of working together, but does not explicitly indicate they will take on the prospective client.
- iii. **Category 3a - Referral (+) or**
- iv. **Category 3b - Referral (-):** The MHP gives a referral to another MHP or practice. We distinguish likely positive (+) from negative (-) referrals based on if the referral is to an MHP who is likely a better fit. We quantify multiple dimensions of "fit" in secondary outcomes, below, where we propose how we analyze referral patterns. We use the following logic to code a referral as positive (+) or negative (-).
  - a. **Step 1)** All referrals are coded as negative (-) if any of the following are present
    - i. 1a) Not accepting patients: the MHP is not accepting appointments per the inclusion/exclusion criteria above.
    - ii. 1b) No focus on client concern: the MHP being referred to does not list the prospective client's main concern (anxiety or depression) under the "expertise" section, nor is it mentioned in the profile narrative, nor does the

- referral email mention that the MHP has expertise in the client's main concern (e.g., "If anxiety is your concern, I would refer you to...")
- iii. Too niche: the MHP being referred to focuses on a population that is not adults (e.g., children, couples) or focuses on unrelated issues (e.g., addictions, grief) per the inclusion/exclusion criteria above.
  - iv. Assumes ESL: the MHP refers to an MHP that they say speaks a non-English language, with the phrasing suggesting that the prospective client needs therapy in a different language, despite the inquiry not mentioning that, and the inquiry having perfect English. This case does not include when the phrasing suggests this as an option (e.g., "In case you need a therapist who speaks Spanish..." "[MHP name] also speaks Spanish")
  - v. Incomplete information: the MHP providing the referral does not provide sufficient information to reasonably identify the MHP or practice being referred to.
- b. **Step 2)** If the referral is still un-coded after Step 1), then code the referral as positive (+) if any of the following are true:
- i. Trans experience: the prospective patient is trans or non-binary and the referred MHP has "trans experience". We define this as the MHP listing "transgender" in the "expertise" or "top specialty" sections, or the profile or website mentioning this expertise, or the MHP sending the referral mentioning that this MHP has experience with trans or LGBTQ+ populations.

- ii. **Payment taken:** the referral mentions that the MHP being referred to accepts the prospective client's payment method, or when the prospective client asks about a sliding scale, the referral mentions that the MHP offers a sliding scale.
- c. **Step 3)** If the referral is still un-coded after Steps 1) and 2), then code the referral as negative (-).
- v. **Category 4 - Screening Question:** The MHP requests additional information.
- vi. **Category 5a - Waitlist (+)** or
- vii. **Category 5b -Waitlist (-):** The MHP offers to put the prospective client on a waitlist. We code this as positive (+) or negative (-) depending on the length of the waitlist, if disclosed. If the waitlist is disclosed to be within or equal to 6 weeks (or, if a range, the average is within or equal to 6 weeks), we code this as positive (+), otherwise we code this as negative (-). This includes coding cases where the waitlist length is not specified as negative (-).
- viii. **Category 6 – Rejection:** The MHP rejects the prospective client.
- ix. **Category 7 - No Response:** No response from the MHP within three weeks.

#### **Default and Alternative Coding of the “Positive” Response Outcome Variable**

All our analysis will use a default coding of a "positive response", detailed below. In addition, we will estimate the robustness of our main results to six different alternative codings of "positive response". These are:

- a) **Default:** Positive response includes if any of the following are positive: Appointment Offer, Call or Consultation Offer, or Referral (+).

- b) **Alternative 1:** Same as Default but also considers "Screening Question" as a positive response.
- c) **Alternative 2:** Same as Default but also considers "Waitlist (+)" as a positive response.
- d) **Alternative 3:** Same as Default but also considers "Screening Question" and "Waitlist (+)" as positive responses.
- e) **Alternative 4:** Same as Alternative 3 but also considers "Waitlist (-)" as a positive response.
- f) **Alternative 5:** Same as Alternative 3 but also considers "Referral (-)" as a positive response.
- g) **Alternative 6:** Same as Alternative 3 but also considers "Waitlist (-)" and "Referral (-)" as positive responses.

#### **Analysis of Referral Patterns**

We will also do a more detailed analysis of referrals, to determine the quality and characteristics of the referrals. This will be a descriptive analysis to better understand when and why referrals are provided, although some aspects of this are reflected in our coding of a positive versus negative referral. This analysis involves coding numerous referral characteristics:

- a. **Payment taken:** For prospective clients that mention having insurance, does the MHP being referred to appear to take the prospective client's insurance (from the profile or from the referral email)? For prospective clients who mention paying out of pocket or who do not mention payment method, does the MHP being referred to offer a sliding scale, or do they set a lower price per session (defined as lower price or lower average price range) than the original MHP? This is coded as positive if the answer to any of the above is yes, otherwise it is coded as negative.

- b. **Distance (minutes):** distance between the original MHP and the referred MHP, measured as estimated driving distance using Google Maps. Left blank when addresses are unknown, or either the original MHP or the referred MHP only do virtual appointments.
- c. **Virtual Only:** the referred MHP offers only offers virtual appointments, while the original MHP offered in-person appointments.
- d. **Trans specialist:** - does the MHP being referred to appear to be a trans specialist? This is yes if one of the following apply:
  - i. they list transgender as a top specialty
  - ii. being a trans specialist features in the profile narrative
  - iii. is mentioned in the referral email (e.g., [Referral] specializes in trans issues).
- e. **Trans expertise:** does the MHP being referred to list transgender under "expertise" (or is a trans specialist, see above)
- f. **LGBTQ+ allied:** does the MHP being referred to list being LGBTQ+ allied (either trans, non-binary, or queer allied) on their profile (or is a trans specialist, see d, or has trans experience, see e)?
- g. **Racial identity specialist:** does the MHP being referred to appear to be a racial identity specialist (either racial identity is listed as a top specialty, it is mentioned in the referral email, or it features in the profile narrative)?
- h. **Racial justice allied:** does the MHP being referred to list being racial justice allied on their profile (or is a racial identity specialist, see g)?

- i. **Condition specialist:** for prospective clients that mention anxiety (depression), is the MHP being referred to an anxiety (depression) specialist (they list anxiety (depression) as a top specialty, or their profile narrative suggests this)?
- j. **Condition expertise:** for prospective clients that mention anxiety (depression), does the MHP being referred to list anxiety (depression) under the "expertise" section, or are an anxiety (depression) condition specialist (see i)?
- k. **Not accepting patients:** the MHP being referred to is not accepting patients, based on their Psychology Today profile.
- l. **Too Niche:** The MHP being referred to would not satisfy the inclusion criteria relating to specialty (i.e., they focus on specific populations or issues).
- m. **Assumes Language:** the MHP refers to an MHP that they say speaks a non-English language, with the phrasing suggesting that the prospective client needs therapy in a non-English language. This case does not include when the phrasing suggests this as an option (e.g., "In case you need a therapist who speaks Spanish..." "[MHP name] also speaks Spanish").
- n. **Incomplete Info:** the MHP providing the referral does not provide sufficient information to reasonably identify the MHP or practice being referred to.

We will also analyze to what extent referrals are based on the race, ethnicity, gender, LGBTQ+ concordance:

- o. **Race or ethnicity concordance:** the prospective clients race or ethnicity appears to match that of the referred MHP. We will use multiple methodologies to code for the MHP's likely race or ethnicity, which includes using names, photos, and direct mentions in the profile

narrative. We will estimate the sensitivity of our results to these different codings of race and ethnicity.

p. **LGBTQ+ concordance:** the prospective client is trans or non-binary, and the referred MHP appears to be LGBTQ+. We will code MHPs as LGBTQ+ ONLY if one of the following is true:

- i. being LGBTQ+ is disclosed in the profile narrative,
- ii. the MHP lists themselves as non-binary (e.g., appears when filtering the search by non-binary),
- iii. the MHP lists pronouns other than strictly "she/her" or "he/him" (e.g., "he/they", "any pronouns", neopronouns), or
- iv. LGBTQ+ status is mentioned in the reply email (e.g., "[Therapist name] is trans..." "As a member of the LGBTQ+ community...").

These factors likely correlate with, but are independent of, being a trans specialist, having trans expertise, or being LGBTQ+ allied (see above for definitions).