

Trans Resilience & Health in Sociopolitical Contexts: A Brief Overview of Study Findings

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Study Overview

In light of the political turmoil and record breaking attempts to restrict transgender people's rights and access to resources, we sought to understand more about how sociopolitical contexts and place influence health, wellbeing, and resilience for transgender and gender diverse people.

We recruited participants across 4 states which vary substantially in their political support and protections for trans communities: Oregon, Michigan, Nebraska, and Tennessee. We also designed the study so that major sociopolitical events, such as the 2020 election, federal and state level political shifts, and the inauguration could be evaluated as "events" that may shape experiences within a person's context. We had no way to anticipate what 2020-2021 would bring. It turned out to be a year of major social unrest and violence targeting communities of color and also a global pandemic that has already killed nearly 6 million people globally and over 950K in the U.S. As we were collecting data throughout this time, this provided a unique opportunity to document the impacts on health and resilience for trans communities.

Our hope is that this study will provide needed insights into how location and sociopolitical context relates to both mental and physical health and resilience for trans people, how shifts in policies and political climate relates to shifts in health and resilience for trans people, and how trans people experience and embody their resilience and cope with marginalization and stigma.

Data Collection Information:



- 1** Initial data collection entailed a baseline interview with 158 participants across the 4 states. These included questions about what it is like to live in each state as a trans person, impacts of recent sociopolitical events, and discussion of participants' experiences of resilience. During these in-person visits participants also completed a series of surveys and participated in biological sample collection to measure the "wear and tear" of stress on health.
- 2** Next, participants completed online surveys monthly for 12 months. In these surveys, participants reflected on their mental health, resilience, coping, exposure to stressors, and other experiences from the past month.
- 3** Finally, we conducted final interviews (remotely due to COVID-19) and asked participants to reflect on some their relationships and key experiences from the prior year. Once able, we met again in-person for the final health and biomarker sample collection.

More About Biomarkers to Assess Health:

In addition to learning more about experience and health through interviews and surveys, we collected a number of biomarker samples in order to examine how stress becomes embodied, impacting multiple bodily systems and overall health. We will be able to assess “wear and tear” by measuring biomarkers from each of these biological systems and examine them together to assess what is called Allostatic Load (AL). For transgender and gender diverse people who may face stigma, marginalization, and unique challenges and stressors, understanding the relationship between resilience, stress experience, and allostatic load within specific sociopolitical and geographic contexts will enhance our understanding of long-term health and health disparities among trans people.

Biomarker Sampling: There are a number of biomarkers that can be measured to examine immune, endocrine, and metabolic function that are measurable in ways that are “minimally invasive” compared to, for instance, drawing blood. We think these types of measures are important because they enable participation outside of clinical settings; many of our interviews and health measures were conducted in university offices, community centers, libraries, and in people’s homes. Participants included those who may be otherwise disinclined to be involved in a research study if it were requiring interactions with clinical health professionals.



We focused our sample collection to measure multiple systems, including assessments of immune function, metabolism, and stress.

From a single finger prick, using dried blood spot cards and a point-of-care device we were able to measure:

- **C-reactive protein (CRP)** – a marker of inflammation and immune function that is measurable using dried blood spots. Chronically high levels may be associated with increased cardiovascular risk.
- **Glycosylated Hemoglobin (HbA1c)** – provides a measure of metabolic function and screening for diabetes. As a measure of glucose metabolism, it is convenient because it does not require fasting and reflects the previous 2-3 months average blood glucose levels.

Participants also collected three saliva samples on their own, one at waking, another 30 minutes after waking, and one before bedtime. From these samples we measure:

- **Cortisol** – this hormone is the product of the hypothalamic-pituitary-adrenal axis and is often measured to assess acute as well as chronic stress response. Because cortisol has many functions beyond stress and is secreted according to a regular daily rhythm, multiple timed measures allow for the evaluation of that daily rhythm as well as overall levels.

Other measures of metabolism, and cardiovascular function will be indexed together with these to assess allostatic load.

These include:

- Blood-pressure
- Heart rate
- Height, weight, and waist/hip circumference

Participant Demographics

*We targeted our recruitment efforts to ensure a diversity of participants in terms of race/ethnicity, gender identities, age, and rural/urban status in order to include those who might otherwise often be left out of research studies.

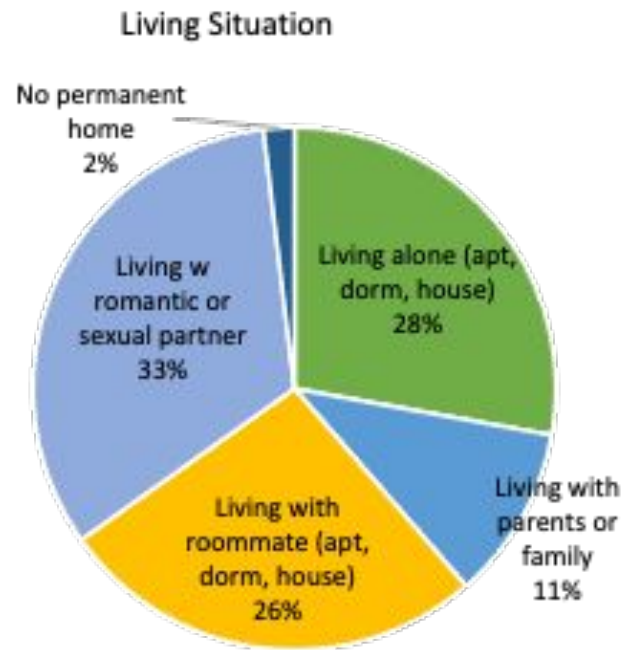
Race or Ethnicity	# (%)
Black or African American	8 (5.1%)
American Indian or Alaskan Native	2 (1.3%)
Asian	6 (3.8%)
Latinx	6 (3.8%)
White	109 (69%)
Not listed	1 (0.6%)
Multiracial/Multiethnic	26 (16.5%)
Overall participants of color	48 (30.4%)

Gender Identity	# (%)
Transman/Trans man	37 (23.4%)
Transwoman/Trans woman	32 (20.3%)
Genderqueer	16 (10.1%)
Non-binary	40 (25.3%)
Agender	3 (1.9%)
Androgyne	1 (0.6%)
Genderfluid	2 (1.3%)
Woman	9 (5.7%)
Man	6 (3.8%)
Bigender	2 (1.3%)
Not listed	9 (5.7%)

Participant Demographics

Site	Participants N (%)
Oregon	45 (28.5%)
Michigan	39 (24.7%)
Nebraska	35 (22.2%)
Tennessee	39 (24.7%)
TOTAL:	158

	Overall
Age	
Age M (SD)	33.06 (12.88)
Age Min	19
Age Max	70
Generational Cohorts	
GenZ 18-25	60
Millennial 26-39	56
GenX 40-56	31
Boomers+ 57 and up	11



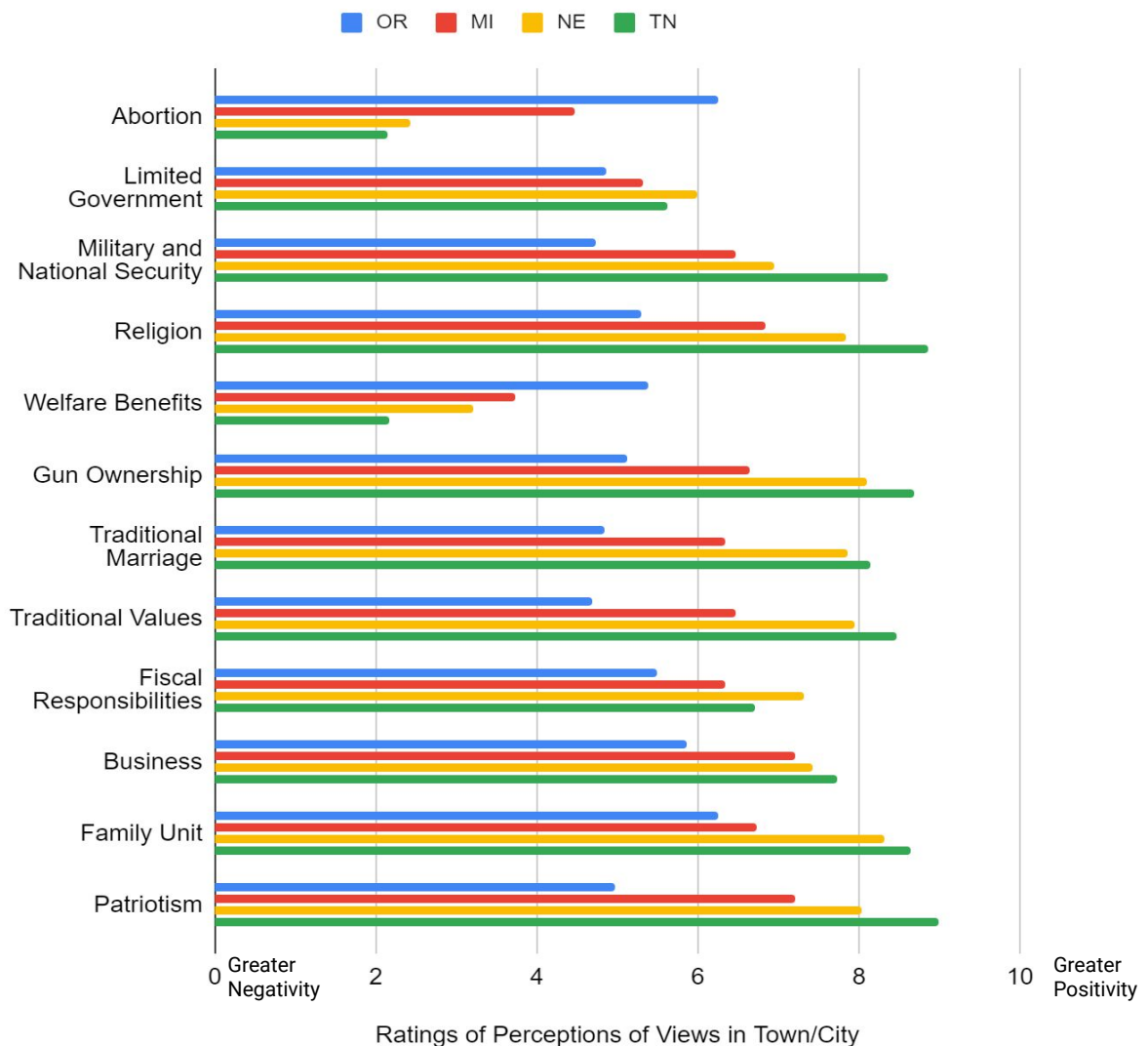
AGE: 19 to 70 years old,
average = 33

51.3% Earned <
\$20,000/year

Social Contexts and Events

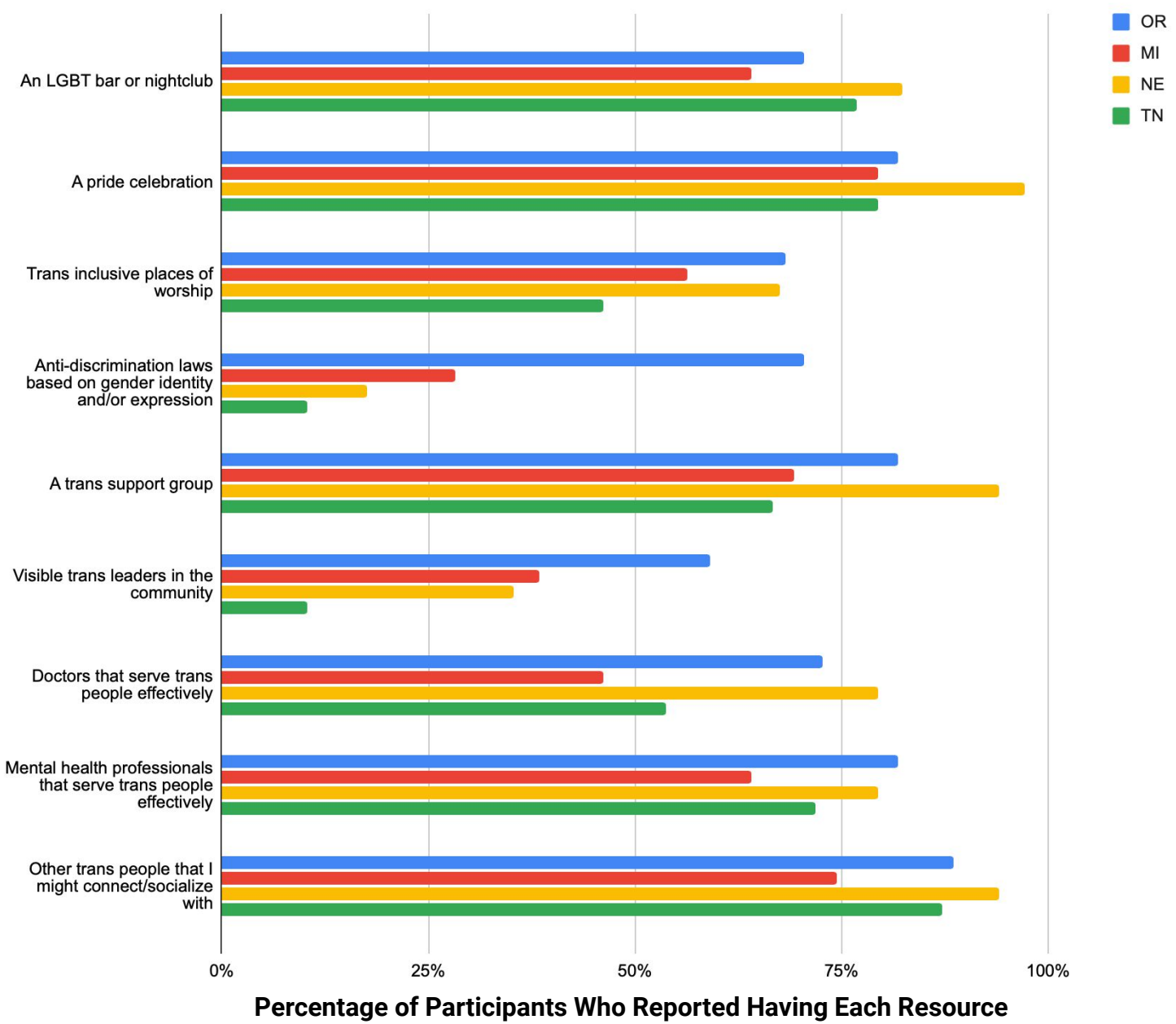
Participants rated how negatively or positively people in the town/city they were living viewed a variety of issues. These items reflected a variety of markers of conservatism that help to get a sense of the local political climate in each state. Of note, across all questions, Oregon was perceived as least conservative on these issues, followed by Michigan, Nebraska, and then Tennessee. This was in line with the overall contrasts across the states in terms of access to policies and protections for transgender people

Social and Economic Conservatism Across Study Sites

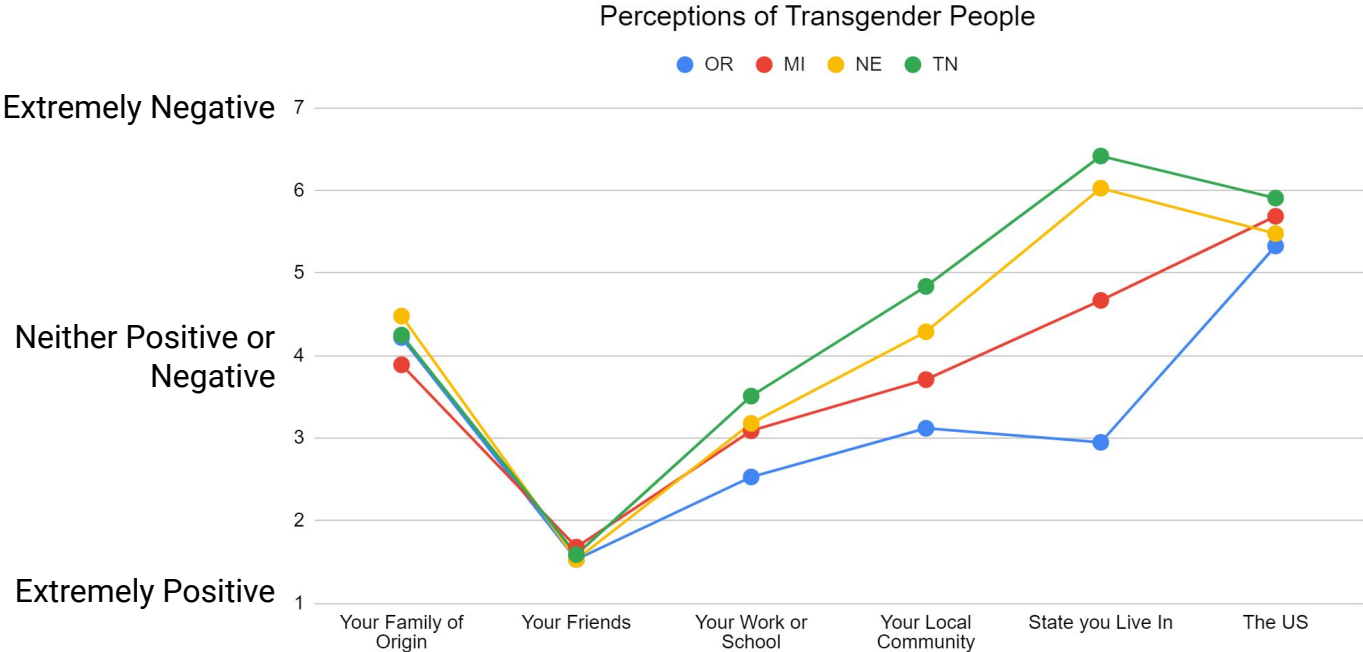


Participants were asked what resources were available in their town or city. In general, Oregon and Nebraska had the most access to trans-friendly resources, with Oregon scoring much higher than any other state on anti-discrimination laws and having visible trans leaders. Nebraska scored high on many categories of trans-friendly resources, despite also being rated high on the social and economic conservatism scale on the previous page.

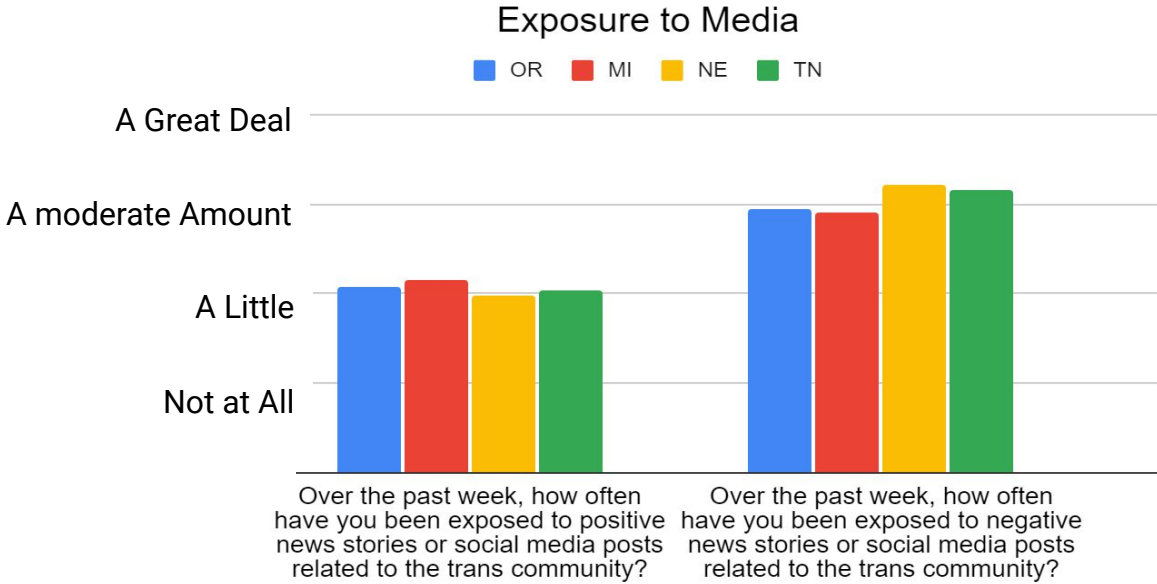
Resources in Town/City



Participants rated how positively or negatively they believed others viewed transgender people; they rated this for their family of origin, their friend group, their work/school, their local community, the state they lived in, and the U.S. As shown below, participants in TN viewed their state to have most negative views, while individuals in OR viewed their state as having the most positive views. Participants from all states rated the US as a whole as more negative overall.



Participants reported how much exposure they had to positive and negative news stories and media about the experiences of transgender people. Overall, there was more exposure to negative media compared to positive media and little variation across the states.

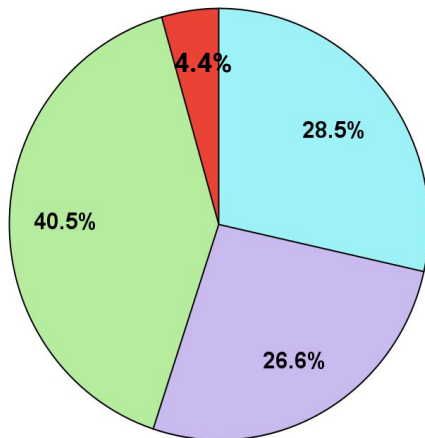


Mental and Physical Health

Mental Health:

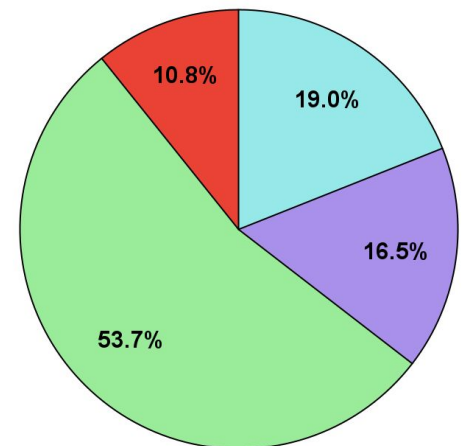
Severity of Depression Symptoms

- None to slight
- Mild
- Moderate
- Severe



Severity of Anxiety Symptoms

- None to slight
- Mild
- Moderate
- Severe

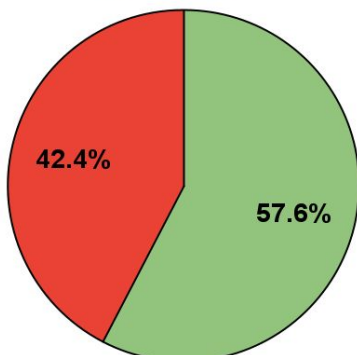


Over half of participants scored in the moderate to severe symptom ranges for both depression and anxiety.



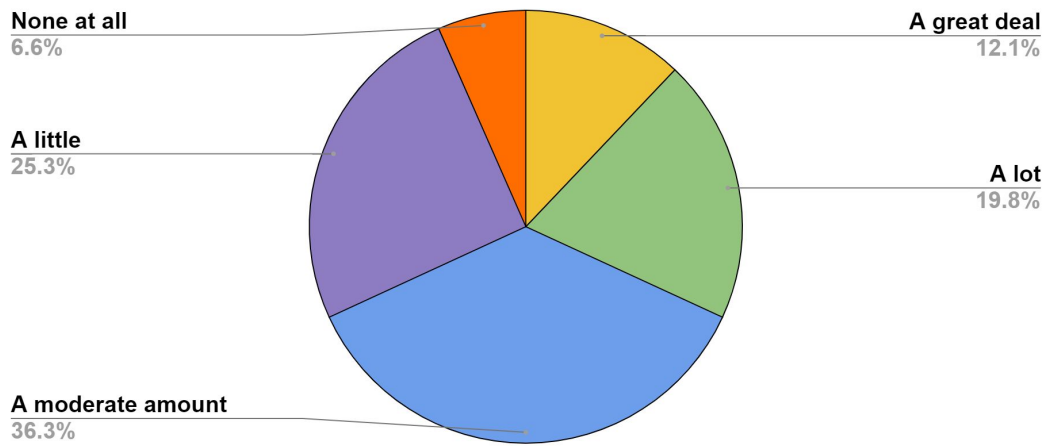
Are you currently seeing a therapist/mental

- Yes
- No

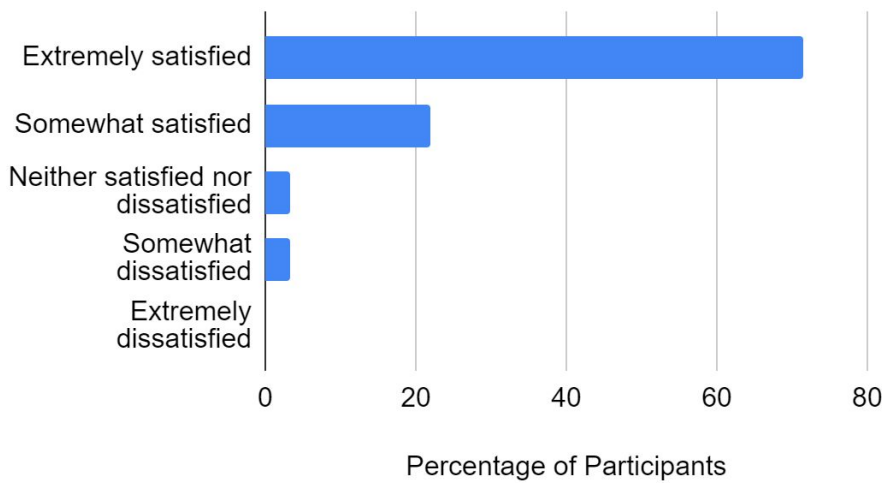


Over half of participants were seeing a mental health provider at the time of the study.

How much of your therapy focuses on your gender?

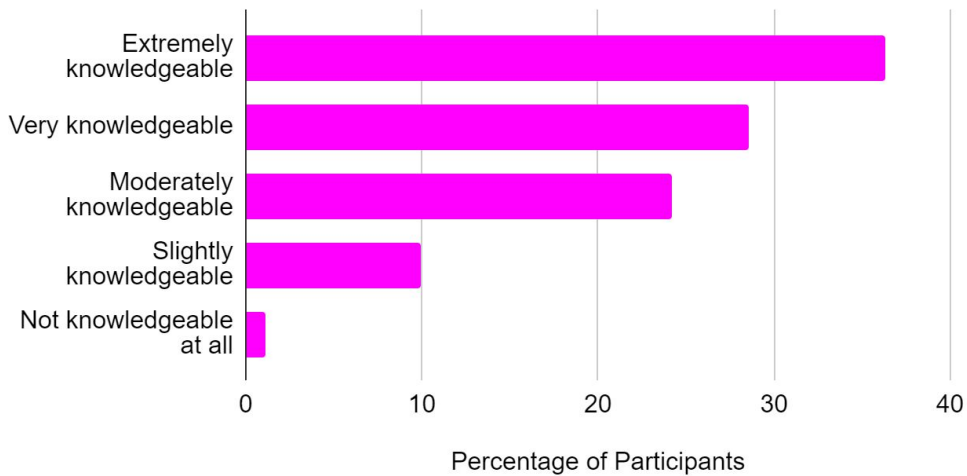


How satisfied are you with your therapist/mental health provider?



Overall, participants reported feeling somewhat to extremely satisfied with their therapist or mental health provider.

How knowledgeable do you feel your mental health provider is about working with trans clients?

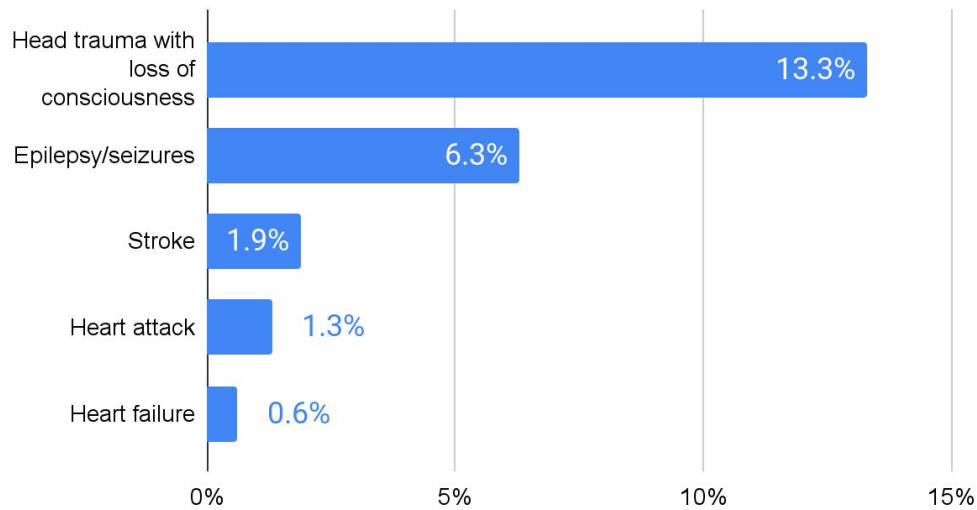


Overall, participants reported feeling that their providers were at least moderately knowledgeable about trans clients' experiences.

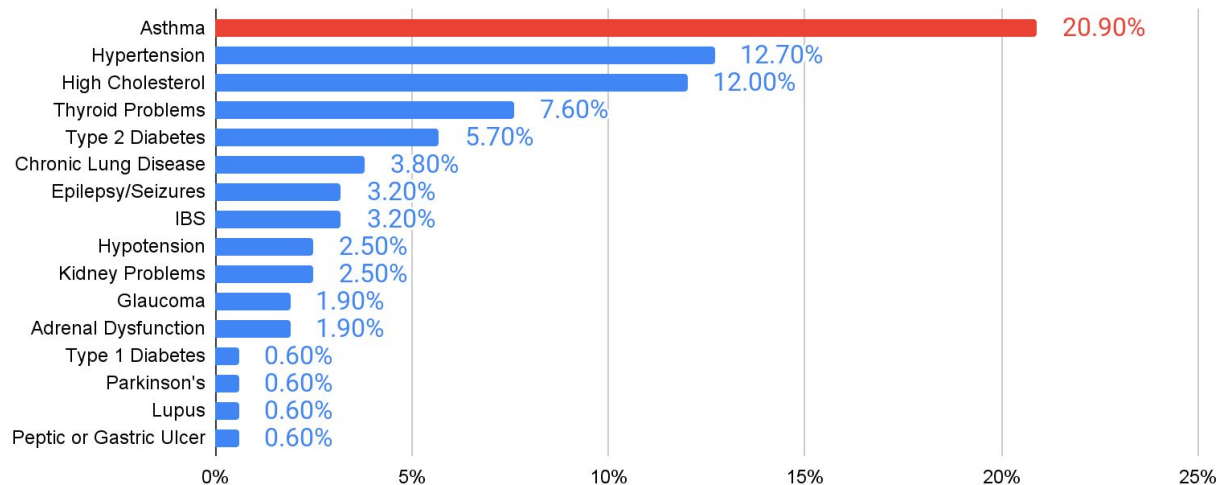
Physical Health:

Participants reported a range of health issues and experiences. The most common was head trauma with loss of consciousness. In terms of diagnosed conditions, 1 out of 5 participants had been diagnosed with asthma.

Experiences of Health Issues



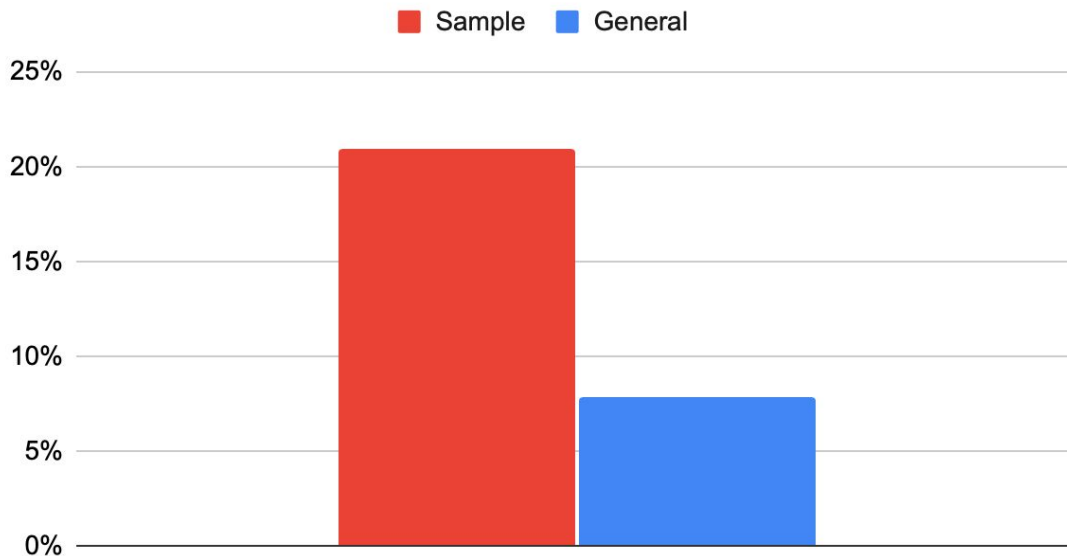
Reports of Diagnoses



Asthma was almost 3 times more prevalent in this sample of trans and gender diverse people (20.9%) compared to the general population (7.8%).

Having a trans identity, of course, does not increase the risk of having asthma directly, but there can be other factors that can increase risk indirectly. For example, trans individuals may have difficulty accessing a provider, especially one that understands unique confounding factors that may mimic or worsen respiratory symptoms like chest-binding.¹ Additionally, the intersectional identities of trans individuals are important to consider as people of color and/or individuals with low incomes are at an increased risk for exposure to air pollution, pest infestations, and occupational hazards.²

Rates of Asthma

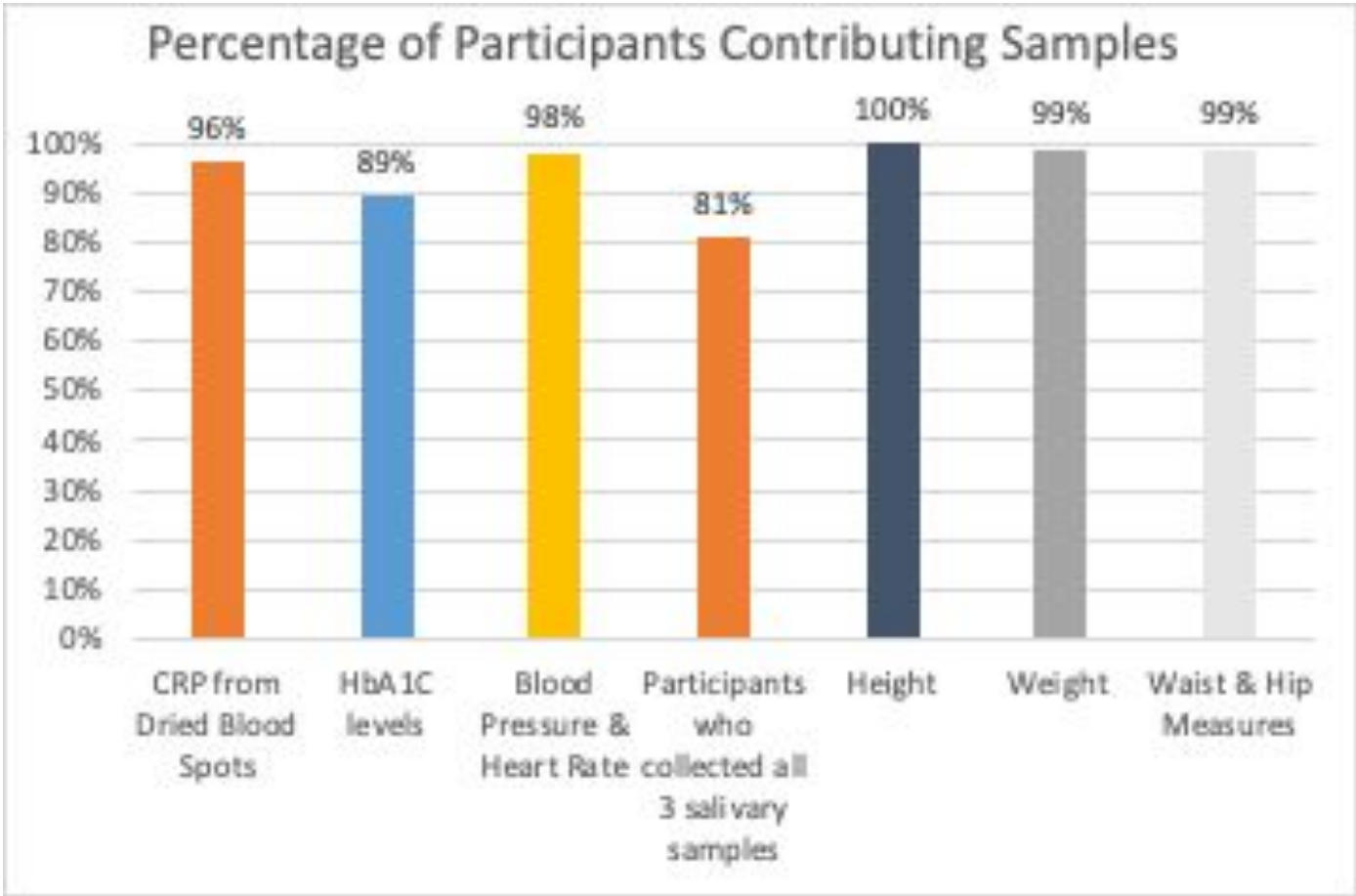


1. Schiebinger, Londa. "Gender." Gendered Innovations. Stanford University . Accessed February 23, 2022. <http://genderedinnovations.stanford.edu.proxy1.cl.msu.edu/terms/gender.htm>.
2. Arroyo, Anna Chen, David A Sanchez, Carlos A Camargo, Paige G Wickner, and Dinah Foer. "Evaluation of Allergic Diseases in Transgender and Gender-Diverse Patients: A Case Study of Asthma." Elsevier. Journal of Allergy and Clinical Immunology, 2021. [https://www-clinicalkey-com.proxy1.cl.msu.edu/#!/content/playContent/1-s2.0-S2213219821011880?returnurl=https:%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2213219821011880%3Fshowall%3Dtrue&referrer=.](https://www-clinicalkey-com.proxy1.cl.msu.edu/#!/content/playContent/1-s2.0-S2213219821011880?returnurl=https:%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2213219821011880%3Fshowall%3Dtrue&referrer=)

Biomarker Sample Collection:

This study is one of very few to incorporate these kinds of minimally invasive sampling techniques in order to measure embodied stress and assess overall wear and tear via allostatic load.¹ Overall, participants conveyed a lot of enthusiasm for these kinds of measures as a way to understand stress effects on health and disease risk.

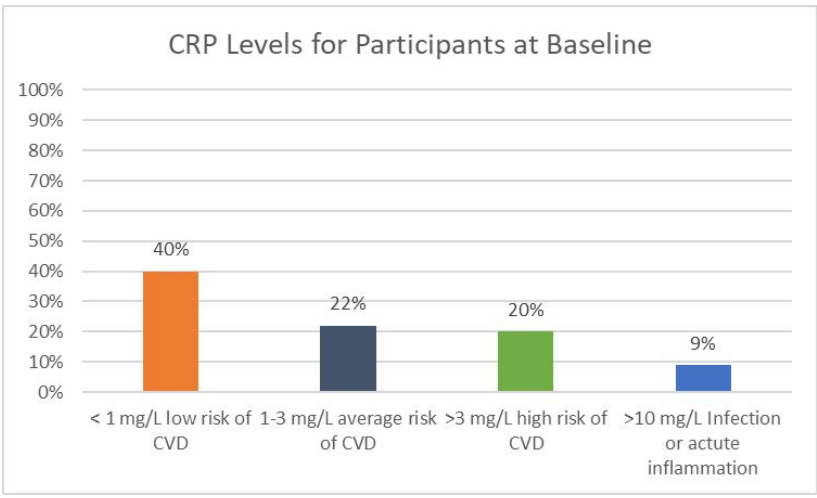
Although trans and gender diverse people are often referred to as “hard to reach” and these measures can be challenging to collect, the percentage of participants who contributed samples during the first round/baseline was remarkably high as shown below!



1. DuBois, L. Z., Gibb, J. K., Juster, R. P., & Powers, S. I. (2021). Biocultural approaches to transgender and gender diverse experience and health: Integrating biomarkers and advancing gender/sex research. *American Journal of Human Biology*, 33(1), e23555.

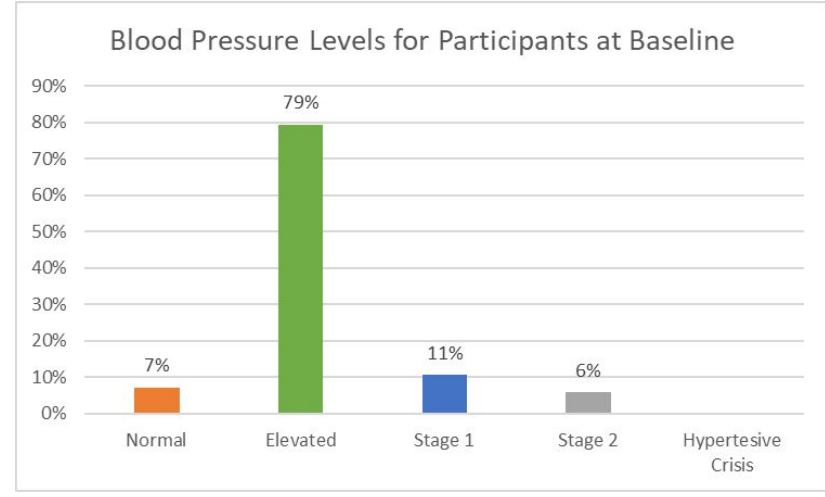
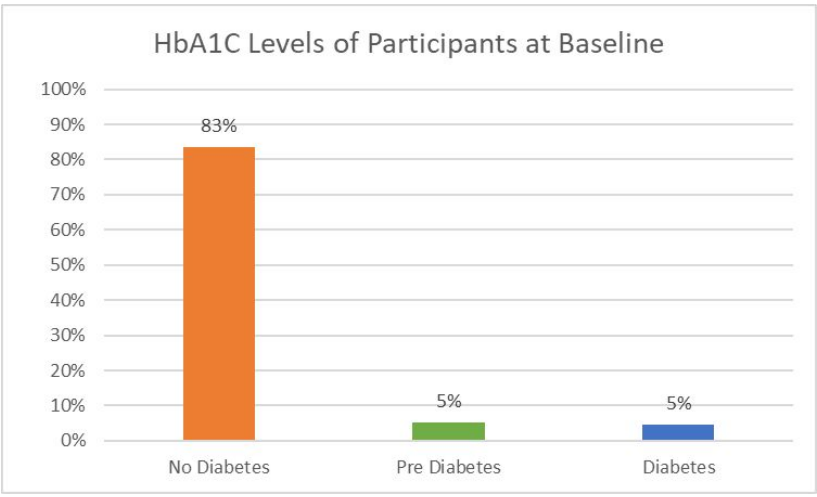
Biomarker Measures of Physical Health:

Below are the rates for participant levels of C-Reactive Protein, HbA1c, and systolic (SBP)/diastolic (DBS) blood pressure at baseline. The categories presented are based on clinical norms for [CRP](#), [HbA1C](#), and [Blood Pressure](#).



CRP is a measure of systemic inflammation. Chronic inflammation is associated with increased risk for cardiovascular disease. Most participants had low or average CRP, though 29% had high or acute levels.

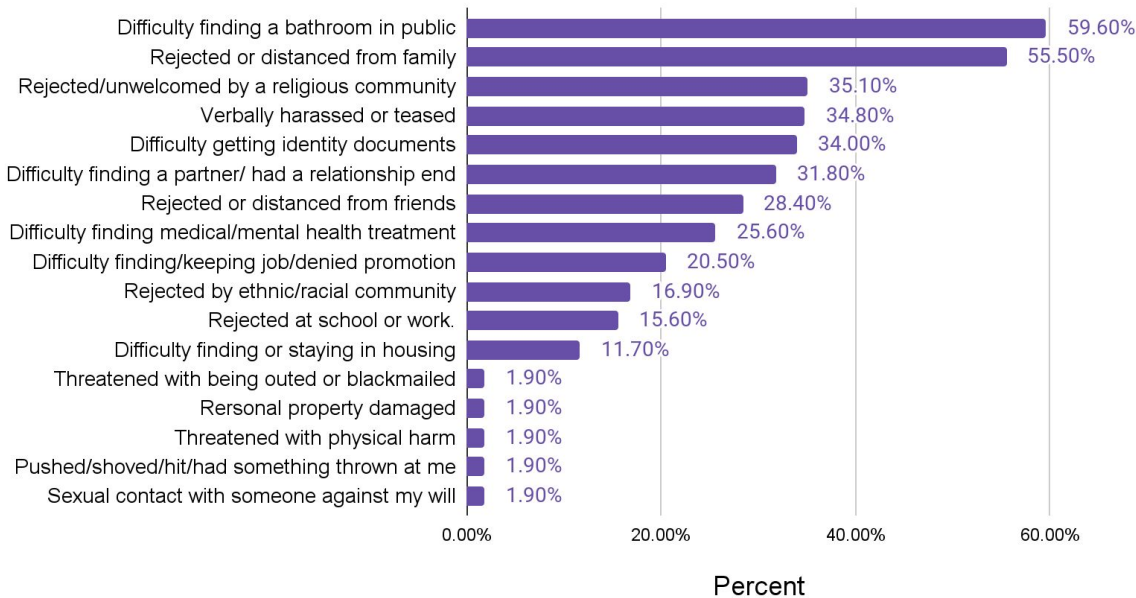
HbA1C reflects average blood glucose levels over the past 3 months. It is used as a diagnostic measure for diabetes and diabetes management. The majority of participants did not have diabetes.



Seated blood pressure measures were taken 3x during the baseline in person meeting. Based on [new \(2021\) standards](#), the majority of participants had elevated blood pressure levels.

Experiences of Minority Stressors

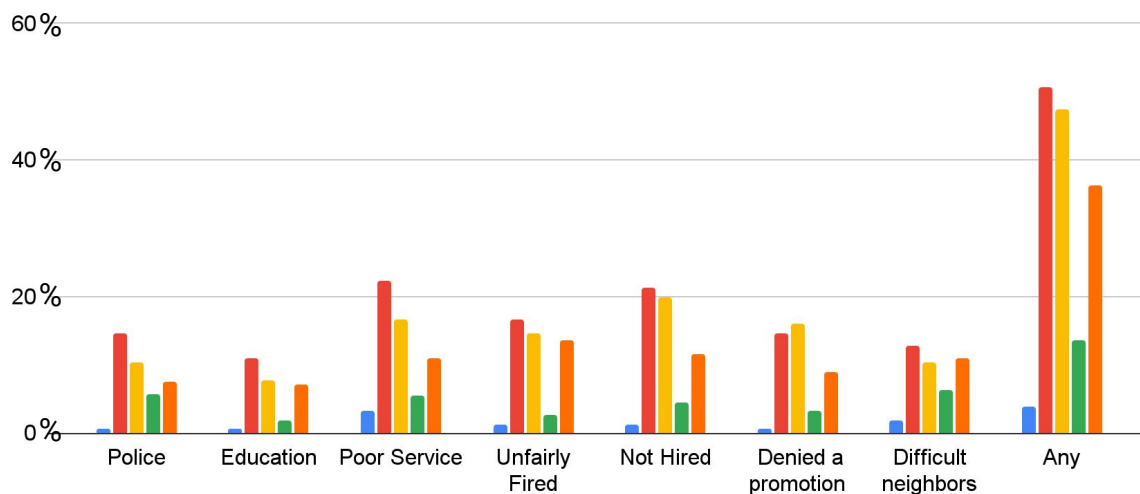
Minority Stressors Over Past Year



Participants faced high rates of minority stressors across multiple sectors. Over half of participants reported trouble accessing a restroom in public and rejection by family just over the past year.

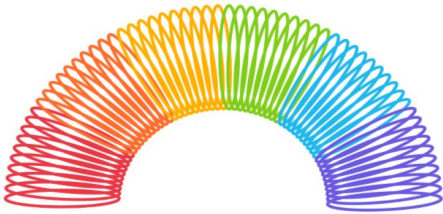
Experiences of Discrimination

■ Ancestry ■ Gender Presentation ■ Gender Identity ■ Race ■ Sexual Orientation



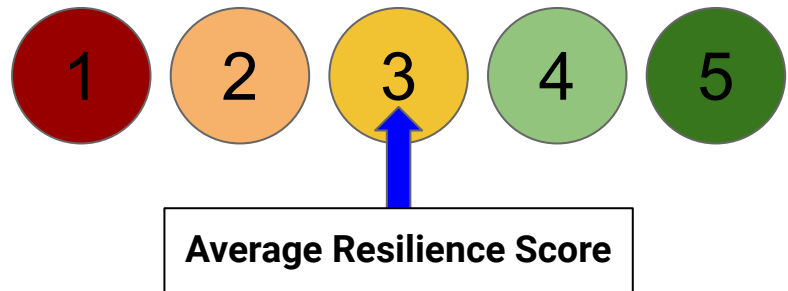
Discrimination was common in relation to gender and sexual orientation. Although racial discrimination was less frequent, this should be considered in light of the sample demographics, which included many fewer participants of color.

Resilience, Social Support, and Coping



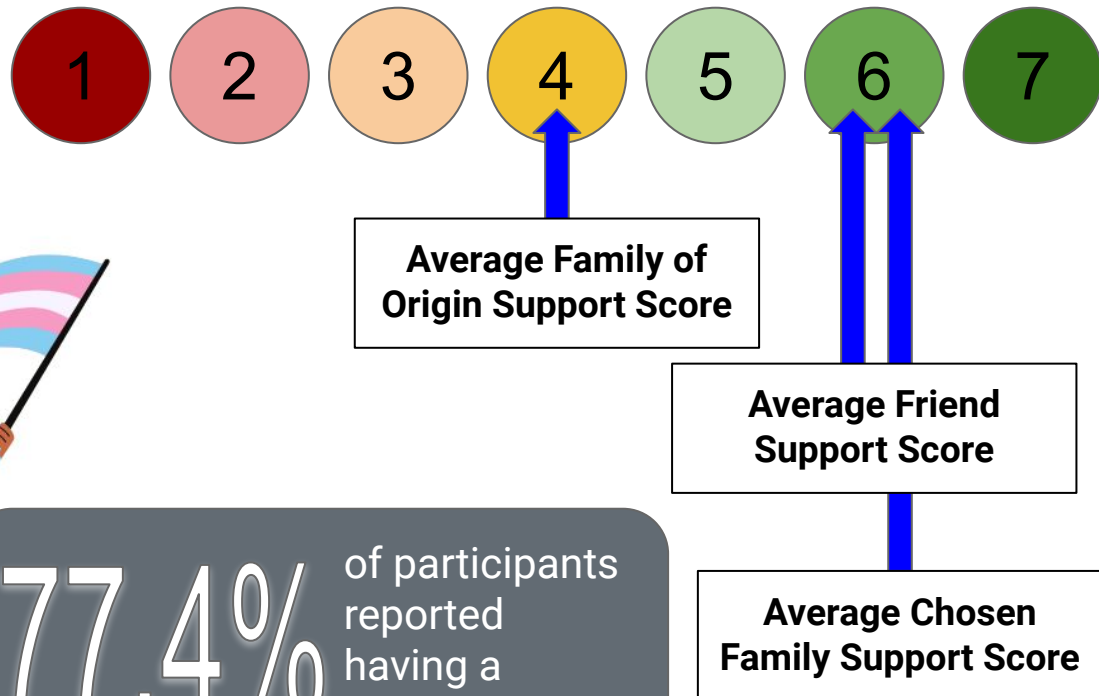
Participants completed a scale measuring resilience which was defined as a general ability to bounce back from challenges. Overall, the average resilience score was in the middle of the range. 1 = low levels of resilience, 5 = high levels of resilience

Resilience



Social Support

Participants completed a scale measuring social support from their family of origin, friends, and chosen family. 1 = low support; 7 = high support



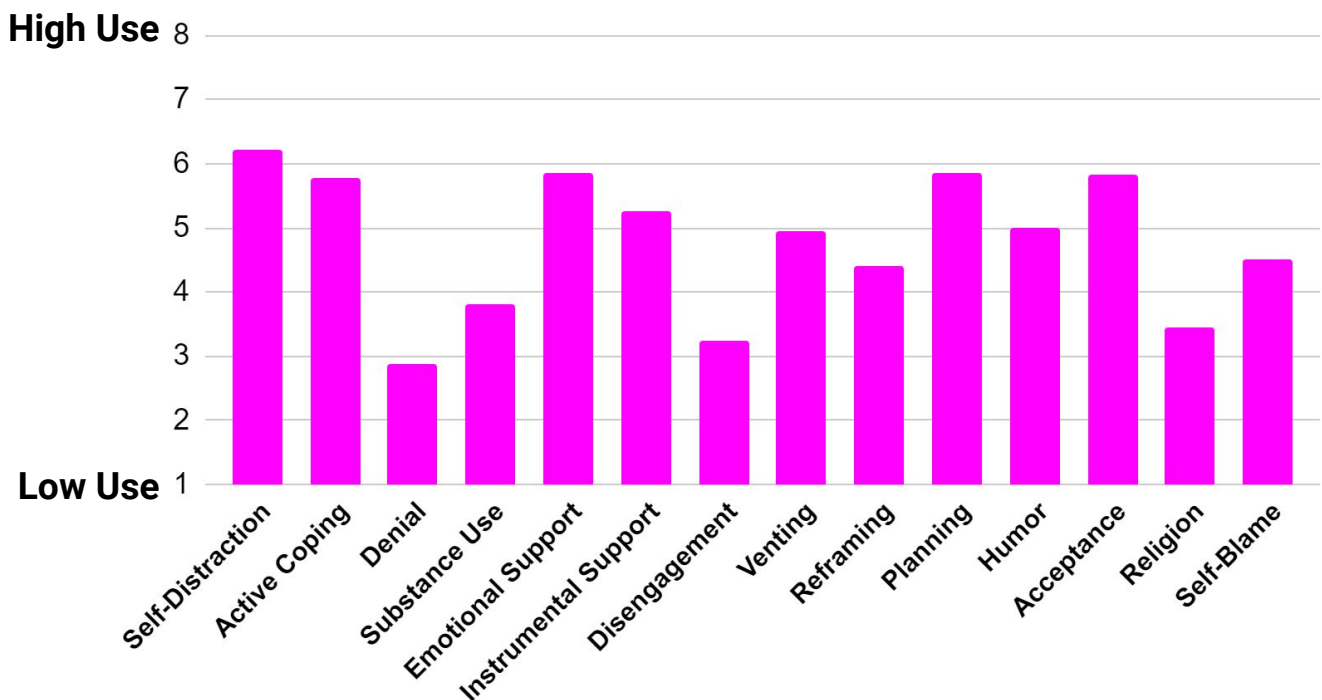
77.4%

of participants reported having a chosen family



Coping

Participants completed a scale about the ways that they cope with stressful experiences. The most common ways of coping were: self-distraction, emotional support, planning, acceptance, and active coping.



Check back later on our website for future summaries and updates about the longitudinal data.