ORIGINAL RESEARCH

Associations Between Healthcare Experiences, Mental Health Outcomes, and Substance Use Among Transgender Adults

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Introduction: **Transgender and nonbinary (TGNB) adults face significant barriers to healthcare, including healthcare denials, limited access to clinicians, and mistreatment by healthcare clinicians. While prior studies have explored the consequences of overt discrimination in healthcare, they often overlook the possible impacts of more subtle forms of discrimination.**

Aim: **Is there a relationship between specific healthcare experiences, including both overt and subtle forms of discrimination, and mental health/substance use among TGNB adults?**

Methods: **This study was a secondary analysis of the 2015 U.S. Transgender Survey (USTS), a cross-sectional survey conducted by the National Center for Transgender Equality (NCTE) that included 27,715 TGNB adults from across the US and several US territories. This study analyzed variables including healthcare experiences, mental health, and substance use outcomes.**

Results: **Doctors refusing to give non-TGNB-related care was associated with 71% increased odds of severe psychological distress and 95% increased odds of suicidal ideation. Further, having to teach doctors about TGNB care and doctors asking invasive questions were associated with all our studied negative mental health outcomes. Doctors asking invasive questions was additionally related to increased odds of heavy alcohol use, marijuana use, and illicit drug use.**

Conclusions: **The results of this study indicate that negative health care experiences are significantly associated with mental health and substance use for TGNB adults. Specifically, these results emphasize the role of more subtle forms of discrimination, including a lack of clinician knowledge about the care of TGNB patients, asking invasive questions, and treating TGNB patients with respect. (J Am Board Fam Med 2022;35:1092–1102.)**

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Introduction

Healthcare denials and limited access to healthcare clinicians act as a significant barrier for transgender and nonbinary (TGNB) people seeking healthcare.[1] The term transgender is often used as an umbrella term to encompass a wide range of identities where one's sex assigned at birth does not match their gender identity, while those under the umbrella of nonbinary identities have a gender identity outside of male or female.[2] As of June 2016, an estimated 1.4 million adults and 150,000 youth in the United States identified as TGNB.[3,4] The TGNB community faces disproportionately high rates of mental illness[5] and high tobacco use among the transgender adult population ranging from 57% to 64%.[6,7] Furthermore, almost a quarter of TGNB people report past or current alcohol misuse[7] and 16.5% report prescription drug misuse over the course of one year.[8]

In addition, some TGNB people undergo a medical transition that requires the expertise of physicians from various disciplines, including primary care.

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Transition-related care could include the prescription of gender-affirming hormone therapy and gender-affirming surgeries. Separate from medical transition, TGNB individuals continue to need routine care; however, many healthcare clinicians refuse to provide treatment for problems wholly unrelated to their gender identity because clinicians feel unequipped to "deal with" TGNB patients;[9] this is an example of "trans broken arm syndrome," a phenomenon in which clinicians assume that all parts of healthcare for TGNB patients is specific to their identity and feel unequipped to treat concerns unrelated to gender identity, such as a broken arm.[10] Many medical training programs lack education and exposure to TGNB people, which leaves healthcare clinicians ill prepared to care for TGNB individuals,[11] and may explain why TGNB people report being put in situations where they need to educate their clinicians on their specific identities and healthcare needs.[7,12]

For many TGNB people, negative healthcare experiences lead to high rates of healthcare avoidance, including missed routine primary care[13,14] and cancer screenings.[15] Negative experiences with healthcare clinicians seem to contribute to poorer mental health for TGNB people.[11] One analysis showed that needing to educate a healthcare clinician increases depression and suicidality among TGNB people,[12] though the other forms of subtle discrimination, including asking invasive questions, and refusal of healthcare related to or unrelated to TGNB identity, were not represented. Further, a 2008 national survey revealed a 60% suicide attempt rate among TGNB people that experienced a refusal of treatment by a healthcare professional.[16] Gender-related discrimination in healthcare is associated with higher prescription drug misuse,[8] however, the individual relationships between prescription drug misuse and specific forms of healthcare discrimination have yet to be explored. While prior studies have explored the consequences of overt discrimination in healthcare, such as verbal or physical harassment, more subtle forms of discrimination often go overlooked or are not viewed as problematic by clinicians. This study aims to explore the relationships between interactions with healthcare clinicians and mental health and substance use outcomes of TGNB patients. There was one overarching research question for this exploratory study: *Among TGNB adults who have visited a healthcare clinician in the last year, is there a relationship between specific healthcare experiences and mental health and substance use?*

Methods

Design and Data Source

This study was a secondary data analysis. The data were obtained from the 2015 U.S. Transgender Survey (USTS), a cross-sectional survey conducted by the National Center for Transgender Equality (NCTE).[17] The data include 27,715 adults who identified as having a marginalized gender identity (transgender, non-binary/genderqueer) residing in the 50 states, District of Columbia, American Samoa, Guam, Puerto Rico, and US military bases overseas. The survey was distributed using community-based outreach and its 32 sections include questions about physical and mental health, treatment in healthcare, gender and sexual identity change efforts (GICE and SOCE, respectively), suicidality, and substance use.[6]

Variables

Healthcare Experiences.

Participants who visited a healthcare clinician in the last year were asked 10 yes/no questions about healthcare experiences they had in the last year. See Table 1 for the list of experiences. Experiences listed on the questionnaire ranged from subtle forms of discrimination (e.g., had to teach doctor about TGNB care, doctor asked invasive questions about trans status unrelated to the visit) to more overt discrimination (e.g., physical abuse, verbal abuse). Each healthcare experience was treated as a separate, binary exposure variable in analyses.

Mental Health Outcomes.

Adverse mental health outcomes included suicidality in the last 12-months (ideation, attempts) and severe psychological distress in the last month. All three variables were coded as binary yes vs. no outcomes. Respondents answered "yes" or "no" on questions pertaining to suicidal ideation in the last 12-months ("did you seriously think about killing yourself") or attempts ("did you try and kill yourself"). Participants completed the 6-item Kessler Psychological Distress scale (K6+) which is a screening tool for possible severe mental illness. Item responses are scored on a Likert-type scale from 0 ("none of the time") to 4 ("all of the time")

Table 1. Weighted Frequency and Prevalence Estimates of Negative Healthcare Experiences, Mental Health and Substance Abuse Outcomes and Covariates[a]

Variable, weighted n (%)	Overall (weighted n = 18,890)
Age	
18–24	2368 (12.5)
25–44	7731 (40.9)
45–64	6513 (34.5)
≥65	2278 (12.1)
Race/ethnicity	
Other	1137 (6.0)
Black/African American	2466 (13.1)
Latinx/Hispanic	2721 (14.4)
White	12,565 (66.5)
Education level	
<High school	2360 (12.5)
High school grad/GED	4810 (25.5)
Some college/associate degree	6144 (32.5)
Bachelor's degree or higher	5576 (29.5)
Gender identity	
Transgender woman	10,572 (56.0)
Transgender man	4749 (25.1)
Nonbinary/genderqueer (birth assigned female)	2545 (13.5)
Nonbinary/genderqueer (birth assigned male)	1024 (5.4)
Sexual orientation	
Asexual	1529 (8.1)
LGB+	11,951 (63.3)
Heterosexual	4352 (23.0)
Other/not listed	1058 (5.6)
Family support of gender identity	
Supportive	9206 (48.7)
Neutral	3074 (16.3)
Unsupportive	2856 (15.1)
No immediate family or none know I am trans	3754 (19.9)
Current healthcare clinicians know I am trans	
No people like this in my life	887 (4.7)
All know	10,269 (54.4)
Most know	2393 (12.7)
Some know	2433 (12.9)
None know	2908 (15.4)
Gender identity change efforts (GICE)	3057 (16.2)
Sexual identity change efforts (SICE)	1836 (9.7)
Healthcare experiences in the last year (yes)	
Positive experience	
Doctor knew trans and treated with respect	13,886 (73.5)
Negative experiences	
Had to teach doctor about trans care[b]	4678 (24.8)
Doctor refused to give trans-related care[b]	1675 (8.9)
Doctor refused to give other healthcare[b]	783 (4.1)
Doctor asked invasive questions about trans status[b]	2444 (12.9)
Doctor used harsh/abusive language	1009 (5.3)
Doctor was physically rough/abusive	440 (2.3)
Verbally harassed in a healthcare setting	1407 (7.4)
Physically attacked in a healthcare setting	250 (1.3)
Unwanted sexual contact in a healthcare setting	371 (2.0)
Any negative experience	6609 (35.0)
No. of negative experiences (range, 0–9)	Mean (±SE) = 0.69 (±0.03)
No. of negative experiences (categories)	
None	12,281 (65.0)
One	3558 (18.8)
Two	1497 (7.9)
Three or more	1555 (8.2)
Outcomes	
Binge alcohol use[c]	4315 (22.8)
Heavy alcohol use[c]	1358 (7.2)
Smoking[c]	4258 (22.5)
Marijuana use[c]	4505 (23.8)
Other illicit drug use[c]	1563 (8.3)
Severe psychological distress[c,d]	5628 (29.8)
Suicidal ideation[e]	7611 (40.3)
Suicide attempt[e]	1161 (6.1)

Abbreviations: SE, standard error; GED, General Equivalency Diploma; LGB+, lesbian, gay, bisexual and transgender/transsexual people.

[a]Weighted frequency and prevalence estimates of negative healthcare experiences, mental health and substance abuse outcomes, and covariates for nonbinary/genderqueer and transgender participants who had seen a healthcare clinician in the last year. There were 21,740 participants eligible for analysis. The total weighted frequency representing eligible participants used as the denominator in complex survey analysis is 18,890 and numbers in table represent weighted frequency and prevalence estimates. Per the 2015 US Transgender Survey: n = 21,740 (unweighted frequency) participants eligible for analysis).

[b]Form of subtle discrimination.

[c]In the last month.

[d]Kessler Psychological Distress Scale score ≥13.

[e]In the last year.

and total score ranges from 0 to 24. A score of ≥13 was coded as "yes" for psychological distress.[18]

Substance Use Outcomes.

Alcohol-related outcomes included any binge drinking and heavy drinking in the last month. Parti-

cipants were asked how many days in the last 30 days they had at least five drinks on the same occasion. Participants answering at least one day were coded as "yes" for binge drinking. Participants answering >4 days were coded "yes" for heavy drinking. Participants were also asked how long it had been since they last smoked part or all of a cigarette; those answering "within the past 30 days" were coded as "yes" and those answering "more than 30 days, within 12 months", "more than 12 months ago" or those indicating that never had a full or partial cigarette were coded as "no" for current smoking. Current marijuana use and other illicit drug use (prescription drugs, crack, cocaine, heroin, LSD, methamphetamine, or inhalants like "poppers" or "whippits") in the last 30 days were defined similarly to current smoking.

Covariates

Covariates included demographic variables like age, race/ethnicity categorized based on the American Community Survey,[19] educational attainment, gender identity, and sexual orientation (see Table 1 for categories). Family support of gender identity was coded from the question "on average, how supportive are they (immediate family) of you being trans?". Responses were coded as supportive ("very supportive" or "supportive"), neutral ("neither supportive nor unsupportive"), or unsupportive ("unsupportive" or "very unsupportive"). Patients indicating that they have no immediate family or that none know that they are trans were not asked level of support so were coded as a separate category. Participants were also asked how many of their current healthcare clinicians know they are trans and responses included "no people like this in my life" (the respondent did not have any healthcare clinicians), "all know I am trans", "most know I am trans", "some know I am trans", and "none know I am trans". Lifetime exposure to Gender Identity Change Efforts (GICE) (yes vs. no) was defined based on the question "Did any professional (such as a psychologist, counselor, or religious advisor) try to make you identify only with your sex assigned at birth (in other words, try to stop you from being trans)?" Lifetime exposure to Sexual Orientation Change Efforts (SOCE) (yes vs. no) was defined with the question "Did any professional (such as a psychologist, counselor, religious advisor) ever try to change your sexual orientation or who you are attracted to (such as try to make you straight/heterosexual)?"

Statistical Analyses

Analyses were conducted using SAS v9.4 (SAS Institute, Cary, NC) and used complex survey procedures and sampling weights generated by the NCTE to reduce sampling bias due to age, educational level, and race/ethnicity and to improve generalizability. From the 27,715 participants completing the survey, 26,957 identified as a trans woman, trans man, assigned female at birth nonbinary/genderqueer, or assigned male at birth nonbinary/genderqueer. The 758 participants excluded at this stage identified as "crossdressers" and thus were ineligible for analysis. Of those participants with an eligible gender identity, 23,541 indicated that they had seen a health care clinician or doctor in the last year. This criterion was necessary as health care experience questions were asked only among those who had seen a health care professional in the last year. Among the 23,541 participants, 1,711 (7.6%) were excluded based on missing data from any variable in the study, leaving data for 21,740 participants available for analyses. Based on prior literature, this level of complete data analysis is acceptable,[20] as the missingness for each variable was less than 2%. The final analytic sample size for eligible participants based on survey weights was 18,890.

Weighted bivariate analyses compared each healthcare experience exposure with each mental health and substance use outcome using Rao-Scott χ^2 tests. Separate, weighted multivariable logistic regression models were used to calculate adjusted odds ratios and 95% confidence intervals for each healthcare experience and outcome pair. Models were adjusted for age, race, education, family support of gender identity, gender identity, sexual identity, GICE, SOCE, and current healthcare clinician knowledge of trans identity.

Results

Table 1 shows weighted prevalence estimates of all variables included in the analyses. Most of the participants were 25-64 years old (75.4%), White (66.5%), had at least some college education (62.0%), identified as transgender women (56.0%), and identified as a sexual minority (including lesbian, gay, and bisexual; LGB+) (63.3%). Approximately

three-fourths (73.5%) of participants indicated that their doctor knew they were TGNB and treated them with respect. The most prevalent negative healthcare experiences were having to teach doctors about TGNB care (24.8%), doctors asking invasive questions (12.9%), doctors refusing to give care related to one's TGNB identity (8.9%), and being verbally harassed in a healthcare setting (7.4%). There was an average 0.69 number of negative experiences (standard error = 0.03), with 35% experiencing at least one negative experience and 16.1% experiencing at least two. In the last year, about 40% experienced suicidal ideation and about 30% reported severe psychological distress. About one in four participants either reported binge alcohol drinking, heavy alcohol use, marijuana use, or smoking in the last month.

Table 2 shows results of bivariate relationships of mental health outcomes and each healthcare experience. Both severe psychological distress and suicidal ideation ($P < 0.0001$) were related to a lower prevalence of doctors knowing a participant is TGNB and treating them with respect, whereas suicide attempts ($P = 0.225$) was not associated with doctors knowing a patient is TGNB and treating them with respect.

Table 2. Weighted Frequency and Prevalence Estimates of Healthcare Experiences in the Last Year by Mental Health Outcomes[a]

	Severe psychological distress			Suicide ideation			Suicide attempt		
	No	Yes		No	Yes		No	Yes	
Variable, weighted n (%)	(n = 13262)	(n = 5628)	*P*	(n = 11278)	(n = 7611)	*P*	(n = 17729)	(n = 1161)	*P*
Healthcare experiences in the last year (yes)									
Doctor knew trans and treated with respect	10,357 (78.1)	3529 (62.7)	<.0001	8666 (76.8)	5220 (68.6)	<.0001	13,073 (73.7)	818 (70.0)	.225
Had to teach doctor about trans care	3023 (22.8)	1655 (29.4)	.0002	2494 (22.1)	2184 (28.7)	.0001	4293 (24.2)	385 (33.2)	.004
Doctor refused to give trans-related care	851 (6.4)	824 (14.6)	<.0001	629 (5.6)	1046 (13.7)	<.0001	1465 (8.3)	210 (18.1)	<.0001
Doctor refused to give other healthcare	446 (3.4)	337 (6.0)	.008	333 (3.0)	449 (5.9)	.004	694 (3.9)	88 (7.6)	.001
Doctor asked invasive questions about trans status	1405 (10.6)	1038 (18.5)	<.0001	1087 (9.6)	1357 (17.8)	<.0001	2173 (12.3)	271 (23.6)	<.0001
Doctor used harsh/abusive language	523 (3.9)	486 (8.6)	<.0001	418 (3.7)	591 (7.8)	.0004	861 (4.9)	148 (12.7)	<.0001
Doctor was physically rough/abusive	189 (1.4)	251 (4.4)	<.0001	174 (1.5)	266 (3.5)	.004	376 (2.1)	64 (5.5)	.051
Verbally harassed in a healthcare setting	679 (5.1)	728 (12.9)	<.0001	555 (4.9)	852 (11.2)	.0001	1199 (6.8)	207 (17.8)	<.0001
Physically attacked in a healthcare setting	116 (0.9)	134 (2.4)	.110	145 (1.3)	106 (1.4)	.891	194 (1.1)	56 (4.8)	.017
Unwanted sexual contact in a healthcare setting	201 (1.5)	170 (3.0)	.167	191 (1.7)	180 (2.4)	.514	288 (1.6)	83 (7.1)	.002

[a]Values represent weighted frequencies derived from complex survey analyses.

Suicide attempts were positively associated with most other studied negative healthcare outcomes except experiencing a physically rough or abusive clinician (P =0.051). Severe psychological distress was positively associated with most studied healthcare experiences including needing to teach the clinician about TGNB care, being refused TGNB-related care, being refused other healthcare, and being asked invasive questions (see Table 2).

Bivariate associations of alcohol and smoking outcomes with each healthcare experience are presented in Table 3. Binge drinking was associated with both verbal harassment (P = 0.040) and doctors asking invasive questions (P = 0.013), whereas heavy alcohol use was only associated with having a clinician ask invasive questions (P = 0.006). Smoking was associated with doctors asking invasive questions (P = 0.025), doctors using harsh/abusive language (P = 0.001), and patients being physically attacked in a healthcare setting (P = 0.028; see Table 3).

Table 4 shows bivariate associations of illicit drug use outcomes with each healthcare experience. Marijuana use and other illicit drug use were associated with most negative healthcare experiences, including having a doctor know of a patients'

Table 3. Weighted Frequency and Prevalence Estimates of Healthcare Experiences in the Last Year by Smoking and Drinking Outcomes[a]

	Binge drinking			Heavy alcohol			Smoking		
	No	Yes		No	Yes		No	Yes	
Variable, weighted n (%)	(n = 14574)	(n = 4315)	P	(n = 17532)	(n = 1358)	P	(n = 14632)	(n = 4258)	P
Healthcare experiences in the last year (yes)									
Doctor knew trans and treated with respect	10,782 (74.0)	3104 (71.9)	.234	12,931 (73.8)	955 (70.3)	.242	10,698 (73.1)	3188 (74.9)	.354
Had to teach doctor about trans care	3619 (24.8)	1060 (24.6)	.875	4296 (24.5)	383 (28.2)	.207	3546 (24.2)	1132 (26.6)	.249
Doctor refused to give trans-related care	1250 (8.6)	425 (9.8)	.326	1510 (8.6)	165 (12.2)	.139	1243 (8.5)	432 (10.1)	.151
Doctor refused to give other healthcare	628 (4.3)	155 (3.6)	.460	744 (4.2)	39 (2.9)	.230	566 (3.9)	217 (5.1)	.269
Doctor asked invasive questions about trans status	1763 (12.1)	681 (15.8)	.013	2184 (12.5)	260 (19.1)	.006	1782 (12.2)	662 (15.6)	.025
Doctor used harsh/abusive language	733 (5.0)	276 (6.4)	.219	898 (5.1)	111 (8.2)	.161	631 (4.3)	378 (8.9)	.001
Doctor was physically rough/abusive	300 (2.1)	1340 (3.2)	.179	375 (2.1)	65 (4.8)	.122	336 (2.3)	104 (2.4)	.842
Verbally harassed in a healthcare setting	964 (6.6)	443 (10.3)	.040	1278 (7.3)	129 (9.5)	.358	1011 (6.9)	396 (9.3)	.175
Physically attacked in a healthcare setting	181 (1.2)	69 (1.6)	.692	206 (1.2)	45 (3.3)	.177	123 (0.8)	128 (3.0)	.028
Unwanted sexual contact in a healthcare setting	288 (2.0)	84 (1.9)	.972	320 (1.8)	51 (3.8)	.278	294 (2.0)	77 (1.8)	.816

[a]Values represent weighted frequencies derived from complex survey analyses.

Table 4. Weighted Frequency and Prevalence Estimates of Healthcare Experiences in the Last Year by Illicit Drug Use[a]

	Marijuana use			Other illicit drug use		
Variable, weighted n (%)	No (n = 14385)	Yes (n = 4505)	*P*	No (n = 17327)	Yes (n = 1563)	*P*
Healthcare experiences in the last year (yes)						
Doctor knew trans and treated with respect	10,347 (71.9)	3539 (78.6)	<.0001	12,826 (74.0)	1060 (67.8)	.023
Had to teach doctor about trans care	3411 (23.7)	1268 (28.1)	.019	4227 (24.4)	451 (28.8)	.091
Doctor refused to give trans-related care	1157 (8.0)	518 (11.5)	.009	1446 (8.3)	229 (14.7)	.003
Doctor refused to give other healthcare	542 (3.8)	241 (5.3)	.113	675 (3.9)	107 (6.9)	.044
Doctor asked invasive questions about trans status	1656 (11.5)	787 (17.5)	<.0001	2129 (12.3)	314 (20.1)	.001
Doctor used harsh/abusive language	611 (4.2)	398 (8.8)	<.0001	829 (4.8)	180 (11.5)	.0003
Doctor was physically rough/abusive	240 (1.7)	20 (4.4)	.001	337 (1.9)	103 (6.6)	.002
Verbally harassed in a healthcare setting	885 (6.2)	521 (11.6)	.002	1189 (6.9)	218 (13.9)	.001
Physically attacked in a healthcare setting	156 (1.1)	94 (2.1)	.275	171 (1.0)	79 (5.1)	.004
Unwanted sexual contact in a healthcare setting	253 (1.8)	119 (2.6)	.411	288 (1.7)	84 (5.3)	.029

[a]Numbers in headings and table represent weighted frequencies from complex survey analyses.

TGNB identity and treat them with respect (marijuana use, $P < 0.0001$; drug use, $P = 0.023$) and having a clinician ask invasive questions (marijuana use, $P < 0.0001$; drug use, $P = 0.001$). Marijuana use was also associated with having to teach a clinician about TGNB care ($P = 0.019$), but illicit drug use was not (see Table 4).

Table 5 shows the results of adjusted logistic regression models. Doctors refusing to give TGNB-related care was associated with 2.33 times the odds of severe psychological distress for the patient (AOR = 2.33, 95% CI, 1.73–3.13), and increased the odds of suicidal ideation (AOR = 2.35; 95% CI, 1.79–3.07), suicide attempt (AOR=1.73; 95% CI: 1.22-2.45), and illicit drug use (AOR = 1.62; 95% CI, 1.15–2.28). Likewise, doctors refusing to give non-TGNB-related care was associated with increased psychological distress (AOR = 1.71; 95% CI, 1.08–2.71) and suicidal ideation (AOR = 1.95; 95% CI, 1.15–3.32). Having to teach doctors about TGNB care and doctors asking invasive questions were associated with all negative mental health outcomes. Doctors asking invasive questions was additionally related to a 58% increased odds of heavy alcohol use (AOR = 1.58; 95% CI, 1.16–2.15), marijuana use (AOR = 1.30; 95% CI, 1.04–1.64), and illicit drug use (AOR = 1.48; 95% CI, 1.13–1.92). Con-versely, doctors knowing their patient is transgender and treating them with respect was associated with 26% decreased odds of severe psychological distress (AOR = 0.74; 95% CI, 0.58–0.95), and was not associated with suicidal ideation or attempts (see Table 5).

Doctors using harsh or abusive language, being physically rough or abusive, and verbally harassing patients were associated with increased odds of severe psychological distress (AOR range, 1.63–2.77; all *P*s < 0.05) and suicidal ideation (AOR range, 1.56–2.22; all *P*s < 0.05). Verbal harassment in a healthcare setting was associated with a 70% increased odds of binge drinking (AOR = 1.70, 95% CI, 1.10–2.61) and doctors using harsh or abusive language was associated with almost twice the odds of smoking (AOR = 1.86; 95% CI, 1.23–2.81). Finally, doctors using harsh language, being physically rough, verbal harassment, physical attacks, and unwanted sexual contact were all positively associated with other illicit drug use (AOR range, 2.02–4.48; all *P*s < 0.05).

Discussion

The results of this study indicate negative health care experiences are significantly associated with mental health and substance use for TGNB adults. While there is a small body of existing evidence that describes the profound negative impact of verbal, physical, and sexual harassment on TGNB patients,[12,21,22] this study establishes a connection between negative mental health, substance use, and

Table 5. Weighted Adjusted Odds Ratios (AORs) and 95% Confidence Intervals (CIs) for the Relationship of Last Year Healthcare Experiences With Mental Health and Substance Use Outcomes[a]

Variable	Severe psychological distress AOR 95% CI	Suicide ideation AOR 95% CI	Suicide attempt AOR 95% CI	Binge drinking AOR 95% CI	Heavy alcohol AOR 95% CI	Smoking AOR 95% CI	Marijuana use AOR 95% CI	Other illicit drug use AOR 95% CI
Healthcare experiences in the last year (yes)								
Doctor knew trans and treated with respect	0.74 0.58, 0.95	0.88 0.72, 1.10	0.71 0.45, 1.12	0.92 0.68, 1.23	0.80 0.46, 1.39	0.85 0.61, 1.19	1.50 1.14, 1.97	0.79 0.52, 1.22
Had to teach doctor about trans care	1.56 1.28, 1.91	1.42 1.19, 1.71	1.43 1.06, 1.91	0.97 0.81, 1.16	1.23 0.94, 1.61	1.05 0.87, 1.28	1.11 0.92, 1.33	1.19 0.94, 1.51
Doctor refused to give trans-related care	2.33 1.73, 3.13	2.35 1.79, 3.07	1.73 1.22, 2.45	1.10 0.82, 1.48	1.33 0.86, 2.05	1.01 0.76, 1.35	1.22 0.92, 1.62	1.62 1.15, 2.28
Doctor refused to give other healthcare	1.71 1.08, 2.71	1.95 1.15, 3.32	1.59 0.97, 2.62	0.82 0.49, 1.38	0.61 0.30, 1.25	1.20 0.72, 2.00	1.35 0.88, 2.07	1.63 0.99, 2.66
Doctor asked invasive questions about trans status	1.59 1.24, 2.04	1.64 1.30, 2.07	1.62 1.18, 2.24	1.23 0.98, 1.55	1.58 1.16, 2.15	1.18 0.91, 1.53	1.30 1.04, 1.64	1.48 1.13, 1.92
Doctor used harsh/abusive language	1.63 1.07, 2.49	1.56 1.01, 2.42	1.87 1.18, 2.95	1.15 0.78, 1.70	1.46 0.81, 2.63	1.86 1.23, 2.81	1.73 1.17, 2.55	2.02 1.31, 3.12
Doctor was physically rough/abusive	2.77 1.59, 4.81	1.88 1.02, 3.48	1.75 0.82, 3.75	1.44 0.74, 2.79	1.95 0.79, 4.82	0.93 0.49, 1.76	2.35 1.32, 4.20	2.92 1.48, 5.75
Verbally harassed in a healthcare setting	2.69 1.56, 4.62	2.22 1.31, 3.76	2.26 1.51, 3.39	1.70 1.10, 2.61	1.28 0.79, 2.07	1.15 0.76, 1.74	1.60 1.05, 2.44	2.02 1.39, 2.93
Physically attacked in a healthcare setting	1.60 0.39, 6.52	0.54 0.16, 1.82	2.00 0.64, 6.29	1.11 0.33, 3.72	2.54 0.67, 9.64	2.69 0.83, 8.76	1.27 0.42, 3.80	4.48 1.50, 13.34
Unwanted sexual contact in a healthcare setting	1.73 0.75, 3.96	1.17 0.50, 2.75	3.43 1.62, 7.29	0.99 0.41, 2.40	1.96 0.65, 5.89	0.71 0.31, 1.68	1.26 0.59, 2.72	3.37 1.51, 7.54

Abbreviations: AOR, adjusted odds ratio; CI, confidence interval.
[a]Separate model for each question and outcome pair. Each model adjusted for age, race, education, family support of gender identity, gender identity, sexual orientation, gender and sexual identity change efforts, current healthcare clinicians know participant is trans.

more subtle forms of discrimination in healthcare settings. Conversely, clinicians treating TGNB patients with respect provided a protective effect against severe psychological distress, which reflects similar findings from Kattari et al.[12]

Minority stress theory, originally conceptualized to describe the increased prevalence of poor mental health outcomes among sexual minority groups,[23,24] explains the relationships between experiences of stigma and discrimination and depression, suicidality, and substance use among transgender youth and adults.[7,13,25,26] One of the key implications of the minority stress model is both the profound negative impact of actual discrimination and the chronic stress of anticipating discrimination in all social spheres for TGNB people. Discrimination against the TGNB community is not limited to healthcare settings, but the impacts of healthcare-related discrimination compound on negative impacts of discrimination faced in other contexts—which is why the impact of healthcare discrimination, even on a seemingly smaller and more subtle scale, has severe implications.

Unsurprisingly, the associations of some of the most overtly discriminatory or aggressive actions—verbal harassment and harsh and abusive language—had the largest range of negative outcomes. That said, it is important to note that the potential negative impacts of these actions were not the highest across all potential outcomes; for example, the odds of heavy alcohol use were much higher when a TGNB patient was asked invasive questions than when they experienced verbal harassment or harsh/abusive language. Therefore, although referred to as more subtle acts of discrimination, they are considered subtle based on their relative visibility rather than based on their impact on the individual.

The more subtle forms of discrimination, including clinicians relying on their patients for information regarding TGNB care and asking invasive questions of their patients, are most likely an indication of a lack of education and experience in medical training rather than a conscious attempt to be unsupportive. Even though clinicians may not have malintent in asking invasive questions or needing to be taught by patients, our findings show that the impact of creating uncomfortable and potentially unsafe spaces may be significant. It could be the impact of these experiences is amplified by the vulnerability of being a TGNB patient within a medical setting in need of care. This is similar to the more specific experiences of TGNB people seeking gender-affirming care described by von Volgelsang et al, in which participants described feeling like they had no choice but to depend on clinicians with limited TGNB care knowledge due to the difficulty of accessing gender-affirming care.[27] This vulnerability can potentially be extended to all types of healthcare; if a clinician makes comments or questions that make their patient uncomfortable, TGNB patients cannot choose to leave because they need treatment, which may increase feelings of vulnerability.

Unexpectedly, we also found that a doctor knowing of a patient's TBNB identity and treating them with respect is associated with a 50% increased odds of marijuana use. One potential explanation for this is that medical marijuana is used for anxiety, depression, and chronic illness,[28] all of which are more prevalent in TGNB people, thus, TGNB patients may be more likely to be prescribed medical marijuana.[29] It may also be a spurious finding with no meaningful connection, especially given the increasing use in the general population[30] and decreased stigmatization of marijuana use across the country.[31]

Implications

Healthcare experiences (and physicians specifically) contribute to stigma and poor health outcomes for TGNB people, which adds to the daily burden of discrimination and violence that TGNB people face. There are several steps that clinicians and practices can take, both immediately and over time, that will help foster a more welcoming and affirming medical environment for TGNB patients.

As demonstrated by this study, asking invasive questions is associated with almost all studied negative outcomes. One way to improve a patient's comfort with a medical interview is using affirming, respectful, and accepting language when talking to and referring to TGNB patients. One way to affirm a patient's gender identity is to mimic the patient's language in how they refer to themselves or their body. Conversations about anatomy can be very sensitive for TGNB people, so clinicians should follow their patients' lead in these conversations. For example, if the patient refers to their breasts as their chest, the clinician should also use the word chest instead of breasts. Another way to affirm a patient's identity is to use their chosen name and pronouns, even if they are different from what is on their legal or health insurance documents, in conversations with the patient, about the patient, and in thoughts about the patient.

If personal questions are medically necessary to ask, such as questions regarding gender-affirming surgeries or sexual partners, explain to the patient how this information will be used.[32] For example, the clinician could explain why they may need information about past gender affirmation surgeries to ensure the patient receives proper preventative care. However, if the question is not relevant to the patient's current treatment, it is best the clinician turns to outside resources such as webinars, videos, and learning modules for their own education. These resources are easily accessible and provided by the National LGBTQIA+ Health Education Center along with many other organizations.[33]

Outside resources should also be used regularly to keep updated on trends in language and best practices in TGNB-affirming care. Additionally,

opportunities for increased empathy have been shown to help shift overall attitudes and beliefs about TGNB people.[34] In addition to informational training, departments and medical offices should find ways to engage with the TGNB community directly, such as through panels, referral partners, offering direct support through donations or free clinic time, speakers, or conferences.[35]

Limitations

Several limitations of this study should be noted. The cross-sectional nature of this study does not allow for the establishment of any causal relationships between the study variables used. Further, both the independent variables and main outcome measures were based on self-report questionnaires, which may allow for variability in the interpretation of experiences, particularly with experiences such as "being treated with respect." However, these NCTE survey results have been used by prior studies.[12] Furthermore, it is important to consider that a patient's perception of an experience is often more important than the intent of an action, and therefore, these findings still hold significant value to improving clinician-patient interactions. Finally, the USTS survey was only offered online to those who spoke English or Spanish, so our results are not generalizable to those without internet access or those who did not speak either of these languages.

Future Research

Future research can explore how experiences differ by gender identity, racial and ethnic identity, and geographical location may clinician further insight into differing experiences in healthcare for TGNB people. In addition, future healthcare practices will benefit from research on the most effective methods for changing healthcare clinicians' beliefs and attitudes about TGNB patients and teaching the best practices for providing both routine and transition-related care.

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