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The Impact of Anti-discrimination Legislation on Transgender People within the USA

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Abstract

Introduction Several state policies were introduced to offer protection and legislative remedies for the hardship experienced by transgender people. However, the impact of such policies is still unclear whether these state policies impact all transgender people the same way or to only a select subset of them. We study the effect of state policies on distress among those who used gender-affirming medical care and those who did not.

Methods The study used the 2015 US Transgender Survey (collected by the National Center for Transgender Equality) to examine the relationship between transgender anti-discrimination policies and health. The study utilized 27,050 cases from 50 states, and linear regression modeling to see how the relationship between policy and distress differs based on the use of gender-affirming medical care.

Results Non-discrimination, public accommodation, hate crime, and ban on Medicaid exclusion legislation were each associated with less distress only for those who did not use gender-affirming medical care, and no effect on those who did. Furthermore, having more people know about one's transgender identity reduced distress, especially among those who used gender-affirming medical services.

Conclusions This study found state-level anti-discrimination legislation varies in its protection of transgender people from distress. Specifically, policies were only effective for those who did not use medical services like hormones or surgeries.

Policy Implications Transgender populations are very diverse and need policy that can encompass the diversity among transgender people. While protection from violence and discrimination is vital, so can policy protecting their access to gender-affirming care.

Keywords Transgender · Policy analysis · Discrimination · Medical gender affirmation · Distress

Introduction

Many transgender people experience discrimination and violence at various points in their lives (James et al., 2016; Lombardi, 2001). Consequently, they show a higher prevalence of mental health problems than non-transgender people (Su et al., 2016). Over the years, several state policies were introduced to offer protection and legislative remedies for the hardship or harm experienced by transgender people in order to help curb the rising prevalence of mental health problems. And many scholars have even noted the positive impact of such policies (Blosnich et al., 2016; Horne et al., 2021). This study utilizes a diverse sample of transgender and other gender-diverse people to examine the relationship between state policies and health outcomes.

Prior studies have noted significant disparities in health outcomes in transgender persons with respect to use of gender-affirming medical care. Mental health outcomes of transgender persons that lived full time in their identified gender (socially transitioned) far exceed those of their counterparts that did not use gender-affirming medical care (Budge et al., 2013; Katz-Wise et al., 2017). Similarly, significant improvements in depression and anxiety were observed for those who used gender-affirming medical care (White Hughto & Reisner, 2016). In this paper, we study the effect of state policies on distress for two groups of transgender people—those who used gender-affirming

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medical care and those who did not. The goal is to include structural measures in examining the relationship between individual factors like medical affirmation services upon health outcomes.

The evidence for the use of protective legislation to promote better mental health outcomes for transgender people is rather scant. Blosnich et al. studied transgender people that lived in states with substantive employment discrimination protections and found lowered risk of suicidal ideation, self-directed violence, and mood disorders (Blosnich et al., 2016). Horne et al. examined how the procedural vote on a referendum to remove state-level gender protections negatively impacted the mental health of transgender people (Horne et al., 2021). Because of the evidence on transgender people is limited, we also draw on the studies detailing the legislation-distress relationship in lesbian, gay, and bisexual people as well. Here, the evidence for protective legislation yielding fewer negative mental health outcomes is well documented, e.g., fewer psychiatric disorders (Hatzenbuehler et al., 2009, 2010), fewer suicide attempts (Hatzenbuehler, 2011), and lower distress (Everett et al., 2016).

Meyer's minority stress model purports that sexual minorities experience a plethora of unique, chronic, and sociability-based stressors, much more than what is experienced by heterosexual people (Meyer, 2003). And, these stressors are linked with increased rates of distress (Bockting et al., 2013; Testa et al., 2012). Meyer claims that social support and coping may help alleviate some of the negative effects of the minority stressors and several studies provide empirical validity for these claims for transgender people. Specifically, social support is associated with lower rates of distress (Bariola et al., 2015; Bockting et al., 2013), anxiety (Pflum et al., 2015), depression (Boza & Nicholson Perry, 2014; Nemoto et al., 2011), non-suicidal self-injury (Claes et al., 2015; Davey et al., 2016), and suicidal ideation and attempts (Bauer et al., 2015). Among the various social support parameters, familial support plays an even more important role in the well-being and the quality of life of transgender people (Başar et al., 2016). However, the opposite is also true: familial rejection and domestic violence were also tightly associated with poor mental health (Haas et al., 2014). Often overlooked is the fact that social support also provides a channel for information sharing on key medical and nonmedical resources among transgender people (Pinto et al., 2008), which on itself may lead to reduced distress.

Transgender people face discrimination in housing, work and employment, accommodation, and healthcare (Bradford et al., 2013; Reisner et al., 2015). NTDS reports that nearly two-thirds (63%) of all transgender persons had experienced a serious act of discrimination and nearly a quarter (23%) of all transgender persons experienced multiple serious acts (> 3) of discrimination (Grant et al., 2011). The prevalence of discrimination is so widespread that over one in four (28%) of transgender persons postponed key medical treatments due to discrimination at the healthcare setting. Discrimination also leads to targeted attacks on transgender people. Over 40% of transgender people report past physical violence and sexual violence in their lives (Clements-Nolle et al., 2006; Kenagy & Bostwick, 2005; Lombardi et al., 2001; Xavier et al., 2007). And experiences of discrimination and the targeted attacks that accompany them are often associated with acute depressive episodes and chronic depressive disorders (Bockting et al., 2013; Khobzi Rotondi, 2012; Nemoto et al., 2011; Nuttbrock et al., 2009; Su et al., 2016; Sugano et al., 2006).

Methods

Data Source

In this paper, we used the 2015 US Transgender Survey (USTS) data to examine the relationship between state-level legislative protections for transgender persons and mental health. The National Center for Transgender Equality compiled the USTS data from personal experiences and responses of adults (18 years or more) who identify as transgender, trans, genderqueer, non-binary, or any other identities on the transgender identity spectrum living in the continental and territorial US. This data was distributed and collected primarily as an online survey in the summer of 2015. A detailed synopsis on the methods and characteristics of the USTS data can be found in the NCTE report (James et al., 2016).

Variables

Our mental health variable is the Kessler Psychological Distress Scale. This variable assessed the participant's psychological distress based on how often in the past 30 days they reported being (i) so sad that nothing could cheer them up, (ii) nervous, (iii) restless or fidgety, (iv) hopeless, (v) that everything was an effort, or (vi) worthless (Moran, n.d.). Each of these six items was rated between 0 and 4 based on how often feelings were experienced, where 0 implies none of the time, 1 implies a little of the time, 2 implies some of the time, 3 implies most of the time, and 4 implies all of the time. On the aggregate, this variable ranged from a score of 0 (low distress) to a score of 24 (high distress).

State-level policy variables are dichotomous variables on transgender protective legislation that existed in the participants' state at the time of the survey and includes those that relate to gender identity–based discrimination on employment and housing, discrimination on public accommodation, hate crime, and ban on insurance exclusions for transgender healthcare services. The information

identifying state policies was retrieved from the Movement Advancement Project website (Movement Advancement Project, 2016).

Medical affirmation status was measured based on whether a participant utilized any medical intervention (hormones/surgery, excl. voice therapy) related to transitioning from one gender to another. This measure was included in the study to examine whether the effect of state-level policies on participant's mental distress varied by the participants' use of gender-affirming medical care.

Next, we include two measures of participant relationships. The first measure is the self-reported number on close relationships in participant's life (ranging from 0 to 9 people). The second measure is the self-reported fraction of those close relationships who were currently aware of the person's transgender identity (ranging from 0 to 1.0). These measures provide some information about people's support network. More close relationships could allow for more supportive interactions. Percentage of people knowing about one's transgender status is used as a measure of outness or concealment. Having more people know about one's identity (outness) has been linked with less distress (Riggle et al., 2017).

The participant's discrimination experience is based on the questions that asked participants whether they were verbally harassed, whether they were disrespected, denied equal treatment or services, and whether they were physically attacked or assaulted within various contexts. Dichotomous measures were created that capture participants experiencing any harassment, being denied equal treatment, and violence within any setting. Additional variables were used to control for age, race/ethnicity, education, income, gender identity, gender nonconformity, insurance coverage for transgender services, and geography (US Census region).

Sample

We start by including all transgender participants living in the continental US in the study and exclude those living outside in US territories (27,050 respondents). We then exclude all observations with missing data (less than 10% of respondents) on all key study variables discussed above. As such, our final sample comprises 24,741 observations from 50 states. For robustness, we exclude 682 transgender participants who never intended to use gender-affirming medical care from our sample and redid the analysis. We have two different final samples. The first sample consists of people who have received gender-affirming care or did not receive gender-affirming care. This sample could include those individuals who do not wish to receive gender-affirming care. And, so the second sample, does not include those who do NOT wish to have such care.

Analysis

Statistical analyses were conducted using Stata version 16.1. A table of summary statistics of all study variables was categorized by use of gender-affirming medical care. We used *t*- or chi-square tests to assess if there were significant differences between those who used gender-affirming medical care and those who did not. Our multivariate analysis starts with a base model where we examined the effect of state transgender policy, discrimination, and personal relationships on distress using a linear regression model. To this model, we included whether they used gender-affirming medical care to capture its effect on distress. Finally, we run two pooled sub-sample regressions—one for those who transitioned and the other for those who did not, to evaluate whether the overall impact of state transgender policies on distress varies by the participant's use of gender-affirming medical care. All of the analyses described here were done for the two different samples as mentioned in the sample section. In all these models, we include standard socioeconomic and demographic factors.

Results

We first compared responses to selected variables between transgender persons that used gender-affirming medical care and those who did not (Table 1). Transgender persons who used gender-affirming medical care reported less distress (9.2 vs. 12.3, $p < 0.001$) and lived in states with legislation that protect against gender-identity discrimination (employment and housing, 57.8% vs. 50.0%; public accommodations, 52.4% vs. 44.8%; hate crime, 50.1% vs. 43.4%; and ban on insurance exclusion, 46.8% vs. 38.8%; all with $p < 0.001$) than the rest of the sample.

Though both groups of transgender persons had comparable number of close relationships (7.6 vs. 7.4), the fraction of those relationships who were currently aware of the person's transgender identity varied markedly between those who transitioned and those who did not (59.8% vs. 30.2%, $p < 0.001$). Those who transitioned also reported less harassment (45.4% vs. 48.1%, $p < 0.001$) and unequal treatment (17.0% vs. 9.6%, $p < 0.001$). The most striking difference between the two groups of transgender persons (transitioned and not transitioned) was found in their insurance coverage for transgender services. Transitioned transgender persons reported having insurance policies that limited coverage for hormone therapy or surgery (37.6% vs. 16.9%, $p < 0.001$) than the rest of the sample. Neither sample with nor without those who did not want medical care was very different from each other within the results.

Transitioned transgender persons on average had higher educational attainment (4-year college degree, 29.6% vs.

Table 1 Responses to selected variables between transgender persons that used gender-affirming medical care and those who did not

	Accessed gender-affirming medical care		Did not access gender-affirming medical care		Total sample	
	(*N* = 12,922)		(*N* = 11,819)		(*N* = 24,741)	
	Mean or % (*N*)		Mean or % (*N*)		Mean or % (*N*)	
Kessler psychological distress	9.2		12.3		10.7	
State transgender policies:						
Non-discrimination in employment and housing (yes)	57.8	(7472)	50	(5905)	54.1	(13,377)
Non-discrimination in public accommodations (yes)	52.4	(6767)	44.8	(5299)	48.8	(12,066)
Hate crime legislation that includes gender identity (yes)	50.1	(6479)	43.4	(5134)	46.9	(11,613)
Ban on insurance exclusion for transgender healthcare (yes)	46.8	(6052)	38.8	(4590)	43	(10,642)
Personal relationships:						
Total number of people in their life	7.6		7.4		7.5	
% of people in their life who know they are transgender	59.8		30.2		45.7	
Experienced discrimination?						
Harassment (yes)	45.4	(5865)	48.1	(5681)	46.7	(11,546)
Physical violence (yes)†	8.3	(1075)	8.6	(1021)	8.5	(2096)
Denied equal treatment (yes)	17	(2202)	9.6	(1130)	13.5	(3332)
Age	35.3		26.3		31	
Denied or no insurance coverage for hormone/surgery (yes)	37.6	(4853)	16.9	(1999)	27.7	(6852)
Education:						
High school or less	1.8	(228)	4.4	(524)	3	(752)
High school graduate	8.4	(1085)	15.8	(1866)	11.9	(2951)
Some college (no degree)	32.3	(4171)	44	(5195)	37.9	(9366)
Associate's degree	10	(1295)	6.7	(789)	8.4	(2084)
Bachelor's degree	29.6	(3821)	21.4	(2524)	25.7	(6345)
Graduate/professional degree	18	(2322)	7.8	(921)	13.1	(3243)
Income:						
No income	8.1	(1041)	21.1	(2493)	14.3	(3534)
$1 to $14,999	32.6	(4208)	47.4	(5597)	39.6	(9805)
$15,000 to $24,999	13.9	(1790)	9.6	(1136)	11.8	(2926)
$25,000 to $34,999	10.1	(1306)	6.1	(723)	8.2	(2029)
$35,000 to $49,999	10.9	(1404)	5.4	(639)	8.3	(2043)
$50,000 or more	24.6	(3173)	10.4	(1231)	17.8	(4404)
Gender identity:						
Crossdresser	1	(129)	4.2	(498)	2.5	(627)
Trans women	48.8	(6302)	15.3	(1811)	32.8	(8113)
Trans men	38.1	(4926)	19.4	(2290)	29.2	(7216)
Assigned-female-at-birth genderqueer/non-binary	8.7	(1125)	50.4	(5954)	28.6	(7079)
Assigned-male-at-birth genderqueer/non-binary	3.4	(440)	10.7	(1266)	6.9	(1706)
Gender appearance:						
Conforming	51.4	(6638)	59.6	(7038)	55.3	(13,676)
Somewhat nonconforming	34.2	(4415)	32.2	(3805)	33.2	(8220)
Nonconforming	14.5	(1869)	8.3	(976)	11.5	(2845)
Race:						
White	82.7	(10,692)	80.9	(9561)	81.9	(20,253)
Black	3.1	(404)	2.5	(294)	2.8	(698)

Table 1 (continued)

	Accessed gender-affirming medical care		Did not access gender-affirming medical care		Total sample	
	(*N* = 12,922)		(*N* = 11,819)		(*N* = 24,741)	
	Mean or % (*N*)		Mean or % (*N*)		Mean or % (*N*)	
Hispanic	4.8	(621)	5.6	(662)	5.2	(1283)
Asian	2.6	(336)	3.2	(381)	2.9	(717)
Other race	6.7	(869)	7.8	(921)	7.2	(1790)
Census region:						
Midwest	19.7	(2541)	22.5	(2658)	21	(5199)
Northeast	20.8	(2686)	20.1	(2374)	20.5	(5060)
South	25.3	(3,270)	29.6	(3498)	27.4	(6768)
West	34.2	(4,425)	27.8	(3289)	31.2	(7714)

21.4%, $p < 0.001$; and masters or professional degree, 18.0% vs. 7.8%, $p < 0.001$) and consequently had higher proportion of high-income wage earners (between $25,000 and $34,999 annually, 10.1% vs. 6.1%; between $35,000 and $49,999 annually, 10.9% vs. 5.4%; and more than $50,000 annually, 24.6% vs. 10.4%, all with $p < 0.001$) than those transgender persons who did not use gender-affirming medical care. And transitioned transgender persons are also older (35.3 years vs. 26.3 years, $p < 0.001$) than the rest of the sample.

Multiple Linear Regression of Distress

By examining the effect state policies play on distress for the full sample transgender persons within the multiple linear regression framework (Table 2), we found that those living in states with legislation that protect against gender-identity discrimination (employment and housing, public accommodations, hate crime, and ban on insurance exclusion) reported less distress than those living in other states ($p < 0.01$). Further, having more people in one's life and a

Table 2 Examining distress among the full sample transgender persons

	DEPENDENT VARIABLE: KESSLER PSYCHOLOGICAL DISTRESS							
	State policies that include gender identity							
	(1) Non-discrimination in employment and housing (yes)		(2) Non-discrimination in public accommodations (yes)		(3) Hate-crime laws that includes gender identity. (yes)		(4) Ban on insurance exclusion for transgender healthcare. (yes)	
	β	*se*	*β*	*se*	*β*	*se*	*β*	*se*
State policy	−0.317[a]	(0.086)	−0.261[b]	(0.08)	−0.314[a]	(0.074)	−0.239[c]	(0.091)
Personal relationships								
Total number of people in their life	−0.159[a]	(0.025)	−0.159[a]	(0.025)	−0.159[a]	(0.025)	−0.160[a]	(0.025)
% of people in their life who know they are transgender	−3.593[a]	(0.161)	−3.603[a]	(0.16)	−3.600[a]	(0.161)	−3.602[a]	(0.161)
Experienced discrimination?								
Denied equal treatment (yes)	1.141[a]	(0.104)	1.141[a]	(0.104)	1.143[a]	(0.104)	1.143[a]	(0.104)
Harassment (yes)	1.492[a]	(0.073)	1.491[a]	(0.073)	1.491[a]	(0.073)	1.492[a]	(0.073)
Physical violence (yes)	1.604[a]	(0.125)	1.605[a]	(0.125)	1.605[a]	(0.125)	1.602[a]	(0.125)

Standard errors in parentheses

[a] $p < 0.001$; [b] $p < 0.005$; [c] $p < 0.010$; [d] $p < 0.050$

higher percentage of people who were currently aware of their transgender identity were also strongly associated with less distress ($p < 0.001$). Experiences of discrimination, harassment, and violence were all associated with more distress ($p < 0.001$). Having an insurance policy that limits transgender person's coverage for hormone therapy and surgery is strongly associated with more distress ($p < 0.001$, data not shown).

The next series of analyses repeated the regressions shown in Table 2 to include the impact of transitioning on distress. In Table 3, we introduce the medical affirmation status of the transgender person as an additional covariate. Here, we found that the use of gender-affirming care was also strongly associated with less distress ($p < 0.001$). And, even after controlling for this additional covariate, the four state-level legislation and key individual-level covariates (social relationships, discrimination experiences, and insurance coverage for transgender services) had similar significant association with distress as discussed before ($p < 0.001$). In Table 4, we bifurcated the sample into those transgender persons that used gender-affirming medical care from those who did not. Separate regression analyses on these subsamples reveal that the effect of state legislation on distress documented previously was solely limited to those who did not utilize medical services ($p < 0.001$), whereas no discernable effect was recorded for those who used gender-affirming medical care. However, individual-level covariates still explained the variability in distress in both subsamples as before.

Discussion

Recent studies have advocated that there is non-ignorable diversity among transgender people (Blosnich et al., 2016; Maguen & Shipherd, 2010). While it is widely documented (and we also show it empirically in Table 2) that gender-protective legislation broadly improves the overall mental health of transgender people, it is not clear whether such an improvement is sizable and meaningful for all types of transgender persons. By administering separate regression analyses on the subsamples of those who used gender-affirming medical care and those who do not, we show that the effect of state legislation on mental health documented previously was solely limited to those who did not utilize medical services to transition (Table 4), whereas other transgender persons reported limited benefits from the presence of favorable state legislative policies. This heterogeneous response to state policies is our main contribution.

Further, to capture a different aspect of heterogeneity among transgender people, we repeated our analysis using social transition (i.e., living in a gender that is different than the one assigned at birth). There were starker differences between those who used gender-affirming medical care and those who did not, and then those who socially transitioned and those who did not. Examining the difference between these groups found that 8.71% (2,150 cases) of the sample reported using hormones or receiving

Table 3 Examining distress among the full sample transgender persons including gender affirming care

	DEPENDENT VARIABLE: KESSLER PSYCHOLOGICAL DISTRESS							
	State policies that include gender identity							
	(1) Non-discrimination in employment and housing (yes)		(2) Non-discrimination in public accommodations (yes)		(3) Hate-crime laws that includes gender identity. (yes)		(4) Ban on insurance exclusion for transgender healthcare. (yes)	
	β	se	*β*	*se*	*β*	*se*	*β*	*se*
State policy	−0.280[b]	(0.086)	−0.228[b]	(0.08)	−0.283[a]	(0.074)	−0.204[d]	(0.091)
Accessed gender-affirming medical care	−0.938[a]	(0.095)	−0.940[a]	(0.095)	−0.937[a]	(0.095)	−0.943[a]	(0.095)
Personal relationships								
Total number of people in their life	−0.176[a]	(0.025)	−0.176[a]	(0.025)	−0.176[a]	(0.025)	−0.177[a]	(0.025)
% of people in their life who know they are transgender	−2.834[a]	(0.18)	−2.841[a]	(0.18)	−2.841[a]	(0.18)	−2.838[a]	(0.18)
Experienced discrimination?								
Denied equal treatment (yes)	1.183[a]	(0.105)	1.183[a]	(0.105)	1.184[a]	(0.105)	1.185[a]	(0.105)
Harassment (yes)	1.464[a]	(0.073)	1.463[a]	(0.073)	1.464[a]	(0.073)	1.464[a]	(0.073)
Physical violence (yes)	1.587[a]	(0.125)	1.588[a]	(0.125)	1.588[a]	(0.125)	1.585[a]	(0.125)

Standard errors in parentheses

[a]$p < 0.001$; [b]$p < 0.005$; [c]$p < 0.010$; [d]$p < 0.050$

Table 4 Examining distress separately by people's usage of gender affirming care

	DEPENDENT VARIABLE: KESSLER PSYCHOLOGICAL DISTRESS							
	State policies that include gender identity							
	(1) Non-discrimination in employment and housing (yes)		(2) Non-discrimination in public accommodations (yes)		(3) Hate-crime laws that includes gender identity. (yes)		(4) Ban on insurance exclusion for transgender healthcare. (yes)	
	β	*se*	*β*	*se*	*β*	*se*	*β*	*se*
GROUP A: DID NOT ACCESS GENDER-AFFIRMING MEDICAL CARE								
State policy	−0.459[a]	(0.125)	−0.248[d]	(0.117)	−0.416[a]	(0.109)	−0.419[b]	(0.134)
Personal relationships								
Total number of people in their life	−0.128[a]	(0.031)	−0.130[a]	(0.031)	−0.128[a]	(0.031)	−0.130[a]	(0.031)
% of people in their life who know they are transgender	−1.805[a]	(0.283)	−1.825[a]	(0.283)	−1.821[a]	(0.282)	−1.805[a]	(0.283)
Experienced discrimination?								
Denied equal treatment (yes)	0.980[a]	(0.174)	0.978[a]	(0.174)	0.981[a]	(0.174)	0.985[a]	(0.174)
Harassment (yes)	1.188[a]	(0.104)	1.185[a]	(0.104)	1.187[a]	(0.104)	1.188[a]	(0.104)
Physical violence (yes)	1.438[a]	(0.173)	1.439[a]	(0.173)	1.439[a]	(0.173)	1.433[a]	(0.173)
GROUP B: ACCESSED GENDER-AFFIRMING MEDICAL CARE								
State policy	−0.103	(0.117)	−0.201	(0.109)	−0.135	(0.1)	−0.011	(0.122)
Personal relationships								
Total number of people in their life	−0.198[a]	(0.041)	−0.199[a]	(0.041)	−0.199[a]	(0.041)	−0.198[a]	(0.041)
% of people in their life who know they are transgender	−3.212[a]	(0.24)	−3.210[a]	(0.24)	−3.213[a]	(0.24)	−3.218[a]	(0.24)
Experienced discrimination?								
Denied equal treatment (yes)	1.263[a]	(0.13)	1.262[a]	(0.13)	1.264[a]	(0.13)	1.263[a]	(0.13)
Harassment (yes)	1.668[a]	(0.104)	1.670[a]	(0.104)	1.669[a]	(0.104)	1.667[a]	(0.104)
Physical violence (yes)	1.733[a]	(0.178)	1.734[a]	(0.178)	1.735[a]	(0.178)	1.732[a]	(0.179)

Standard errors in parentheses

[a]$p < 0.001$; [b]$p < 0.005$; [c]$p < 0.010$; [d]$p < 0.050$

surgery and had not transitioned socially, and 16.85% (4,162 cases) reported social transition but not using hormones or having surgery. Next, we redid all of the statistical analysis by excluding the transgender participants who never intended to use gender-affirming medical care and found qualitatively similar results. These participants showcase the diversity found transgender population and the need to capture the diversity among them.

Further, from our multiple regression analysis, we find that employment non-discrimination and hate crimes legislation show less distress regardless of their social transition status, whereas public accommodations protection and bans on insurance exclusions were associated with less distress only for those who socially transitioned. The coefficients for the policies were weaker in the analysis with those who used gender-affirming medical care. Our results acknowledge that transgender persons' experiences differ in response to transitioning and studying these differences matters for further shaping gender-related public policies in the future.

Our study shows that while non-discrimination, hate crimes, and other state legislation are an important structural intervention to product transgender people in a broad sense, this legislation treat transgender people as a single homogenous group. Other studies have found that there is non-ignorable diversity among transgender people with different experiences (Blosnich et al., 2016). We add to the body of such studies and show that transgender people's experiences can differ based on whether they socially transition or use gender-affirming medical care. For example, those who socially transitioned may tend to prioritize hate crimes legislation due to worries around public harassment and violence.

There are also important socioeconomic differences between those who used gender-affirming medical care and

those who did not. Those who used affirming medical care reported to be older, more educated, to report higher income than those who did not, and generally reporting less distress. They also reported being denied insurance coverage for hormones or surgery. These differences can reflect the relative privilege needed to access medical resources without the aid of insurance. Policy can play an important role in aiding people in accessing gender-affirming care like hormones and surgical interventions via health insurance that would likely require out of pocket expenditures otherwise (Goldenberg et al., 2020a). Studies have shown that gender-affirming care is beneficial for many transgender and other gender-diverse people by reducing their level of distress, and this is reflected in our finding that those who used affirming care reported less distress (Goldenberg et al., 2020a).

A significant coping resource regardless of which variable was used to identify transgender people was their social relationships. The more people participants reported knowing that they were transgender was associated with them reporting less distress regardless of whether they used medical gender affirmation services or had socially transitioned. What is notable is that the effect is greatest among those who used affirming medical care. Not having to fear disclosure and having a potential network that one can turn to when feeling stressed follows both the minority stress and House et al. models (House et al., 1988; Meyer, 2003). Clark et al. (2020) reported the importance of social networks for the well-being of transgender women in their study. The implication for these data is that micro/meso coping resources (social relationships) may be more effective than macro elements (anti-discrimination legislation) in reducing the impact of stigma. That does not mean that macro elements are not important, but their role may be more nuanced and relate more to the socioeconomic context (such as access to gender-affirming care) than providing direct coping resources.

In the case of those who use gender-affirming medical care, policy may provide indirect effects upon their lives through their access of medical resources and in providing a more secure environment to let others know about their transgender identity (Goldenberg et al., 2020a; Goldenberg et al., 2020b). Meyer (2003) highlights that identity concealment is one coping mechanism in light of societal stigma, but that concealment itself can be stressful. This contrasts with those who had not utilized medical resources who benefited directly from state policies. The distinction between these groups shows the importance in not viewing transgender population as a single entity but made of diverse groupings.

Limitations

The data used for these analyses were from a single point in time, and at the time of publication, many years old. These data were collected within a very specific time in our country that could have made an impact on our results. Notably that the data was collected during the time of Obama administration. This time period could be seen as providing more opportunities optimism for transgender adults, especially compared to the years following.

Additionally, legislation all varied in the amount of time they have been active in each state. It is unknown whether states with long established legislation will have a different effect upon people than states whose legislation was more recent. Minnesota became the first U.S. state to protect transgender people from discrimination in the fields of employment, housing, and public accommodations by introducing sexual orientation and gender identity–based laws in 1993. Contrastingly, Delaware passed the similar laws only in 2013. Put simply, transgender Minnesotans have had protective laws influence their perception of discrimination for over two decades at the time they were sampled for this survey as opposed to less than 2 years for the transgender people that live in Delaware. It would be interesting in the future to study how the duration that the transgender-friendly laws have been active in a state influences transgender people's perception of discrimination and distress residing in that state. It would be particularly interesting to see if duration that the legislation has been active is also associated to other socioeconomic or structural factors that impacts the experiences of transgender people.

Policy Implications

This study suggests that state-level anti-discrimination policies play a vital role in the mental health of transgender people. Specifically, this study shows that state policies are positively associated with lower distress for those who have not used medical affirmation services. However, there is no discernible association between state policies and the distress of those who used affirming medical care. This is not to suggest that the protective policies do not benefit those who used gender-affirming medical care; the presence of state policies does not preclude access to medical affirmation services for all transgender people (Goldenberg et al., 2020a, b). This study also shows that social support also plays a major role in lowering distress, a role that is more pronounced for those who used affirming medical care than others. Finally, this study sheds light on how macro effects at the state level have dire consequences on the mental health of transgender people and that these effects are sometimes not uniform across the transgender community. A coordinated effort to reduce these mental health inequities among the transgender people is warranted.

The time when the study was conducted was very different to the current social and political context for transgender Americans. Rather than seeing more states enacting positive

legislation for transgender people, there have been waves of negative policies seeking to not only deny transgender people to public spaces, but in some cases criminalizing gender-affirming care (Barbee et al., 2022). The impact of this legislation along with the social and political environment it emerges from could likely mean growing health disparities among transgender people for the foreseeable future and shows a great need for advocacy by health professionals and others to prevent negative legislation from being enacted or enforced.

Author Contribution All authors contributed to the study conception and design. Data analysis for this paper was performed by Herman Sahni. The first draft of the manuscript was written by Emilia Lombardi and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Declarations

Ethics Approval The Baldwin Wallace University Institutional Review Board approved the study (SP18-9704).

Consent to Participate The authors utilized pre-existing data from the 2015 US Transgender Survey collected by the National Center for Transgender Equality (ICPSR 37229). Information about how the data was collected is available in the organization's report.

Consent for Publication The authors utilized pre-existing data from the 2015 US Transgender Survey collected by the National Center for Transgender Equality (ICPSR 37229). Information about how the data was collected is available in the organization's report.

Competing Interests The authors declare no competing interests.

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