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Transgender, nonbinary, and gender nonconforming (TNG) college students, especially TNG students of color, often face marginalization and victimization within higher education settings. Implementing inclusive policies and practices may help to mitigate the harmful effects of these experiences and strengthen students' connections to colleges and universities. Using data from a 2016 online survey of TNG students' experiences ($n = 523$), we conducted multivariate ordinal regressions to examine whether knowledge of trans-inclusive campus resources was associated with stronger perceptions of inclusion in campus LGBTQ+ groups, particularly in relation to TNG students' intersecting gender and racial identities. We found that TNG students who knew of a higher number of trans-inclusive resources generally felt a stronger sense of inclusion in campus LGBTQ+ groups. This association was moderated by students' race: White students, but not students of color, reported feeling stronger levels of inclusion in LGBTQ+ groups if they were aware that their institutions had a relatively greater number of trans-inclusive resources. Therefore, TNG students of color were more likely to feel marginalized within LGBTQ+ groups, even when they reported higher levels of trans-inclusive resources on their campuses. Findings are considered in light of existing research on TNG students' experiences within higher education settings, and recommendations are made for providing stronger supports for TNG students of color.

Public Significance Statement
This study enhances understanding of both the broad impact of higher institutions' policies and practices for improving school climates for all students, and limitations of these approaches for trans, nonbinary, and gender nonconforming students of color.

Keywords: higher education, LGBTQ+ student groups, policies and practices, school climate, intersectionality

Transgender, nonbinary, and gender nonconforming (TNG) students are often exposed to implicit and explicit forms of marginalization and victimization within higher education. Cisnormative policies and practices, such as campus forms and records that reinforce binary notions of gender (i.e., man/woman) and sex (i.e., male/female), may contribute to more negative school climates for TNG students (Goldberg & Kuvalanka, 2018; Marine & Nicolazzo, 2014). Yet, colleges and universities vary greatly in the extent to which they provide trans-inclusive resources (e.g., allowing for name changes on official college records; providing access to gender-inclusive facilities such as bathrooms and campus housing) and have policies that protect students, staff, and faculty from harassment (Goldberg et al., 2019). Thus, there is a need to interrogate the degree to which policies and practices within higher education institutions privilege and uphold the gender binary of man/woman, or are inclusive and affirming of TNG students.

In addition to trans-inclusive policies and practices, lesbian, gay, bisexual, trans, and queer (LGBTQ+) student groups are often valuable sources of social support for TNG students (Garvey et al., 2019). However, these groups are sometimes experienced as marginalizing and exclusionary, especially for TNG students (Marine & Nicolazzo, 2014; McKinney, 2005), students whose gender identities and/or expressions challenge the gender binary (Cruz, 2014; Goldberg & Kuvalanka, 2018; Nicolazzo, 2016b), and TNG students of color (Felipe et al., 2022). Therefore, it is also necessary to better understand if and how trans-inclusive resources may foster environments in which TNG students feel more supported within campus groups, including within LGBTQ+ clubs and organizations.

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The primary aim of this study was to examine how TNG students' knowledge of trans-inclusive resources, or lack thereof, related to their perceptions of inclusion within LGBTQ+ student groups (i.e., organizations that claim to encompass and support students with marginalized sexual and gender identities) and trans-specific communities on college and university campuses. Further, we considered how perceptions of inclusion might vary based on race. We recognize that the meaning and use of "trans" varies across studies, and we use "TNG" (trans, nonbinary, or gender nonconforming) as an inclusive term that encompasses various gender identities (e.g., agender, gender fluid, genderqueer, nonbinary, trans man, and trans woman; see Nicolazzo, 2016b; Stryker, 2008).

Literature Review

In the following sections we review extant literature related to TNG students' general experiences on college and university campuses. We then focus specifically on the experiences of TNG students of color and the additional stressors they might experience related to their intersecting identities. Next, we review literature related to the roles of trans-inclusive resources for creating safer and more supportive campus climates. Finally, we review how LGBTQ+ student groups can be both a source of support and marginalization for TNG students.

TNG Students' Experiences on College Campuses

Existing literature emphasizes that students who are not cisgender, heterosexual, or White often experience marginalization on college campuses. For example, TNG students (Dugan et al., 2012; Singh et al., 2013), LGBQ+ students (Wilson & Liss, 2022), students of color (Hussain & Jones, 2021), and LGBQ+ students of color (BrckaLorenz et al., 2021) are less likely to feel a sense of belonging than their cis, heterosexual, White peers within higher education settings. Students with marginalized identities often do not see themselves reflected within the curricula or the staff and faculty at higher education institutions, and may feel a lack of connection in classrooms, other campus spaces, and with peers. This is especially concerning as lower levels of belongingness have been linked to higher rates of mental health issues (Wilson & Liss, 2022) and are detrimental to academic success and retention among college students (Dugan et al., 2012; Singh et al., 2013).

Relative to cis students, TNG students are less likely to perceive their college campus as welcoming and safe, have fewer positive interactions with members of the campus community (i.e., students, faculty, and administrators; Greathouse et al., 2018), have a more negative perception of campus and classroom climates, and feel less accepted as part of the campus community (Dugan et al., 2012; Garvey & Rankin, 2015; Greathouse et al., 2018). TNG students who are out or perceived as TNG in college are also at risk of being verbally, physically, or sexually harassed resulting in some TNG students leaving college due to hostile campus environments (Goldberg et al., 2019; James et al., 2016).

TNG students also often encounter pressures to conform to socially constructed gender norms in terms of appearance, dress, and pronouns (Beemyn, 2019; Catalano, 2015; Galupo et al., 2017; James et al., 2016). This pressure is especially acute for students who identify as nonbinary, genderqueer, genderfluid, or gender nonconforming, as they often struggle to be treated in ways that are consonant with their gender identity (e.g., respecting the use of pronouns other than she/her/hers or he/him/his for those who do not identify with these terms) and face particular scrutiny for not seeking to conform to or be seen as "either" gender (Goldberg & Kuvalanka, 2018; McGuire et al., 2016). Thus, these students may particularly be at risk of marginalization and experiences of gender-related minority stress on college campuses (Beemyn, 2019; Nicolazzo, 2016a).

TNG Students of Color

Scholars have called for increased attention to students' intersecting marginalized identities (e.g., LGBTQ+ students of color and LGBTQ+ students with disabilities; Duran, 2021; Garvey et al., 2019; Miller et al., 2021; Renn, 2010). Although the current literature on the topic is limited, it is apparent that LGBTQ+ students of color often have intersecting experiences of racism, heterosexism, and genderism within higher education settings (Cyrus, 2017; Meyer, 2010). More specifically, TNG students of color experience unique barriers related to the intersections of their gender identity and race/ethnicity (Jourian, 2017; Nicolazzo, 2016a), including feeling alienated within identity-based groups focused either on race or sexual orientation and gender identity (Nicolazzo, 2016a). A recent qualitative study by Jourian and McCloud (2020) emphasizes how gender and race intersect within various campus settings, such as classrooms and identity-based spaces (e.g., Black spaces, queer, and TNG spaces), and the complexities this creates for TNG students of color navigating these spaces (and their identities within them).

While campus-based organizations, such as multicultural, diversity, and LGBTQ+ centers, may serve as sources of support for TNG students of color, these places also often "mask" the overall dominant identity of college campuses—specifically, White, cis, and heterosexual (Jourian, 2017; Singh, 2022). Even when campuses provide resources for gender identity exploration and community-building (e.g., LGBTQ+ centers, college-sanctioned LGBTQ+ and TNG-specific student groups), these spaces are often predominantly White, making them less safe and affirming for TNG students of color (Nicolazzo, 2016a, 2016b; Singh, 2022). In summation, given that members of race-based groups are predominately heterosexual and cis, and members of LGBTQ+ groups are predominately White and cis, these groups tend to focus on single-issues and may be oblivious to or ignorant of the unique needs of TNG students of color (Singh, 2018).

Trans-Inclusive Resources

TNG students' negative experiences in higher education settings are exacerbated by colleges and universities failing to provide sufficient institutional supports to meet their needs (Beemyn, 2019). Policies, or the lack thereof, also serve a symbolic function representing a college's climate as supportive or unsupportive of LGBTQ+ students (Pitcher et al., 2018). Cisnormativity and genderism are frequently evident in multiple domains within higher education, such as in facilities, official records, and curricula (Bilodeau, 2005; Marine & Nicolazzo, 2014), which results in the gender binary being reinforced through practices, policies, and norms (Beemyn, 2019).

There are numerous policies and practices that create negative campus climates for TNG students. Sex-segregated restrooms and housing represent institutional features that exclude TNG people and/or expose them to harassment, which can cause significant stress (Seelman, 2014). Forms, documents, and records can also be alienating for TNG students, who routinely encounter paperwork that allows only male and female as options, does not differentiate between sex and gender, and provides no means for students to change their gender marker without changing their birth certificates. As of this writing, less than one fifth of higher education institutions enable TNG students to use the name they go by, rather than their "deadname" (i.e., birth or legal), on records and documents (*Campus Pride Trans Policy Clearinghouse*, 2022), and the institutions that do offer this option do not always advertise it well or make the process easy to navigate (Beemyn & Brauer, 2015; *Campus Pride Trans Policy Clearinghouse*, 2022; Seelman, 2014). Nevertheless, many colleges and universities have implemented policies and practices to address the issues detailed above (Beemyn, 2019; *Campus Pride Trans Policy Clearinghouse*, 2022; Goldberg et al., 2019). In qualitative studies, TNG students underscore that such supports are necessary for creating safer and more supportive campus environments for TNG students (Beemyn, 2019; Goldberg et al., 2019; Seelman, 2014). TNG students also note that even when colleges and universities do implement trans-inclusive supports, they often are not well-publicized and/or are onerous to access (Goldberg et al., 2019).

Support and Marginalization Within LGBTQ+ Student Groups

Student-led LGBTQ+ groups are often a valuable source of social support that build a sense of belonginess and facilitate retention of LGBTQ+ students (Pitcher et al., 2018). Beyond campus groups, TNG people with stronger feelings of belonging to TNG communities tend to report higher self-esteem, life satisfaction, and psychological well-being (Barr et al., 2016). Yet some TNG students report feeling misunderstood, overlooked, or poorly represented in campus groups in which the services, programming, supports, and available resources may be more aligned with the experiences of cis students (Nicolazzo, 2016b).

TNG students indicate that LGBTQ+ groups that consist primarily of LGBQ+ students are frequently not responsive to their needs, either because of a lack of awareness (McKinney, 2005; Nicolazzo, 2016a) or sensitivity (Goldberg & Kuvalanka, 2018). Students who identify as nonbinary, genderqueer, genderfluid, and other gender expansive identities may face unique challenges within LGBTQ+ groups, as their identities may be less familiar, legible, validated, and understood. These students may encounter marginalization within LGBTQ+ groups, as they often feel a need to prove their "transness" (Goldberg & Kuvalanka, 2018) and are "policed" for their gender expression (e.g., being admonished for not acting "ladylike"; Nicolazzo, 2016a).

Other studies have found that LGBTQ+ groups are instrumental for supporting identity exploration and increasing feelings of belonging on college campuses (Garvey et al., 2019; Gorman et al., 2022). However, experiences of racism within LGBTQ+ communities can serve as a barrier to LGBTQ+ students of color finding connections to these communities (Felipe et al., 2022). LGBTQ+ groups can reflect and exacerbate racial tensions within LGBTQ+ communities; for example, by being focused on a single issue (a narrow trans agenda) and are off-putting to many TNG students of color (Beemyn, 2016; Dickey, 2016). There is therefore a need to better understand mechanisms that may facilitate or thwart feelings of inclusion for TNG students of color.

Theoretical Framework

Minority stress theory (MST) emphasizes that adverse mental health outcomes within LGB populations emerge from minority-specific stressors, such as discrimination and stigma (Meyer, 2003). Meyer's theory was extended by Hendricks and Testa (2012) through the Gender Minority Stress model (GMSM) to more explicitly address how gender-related experiences of discrimination and stigma (distal stressors), and expectations of rejection, identity concealment, increased vigilance, and internalized transphobia (proximal stressors) may negatively affect TNG individuals' mental health. This theory also underscores the importance of informal and formal supports provided by social support networks (Hendricks & Testa, 2012). Both MST and GMSM emphasize that adverse outcomes within LGBTQ+ communities often emerge from stress-inducing conflict based on ways in which LGBTQ+ populations are marginalized by hetero- and cis-normative value systems. MST has also been used as a framework to examine the multiple minority stressors that LGBTQ+ people of color experience related to heterosexism, genderism, and racism (Cyrus, 2017; Meyer, 2010). Recent studies underscore that although LGBTQ+ people of color may not experience differential heterosexist stressors relative to White LGBTQ+ people (Cyrus, 2017; Velez et al., 2017), even experiences of vicarious trauma–acts of bias-based victimization and discrimination against others with shared identities–is associated with negative mental health outcomes (Ramirez & Paz Galupo, 2019), and the potential long-term consequences of experiencing multiple forms of discrimination should not be neglected or ignored (Cyrus, 2017). To date, there is a dearth of quantitative research on the nuanced and multifaceted lives of TNG students, especially TNG students of color.

Colleges and universities are often sites of both stress and support for TNG students. For example, TNG students often experience hostile campus climates (James et al., 2016), though gender-related pride and community organizations may provide supports that buffer the negative effects of antitrans experiences (Testa et al., 2015). To our knowledge, this is the first study to use the GMSM to quantitatively examine how trans-inclusive campus resources may serve as a source of support for TNG students, and if higher institutions with a greater number of trans-inclusive resources are also associated with LGBTQ+ groups supporting the unique needs of TNG students. Examining this relationship may elucidate mechanisms that promote more inclusive campus climates.

Current Study

The current study focused on two sources of support for TNG students within higher education settings, trans-inclusive resources and LGBTQ+ groups and communities, and how these supports might operate differentially for White students and students of color. The following two research questions guided the study:

1. Is knowledge of more trans-inclusive resources associated with perceiving LGBTQ+ student groups and communities as more inclusive of TNG students?

Hypothesis 1: We expected that TNG students who are aware of a greater number of trans-inclusive resources will also tend to perceive campus LGBTQ+ groups as more inclusive.

2. Does the association between knowledge of trans-inclusive resources and TNG students' feelings of inclusion within LGBTQ+ groups differ by race?

Hypothesis 2: Recognizing that experiences may differ for White TNG students and TNG students of color, we considered how the association between trans-inclusive resources and inclusion may be stronger for students from more privileged groups, particularly for White TNG students. That is, we expected that the strength of the relationship between knowledge of more trans-inclusive resources and sense of inclusion will be stronger among White TNG students compared with TNG students of color. Related to this hypothesis, we also expected that White TNG students would report a stronger sense of inclusion to LGBTQ+ groups and TNG communities relative to TNG students of color, regardless of knowledge of trans-inclusive resources.

Method

Data Collection, Cleaning, and Preparation

Data were drawn from a 2016 online survey of TNG undergraduate and graduate students' experiences in higher education that was developed by the second author and constructed using *Qualtrics* software. Focus groups with seven TNG students—led by trained TNG-identified members of the research team—helped to inform the development of the survey. Before launch, the survey was pilot tested for ease of use and functionality by four members of the target population. Feedback was also sought from scholars who study TNG populations. The suggestions of both groups led to changes in the survey. The survey was approved by the Human Subjects Board at Clark University and disseminated widely via listservs and social media pages aimed at TNG people and/or college students, and via LGBTQ+ groups and centers on college and university campuses across the United States. Some institutions did not have LGBTQ+ groups/centers, but did have a designated staff member within a larger center—such as a multicultural center—who provided support or information to LGBTQ+ students. In such cases, they were asked to disseminate the study to relevant students.

The survey included questions on a range of topics, such as gender identity, involvement in campus groups, and perceptions of campus policies. Participants were instructed: "You may complete this survey if you (a) identify as trans, gender nonconforming, gender questioning, genderqueer, gender nonbinary, agender, or anywhere on the gender-nonconforming spectrum; and (b) are currently enrolled at least part-time in a college/university (or recently graduated). Graduate students may also participate. *Students with nonbinary gender identities are particularly encouraged to participate.*" Participants were told not to include any identifying information on the survey, and that upon completing it, they would be directed to a link where they could give their name and e-mail—which would not be linked to their data—to be entered into a drawing to win one of ten $50.00 Amazon gift cards.

Study Sample

A total of 652 students initiated the survey. The median (and modal) time to completion was 39 minutes, whereas the mean time to completion was 153 minutes; there was a large range (10–8,685 minutes; $SD = 762$), with the high upper limit seemingly reflecting the fact that participants could start and return to the survey. Respondents were prevented from completing the survey more than once. To enhance the validity of our data analysis, participants' answers to similar questions (i.e., consistency indices) were inspected for evidence of careless, inattentive, or fraudulent responding; response times and missing data patterns were also assessed for this purpose (Dillman et al., 2009; Meade & Craig, 2012). Respondents who did not answer any of the open-ended questions, and those who completed the survey in under 15 minutes, were subjected to careful inspection of their data to ensure logical responding patterns (Meade & Craig, 2012). These methods resulted in the deletion of three surveys. Thirty (30) students reported attending college outside of the United States and were also excluded from analyses. Additionally, 96 students did not respond to any of the questions related to trans-inclusive resources and were removed from the sample (we did not assume that a lack of response for these items was an indication that institutions lacked these resources, or that students did not know of the resources).

The study sample consisted of 523 undergraduate and graduate students who identified with one or more gender identities under the trans umbrella (see Table 1 for demographic information). Participants were asked to select from a number of gender identities (including a write-in option), and were allowed to indicate more than one identity (e.g., they could select trans and gender nonconforming). Under half (41.7%) of the students identified as transgender specifically (20.8% identified as trans men, and 7.7% as trans women), and 75.4% indicated at least one identity other than trans. For example, 39.0% selected nonbinary, 25.8% genderqueer, 19.3% gender nonconforming, and 17.2% genderfluid. A majority (80.1%) of students were assigned female at birth (AFAB), and 19.9% were assigned male at birth (AMAB).

The sample was predominantly White (72.7%), with 12.0% of the students identifying as multiracial, 5.2% as Latinx, 2.7% as African American/Black, 4.5% as Asian, .4% as Middle Eastern, and .4% as Native American/American Indian/Aboriginal. A small proportion (2.1%) of participants indicated that an option for their racial identity was not provided. A majority (76.3%) of the sample indicated they were undergraduate students.

Measures

Known Trans-Inclusive Resources

Participants were provided with 17 policies and practices (see Table 2) derived from existing literature (Beemyn, 2005) and online resources (*Campus Pride Index*, 2021; *Campus Pride Trans Policy Clearinghouse*, 2022), and asked to indicate whether each one was

Table 1

Descriptive Sample Characteristics and Statistics for Perceptions of Marginalization Within LGBTQ+ Groups and TNG Communities

Variable	M (SD)/%	Range	n
Trans-inclusive resources (summary)	6.50 (3.41)	0–17	523
Trans-woman	7.65%	—	523
Trans-man	20.08%	—	523
Nonbinary+	75.44%	—	517
Sex assigned at birth (male)	19.88%	—	518
Race (POC)	27.15%	—	523
Graduate student	23.71%	—	523
School size			523
Small university (<5,000)	26.96%	—	—
Medium university (5,001−15,000)	17.02%	—	—
Large university (15,001+)	16.44%	—	—
Not reported	39.58%	—	—
Public school	54.68%%	—	523
Marginalization within LGBTQ groups			
Trans students marginalized within LGBTQ+ groups			491
Not at all	18.13%	—	—
Not really	31.16%	—	—
Somewhat	40.33%	—	—
Very much so	10.39%	—	—
Nonbinary students marginalized within LGBTQ+ groups			489
Not at all	16.36%	—	—
Not really	26.38%	—	—
Somewhat	37.42%	—	—
Very much so	19.84%	—	—
Nonbinary students marginalized within TNG groups			421
Not at all	17.58%	—	—
Not really	36.58%	—	—
Somewhat	32.54%	—	—

Note. Nonbinary+ = participants who identified as nonbinary, genderqueer, gender nonconforming, gender fluid, androgynous, agender, demigender, third gender, transmasculine, masculine, or feminine of center, questioning; POC = person of color; LGBTQ+ = lesbian, gay, bisexual, transgender, and queer; TNG = trans, nonbinary, and gender nonconforming.

present at their college/university (1 = *yes*; 2 = *no*; 3 = *do not know*). These items were dichotomized (0 = *no/do not know*: 1 = *yes*). Participants that did not provide a response for any of the items related to trans-inclusive resources were set to missing. While it is likely that some of these services/supports were present on students' campuses but they were unaware of them, we have no way of knowing if this was the case. Thus, this is an index of known services/supports—reflecting, in part, their visibility and accessibility.

The "yes" responses were summed to form a measure of college/university inclusivity, reflecting students' knowledge of available supports and services (ranging from 0 to 17), and then centered on the mean. Cronbach's α was not calculated for these items, as internal consistency estimates are not appropriate for this type of measure (i.e., these items are not expected to be highly correlated). Notably, students were not asked what college/university they attended, so we were unable to independently verify the trans-inclusive resources available at each institution.

Marginalization Within LGBTQ+ Groups and TNG Communities

Participants were asked about their perceptions of marginalization within LGBTQ+ groups and trans/gender nonconforming communities using a Likert scale (0 = *very much so*; 1 = *somewhat*; 2 = *not really*; 3 = *not at all*): "To what extent do you feel that the needs, interests, and experiences of . . ." (a) "trans/gender-nonconforming

(GNC) students are buried, ignored, and/or marginalized within the LGBTQ+ group on your campus?"; (b) "students with nonbinary gender identities or gender expressions specifically are buried, ignored, and/or marginalized within the LGBTQ+ group on your campus?"; and (c) "students with nonbinary gender identities or gender expressions specifically are buried, ignored, and/or marginalized within the larger trans/gender nonconforming community on your campus?" These items were developed by scholars with expertise in the fields of higher education and psychology, and were informed by existing literature and theory (Balsam et al., 2011; Garvey & Rankin, 2015; Garvey et al., 2015; Singh et al., 2013; Vaccaro & Newman, 2017). The items were also reviewed by scholars with expertise in trans and gender nonconforming youth development and experiences in higher education, as well as consultants from the TNG community. Each of the items was reverse coded (0 = *not at all*; 3 = *very much so*) and assessed as separate outcomes across models (i.e., not as a combined measure). Responses indicating that the campus does not have an LGBTQ+ group (*n* = 15; 2.42%) or a visible/out TNG community (*n* = 74; 12.25%) were set to missing and excluded from analyses in models that included these variables.

Sex Assigned at Birth (Male, Female)

Participants were asked, "Please indicate your natal sex (i.e., sex assigned at birth): Male; Female; Intersex; Intersex, but assigned female; Intersex, but assigned male." Sex assigned at birth was coded

Table 2
Descriptive Statistics for Known Trans-Inclusive Resources

Trans-inclusive resource	M (SD)/%	Range	n
Trans-inclusive resources (summary)	6.50 (3.41)	0−17	523
Nondiscrimination policy that includes gender identity/expression	65.77%	—	523
University recognized student organization for LGBTQ+ students and allies	92.47%	—	518
University recognized student organizations for trans/GNC students and/or which primarily serve the needs of trans/GNC students	45.75%	—	518
Courses that address topics related to gender identity/expression	69.31%	—	518
Courses that address topics related to sexual orientation	71.62%	—	518
Provides gender-inclusive housing	46.83%	—	521
Allows students to change their name on campus records	42.03%	—	521
Allows students to change their gender on campus records without changing legal documents	16.15%	—	520
Gender-neutral/gender inclusive bathrooms in most campus buildings	45.49%	—	521
Incorporation of topics related to sexual orientation in new student orientation program	28.57%	—	518
Incorporation of topics related to gender identity/expression in new student orientation program	23.89%	—	519
Covers transition-related medical expenses under student health insurance	20.08%	—	523
Private changing facilities and single-person showers in athletic facilities and recreational centers	17.31%	—	520
Career counseling specifically focused on the needs/experiences of trans/GNC students	15.06%	—	518
Sexual orientation identity questions included as an option on admissions applications and enrollment forms	20.15%	—	521
Gender identity questions included as an option on admission applications and enrollment forms	21.50%	—	521
Trans/GNC-inclusive intramural athletic policy	12.28%	—	521

Note. LGBTQ+ = lesbian, gay, bisexual, transgender, and queer; trans/GNC = transgender/gender-nonconforming.

as 1 = *male* and 0 = *female* (no participants in the analytic sample identified as intersex). We included this as a predictor in analyses as research indicates that AMAB people who are gender nonconforming often encounter greater stigma (Bockting et al., 2013).

Race

Race was recoded such that any student who indicated a racial category other than White was coded as a *student of color* (1), and students who solely indicated White were coded as *White* (0). We recognize problems inherent with collapsing all people of color into a single group; however, we included race as a dichotomous predictor in analyses because a large majority of the participants were White.

Covariates

Models were adjusted for: (a) sex assigned at birth; (b) race; (c) student status (undergraduate or graduate); (d) school size (small = < 5,000 students; medium = 5,001–15,000 students; large = > 15,001 students); and (e) institution type (public or private). School size and institution type were based on self-reports. School size was an open-ended question ("What is the approximate size of your university's student population, including undergraduate and graduate students") and institution type was assessed through a single question ("What best describes your university? [check all that apply]: 2 year college/university; 4 year public university; 4 year private college/university; Liberal arts college/university; single sex university; religiously affiliated college/university"). Institution type was included as a dichotomous variable (private = 0; public = 1).

Analytic Plan

Recognizing that trans-inclusive resources and connection to LGBTQ+ organizations and communities may be important buffers against the negative effects of minority stressors (Hendricks & Testa, 2012), we conducted bivariate and multivariate analyses to test the association between trans-inclusive resources and feelings of marginalization within student LGBTQ+ groups and communities. We first examined bivariate associations between trans-inclusive resources and marginalization of students with nonbinary identities and gender expressions (henceforth referred to as "nonbinary" for succinctness) within LGBTQ+ groups and nonbinary students within TNG communities. We then estimated main effect multivariate ordinal logistic regression models. Finally, because TNG students of color often face multiple minority stressors related to gender- and race-based discrimination and exclusion (Cyrus, 2017), we included interaction terms to test if race moderated the relationship between known trans-inclusive resources and our outcome variables. All analyses were conducted using Stata 15 (StataCorp, 2017).

Ordinal logistic regressions must meet the assumptions that: (a) the dependent variable are ordered; (b) one or more predictor variables are continuous or categorical; (c) no multicollinearity; and (d) proportional odds across outcome categories. To verify our models did not violate the third assumption, we checked polychoric correlations (appropriate for categorical data) for any highly correlated variables. Covariates were weakly to moderately related to the outcomes and each other, with r's ranging from −.30 to .15. We also verified we did not violate the fourth assumption using the "brant" command (a user generated command in Stata to conduct a Brant test for ordinal logistic regression models). Significant test statistics indicate this assumption was violated. The test statistics for our models were not significant and therefore did not find evidence that our models violate this assumption.

Analyses of patterns of missingness indicated that data were missing at random. We used chained multiple imputations (10 iterations seeded at 53,421) to account for missing data (Enders, 2010). Because multiple imputations account for missing data by aggregating results from multiple plausible models, it is not assigning values to any individual participant and is a suitable way to address missing data (Enders, 2010), even when accounting for identity measures. Imputed models included all variables in the analyses, including interaction terms.

Results

Descriptive Statistics

On average, participants knew of 6.5 (*SD* = 3.4) trans-inclusive resources at their schools (see Tables 1 and 2 for descriptive statistics on known trans-inclusive resources). The most common supportive resources were college-recognized student organizations for LGBTQ+ students (92.5%). Under half (45.8%) of the students reported that they attended schools that had organizations for TNG students or that primarily served the needs of TNG students (all but three also had college-recognized student organizations for LGBTQ+ students). Other common known inclusive resources included: courses that address topics related to sexual orientation (71.6%) or gender identity/expression (69.3%); nondiscrimination policies that include gender identity/expression (65.8%); policies that allow students to change their name on campus records (e.g., ID cards, class rosters; 42.0%) or to change their gender marker without changing legal documents (16.2%); providing gender-inclusive housing (i.e., housing in which gender is not the determining factor in assigning rooms; 46.8%); and providing gender-inclusive bathrooms in most campus buildings (45.1%).

Over half of the students endorsed the perception of LGBTQ+ groups "somewhat" to "very much so" marginalizing trans students in general (50.5%) and nonbinary students in particular (57.1%; see Table 1). Under half (45.6%) perceived that TNG communities "somewhat" to "very much so" marginalized nonbinary students. Perceptions that (a) trans students in general and (b) nonbinary students in particular were marginalized in LGBTQ+ groups, and that (c) nonbinary students were marginalized in TNG communities, were moderately correlated (r_{ab} = .65; r_{ac} = .37; r_{bc} = .50).

Marginalization Within LGBTQ+ Groups and TNG Communities

In bivariate analyses, participants with knowledge of a greater number of trans-inclusive resources were less likely to perceive LGBTQ+ groups as marginalizing the needs and experiences of trans students in general (odds ratio, *OR* = .91, 95% confidence interval, CI [.86, .96]) and of nonbinary students in particular (*OR* = .90, 95% CI [.86, .95]). That is, a one unit increase in trans-inclusive resources was associated with a 9% decrease in the odds of feeling that LGBTQ+ groups marginalize trans students, and a 10% decrease in feelings that they marginalize nonbinary students. TNG students with knowledge of more trans-inclusive resources were also less likely to perceive that TNG communities marginalized the needs of nonbinary students (*OR* = .91, 95% CI [.86, .96]).

These findings held in multivariate models adjusted for demographic factors, school size, and school type (see Table 3). In these models, participants who had knowledge of more trans-inclusive resources had lower odd of perceiving that: trans students were marginalized in LGBTQ+ groups adjusted odds ratio (*AOR* = .92, 95% CI [.87, .96]; 8% decrease in the odds of feeling marginalized with every one unit increase in known trans-inclusive resources); nonbinary students were marginalized in LGBTQ+ groups (*AOR* = .90, 95% CI [.86, .95]; 10% decrease with every one unit increase); and nonbinary students were marginalized in TNG communities (*AOR* = .91, 95% CI [.86, .96]; 9% decrease with every one unit increase). Regarding covariates, students of color had higher odds of

Table 3
Ordinal Logistic Regression Models for Perceptions of Marginalization Within LGBTQ+ Groups and TNG Communities

Variable	Main effects Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	Moderated Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	Main effects Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	Moderated Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	Main effects Nonbinary marginalized within TNG communities AOR [95% CI]	Moderated Nonbinary marginalized within TNG communities AOR [95% CI]
Inclusive resources	**.92 [0.87, 0.96]*****	**.87 [0.82, 0.93]*****	**.90 [0.86, 0.95]*****	**.86 [0.81, 0.91]*****	**.91 [0.86, 0.96]****	**.87 [0.81, 0.93]*****
Race (POC)	1.28 [0.88, 1.87]	1.23 [0.85, 1.80]	1.25 [0.86, 1.83]	1.20 [0.82, 1.75]	**1.90 [1.27, 2.84]****	**1.78 [1.19, 2.67]****
Inclusive Resources × Race	—	**1.19 [1.06, 1.32]****	—	**1.16 [1.04, 1.28]****	—	**1.16 [1.04, 1.30]****
SAB (male)	1.43 [0.94, 2.18]	1.40 [0.92, 2.13]	1.14 [0.75, 1.72]	1.11 [0.74, 1.68]	.76 [0.48, 1.20]	.73 [0.46, 1.16]
Graduate student	1.30 [0.88, 1.93]	1.31 [0.88, 1.94]	**1.47 [1.00, 2.17]***	**1.50 [1.02, 2.20]***	1.20 [0.79, 1.80]	1.21 [0.80, 1.82]
School size						
Small university	.96 [0.59, 1.56]	.95 [0.58, 1.55]	.82 [0.51, 1.32]	.81 [0.50, 1.31]	1.13 [0.67, 1.89]	1.11 [0.66, 1.86]
Medium university	.96 [0.54, 1.73]	.95 [0.53, 1.71]	.71 [0.40, 1.27]	.70 [0.39, 1.25]	1.24 [0.66, 2.30]	1.19 [0.64, 2.22]
Not reported	1.06 [0.59, 1.91]	1.08 [0.60, 1.95]	1.01 [0.56, 1.81]	1.02 [0.57, 1.84]	1.52 [0.82, 2.81]	1.51 [0.82, 2.80]
Public school	1.25 [0.85, 1.85]	1.26 [0.85, 1.85]	.97 [0.66, 1.42]	.96 [0.66, 1.41]	1.21 [0.80, 1.83]	1.20 [0.79, 1.81]

Note. AOR = adjusted odds ratio; CI = confidence interval; trans-inclusive resources (range = −6.40 to10.60; SAB = sex assigned at birth (0 = female, 1 = male); race (0 = White, 1 = person of color); graduate student (0 = undergraduate, 1 = graduate); school size (large university = referent; public school (0 = not public, 1 = public); nonbinary = students with nonbinary gender identities or gender expressions; TNG = trans, nonbinary, and gender nonconforming; LGBTQ+ = lesbian, gay, bisexual, transgender, and queer; trans/GNC = transgender/gender-nonconforming. Bolded findings indicate significance of at least *p* ≤ .05.
* *p* < .05. ** *p* < .01. *** *p* ≤ .001.

perceiving that nonbinary students were marginalized within TNG communities, and graduate students had higher odds of perceiving that nonbinary students were marginalized within LGBTQ+ groups.

Moderated Models

We examined if the relationship between known trans-inclusive resources and each outcome differed for White students and students of color (see Table 3). Race moderated the relationship between known trans-inclusive resources and perceptions that trans (AOR = 1.19, 95% CI [1.06, 1.32]) and nonbinary (AOR = 1.16, 95% CI [1.04, 1.28]) students were marginalized within LGBTQ+ groups. Additionally, race moderated the relationship between known trans-inclusive resources and perceptions that nonbinary students were marginalized within TNG communities (AOR = 1.16, 95% CI [1.04, 1.30]).

To decompose significant interaction terms, we stratified models based on students' race (see Table 4). These models indicated that White students who knew of more trans-inclusive resources felt that trans students in general and nonbinary students in particular were less marginalized in LGBTQ+ groups and TNG communities; students of color did not differ in their perceptions of marginalization relative to their knowledge of trans-inclusive resources. More specifically, White students who had knowledge of more trans-inclusive resources had lower odds of perceiving that: trans students were marginalized within LGBTQ+ groups (AOR = .87, 95% CI [.82, .92]; 13% decrease in odds of feeling marginalized with every one unit increase in known trans-inclusive resources); nonbinary students were marginalized within LGBTQ+ groups (AOR = .86, 95% CI [.81, .91]; 14% decrease in odds with every one unit increase); and that nonbinary students were marginalized within TNG communities (AOR = .87, 95% CI [.81, .93]; 13% decrease in odds with every one unit increase). The associations between known trans-inclusive resources and perceptions that trans (AOR = 1.04, 95% [.94, 1.94]) and nonbinary (AOR = 1.00, 95% CI [.91, 1.09]) students were marginalized within LBGTQ+ groups, and that nonbinary students were marginalized within TNG communities (AOR = 1.01, 95% CI [.91, 1.11]) were not significant among students of color.

Models Stratified by Student Status

Because our sample included both graduate (n = 124; 23.7%) and undergraduate (n = 399; 76.3%) students who may vary in their participation in LGBTQ+ groups, we stratified models by student status to determine if our findings were consistent across both groups (see Table 5). In models restricted to undergraduate students, the interaction between race and trans-inclusive resources was significant in relation to perceptions that trans students were marginalized within LGBTQ+ groups and that nonbinary students were marginalized within TNG specific communities. Among graduate students, the interaction term was only significant in relation to feelings that nonbinary students were marginalized withing LGBTQ+ groups.

Discussion

The findings from the current study elucidate that White TNG college students, but not TNG students of color, that were aware of

Table 4

Decomposition of Association Between Perceptions of Marginalization and Known Trans-Inclusive Resources Moderated by Race

Variable	White students Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	Students of color Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	White students Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	Students of color Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	White students Nonbinary marginalized within TNG communities AOR [95% CI]	Students of color Nonbinary marginalized within TNG communities AOR [95% CI]
Inclusive resources	**.87 [0.82, 0.92]*****	1.04 [0.94, 1.14]	**.86 [0.81, 0.91]*****	1.00 [0.91, 1.09]	**.87 [0.81, 0.93]*****	1.01 [0.91, 1.11]
SAB	1.14 [0.70, 1.85]	**2.44 [1.00, 5.96]***	.89 [0.55, 1.45]	1.85 [0.79, 4.32]	.65 [0.38, 1.11]	.90 [0.35, 2.33]
Graduate student	1.34 [0.86, 2.09]	1.28 [0.54, 3.04]	**1.66 [1.05, 2.61]***	1.23 [0.56, 2.73]	1.41 [0.88, 2.27]	.79 [0.34, 1.80]
School size						
Small university	1.00 [0.56, 1.78]	.85 [0.33, 2.15]	.98 [0.55, 1.73]	.50 [0.20, 1.28]	1.17 [0.64, 2.15]	.96 [0.36, 2.59]
Medium university	.96 [0.49, 1.91]	.97 [0.32, 2.97]	.90 [0.46, 1.80]	.37 [0.12, 1.12]	1.36 [0.65, 2.84]	.88 [0.27, 2.93]
Not reported	1.25 [0.64, 2.43]	.62 [0.16, 2.43]	1.30 [0.67, 2.54]	.49 [0.13, 1.88]	1.61 [0.81, 3.21]	1.34 [0.31, 5.74]
Public school	1.10 [0.70, 1.71]	1.72 [0.77, 3.84]	.82 [0.53, 1.28]	1.40 [0.64, 3.08]	1.05 [0.65, 1.68]	1.66 [0.69, 4.00]

Note. AOR = adjusted odds ratio; CI = confidence interval; Trans-inclusive resources (range = −6.40 to 10.60); SAB = sex assigned at birth (0 = female, 1 = male); race (0 = White, 1 = person of color); graduate student (0 = undergraduate, 1 = graduate); school size (large university = referent); public school (0 = not public, 1 = public); nonbinary = students with nonbinary gender identities or gender expressions; TNG = trans, nonbinary, and gender nonconforming; LGBTQ+ = lesbian, gay, bisexual, transgender, and queer; trans/GNC = transgender/gender-nonconforming. Bolded findings indicate significance of at least p ≤ .05.
* p < .05. *** p ≤ .001.

Table 5

Ordinal Logistic Regression Models for Perceptions of Marginalization Within LGBTQ+ Groups and TNG Communities Stratified by Student Status

Variable	Undergraduate — Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	Graduate — Trans/GNC marginalized within LGBTQ+ groups AOR [95% CI]	Undergraduate — Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	Graduate — Nonbinary marginalized within LGBTQ+ groups AOR [95% CI]	Undergraduate — Nonbinary marginalized within TNG communities AOR [95% CI]	Graduate — Nonbinary marginalized within TNG communities AOR [95% CI]
Inclusive resources	.90 [0.84, 0.97]**	.77 [0.67, 0.89]***	.90 [0.84, 0.96]**	.72 [0.63, 0.84]***	.89 [0.82, 0.96]**	.81 [0.70, 0.93]**
Race (POC)	1.24 [0.81, 1.92]	1.22 [0.51, 2.91]	1.25 [0.81, 1.93]	1.11 [0.47, 2.62]	2.08 [1.30, 3.32]**	1.12 [0.49, 2.56]
Inclusive Resources × Race	1.14 [1.02, 1.28]*	1.39 [0.98, 1.98]	1.09 [0.98, 1.23]	1.59 [1.12, 2.27]*	1.14 [1.01, 1.29]*	1.09 [0.80, 1.50]
SAB	1.28 [0.79, 2.06]	2.07 [0.82, 5.21]	1.00 [0.62, 1.61]	1.94 [0.80, 4.72]	.71 [0.42, 1.22]	.64 [0.26, 1.57]
School size						
Small university	.91 [0.51, 1.62]	1.02 [0.40, 2.61]	.61 [0.34, 1.08]	1.73 [0.69, 4.37]	1.16 [0.62, 2.19]	.90 [0.35, 2.32]
Medium university	1.00 [0.51, 1.95]	.72 [0.20, 2.54]	.54 [0.28, 1.06]	1.40 [0.39, 5.05]	1.23 [0.59, 2.57]	1.15 [0.34, 3.95]
Not reported	1.06 [0.54, 2.10]	1.37 [0.37, 5.01]	.78 [0.39, 1.53]	2.56 [0.68, 9.68]	1.82 [0.88, 3.77]	.78 [0.21, 2.87]
Public school	1.38 [0.89, 2.13]	1.04 [0.44, 2.46]	.93 [0.60, 1.43]	1.46 [0.62, 3.42]	1.33 [0.82, 2.14]	.91 [0.37, 2.26]

Note. AOR = adjusted odds ratio; CI = confidence interval; Trans-inclusive resources (range −6.40 to10.60); SAB = sex assigned at birth (0 = female, 1 = male); race (0 = White, 1 = person of color); graduate student (0 = undergraduate, 1 = graduate); school size (large university = referent); public school (0 = not public, 1 = public); nonbinary = students with nonbinary gender identities or gender expressions; TNG = trans, nonbinary, and gender nonconforming; LGBTQ+ = lesbian, gay, bisexual, transgender, and queer; trans/GNC = transgender/gender-nonconforming. Bolded findings indicate significance of at least p ≤ .05.
* p < .05. ** p < .01. *** p ≤ .001.

a greater number of trans-inclusive resources perceived LGBTQ+ groups and TNG communities as more inclusive. This study is grounded in the framework that TNG students experience gender minority stress (Hendricks & Testa, 2012), and that TNG students of color often experience both gender- and race-based stigmatization and discrimination (Cyrus, 2017). Trans-inclusive resources and supportive identity-based groups are sources of formal and informal support that may alleviate the negative consequences of minority-based stressors (Hendricks & Testa, 2012). Conversely, the lack of such resources and support networks may contribute to experiences of minority stress. This study examined how the relationship between known trans-inclusive resources and perceptions of marginalization differ for White TNG students and TNG students of color given TNG students often experience racism and discrimination within higher education settings, including within LGBTQ+ groups (Nicolazzo, 2016a, 2016b; Singh, 2018).

In support of our first hypothesis, we found negative associations between TNG students with more knowledge of trans-inclusive resources and perceptions of marginalization for trans students in general, and nonbinary students in particular, within LGBTQ+ groups. As emphasized by the Gender Minority Stress model (GMSM), TNG people often experience stress-inducing conflict due to marginalization within cis-normative value systems (Hendricks & Testa, 2012), including within LGBTQ+ groups. TNG students with knowledge of more trans-inclusive resources were generally less likely to perceive that TNG students were marginalized within LGBTQ+ groups and that nonbinary students were marginalized within TNG communities. Previous research has identified trans-inclusive resources (Beemyn, 2019; Goldberg et al., 2019; Seelman, 2014) and LGBTQ+ groups and communities (Barr et al., 2016; Gorman et al., 2022; Pitcher et al., 2018) as valuable sources of support for TNG students.

Our findings underscore that the combination of trans-inclusive resources and LGBTQ+ groups and communities may be mutually reinforcing and valuable sources of formal and informal support for TNG students (Hendricks & Testa, 2012). These findings, however, should be interpreted with caution because our data were not longitudinal and we cannot establish causality. It is also important to note that all but three students who reported having organizations at their schools that specifically served the needs of TNG students also reported the existence of campus LGBTQ+ groups. TNG students at these schools may feel less marginalized within LGBTQ+ groups because they also have access to organizations or social networks that attend to their unique experiences and needs as TNG people.

Our second hypothesis was also supported: students' race moderated the relationship between known trans-inclusive resources and feelings of inclusion in LGBTQ+ groups and TNG communities, especially among undergraduate students. Consistent with previous studies that indicate that TNG students of color often experience multiple forms of marginalization and victimization (e.g., genderism and racism) within educational contexts (Cyrus, 2017; Greytak et al., 2009; Hatchel & Marx, 2018; Toomey et al., 2017), we found that White students were less likely than students of color to feel that TNG students were marginalized within LGBTQ+ organizations when they knew of more trans-inclusive resources relative to those who knew of fewer resources.

These findings emphasize the importance of attending to the intersecting forms of marginalization and discrimination that

students with multiply marginalized identities experience (Cyrus, 2017; Meyer, 2010), and to the limitations of formal and informal sources of support for TNG students of color. One possible explanation for these findings is differences in group privilege and persistent issues of institutionalized racism, even within LGBTQ+ groups. White students may benefit more than students of color from campus supports—that are grounded in and framed by a "White lens" (Singh, 2022)–further marginalizing students of color. White students also may be unaware of their privilege and assume that what works for them works for other (marginalized) members of their community. TNG students of color may choose to become involved in non-LGBTQ+ groups/activities that are more salient to their racial identities (Martinez & Jackson, 2018), or may choose to become involved in off-campus communities that better support them. Additionally, we primarily observed these moderated relationships in the full sample and among undergraduate students, perhaps because the sample of graduate students consisted of 124 students, of which only 29 (23.4%) were students of color. Nevertheless, the finding that trans-inclusive resources are not associated with stronger feelings of inclusion within LGBTQ+ groups and TNG communities for students of color is striking and warrants further study.

For colleges, these findings point to the possibility that institutions that are generally trans-supportive may still privilege certain TNG identities through classroom practices, campus policies, and programming. In line with the Gender Minority Stress Model (Hendricks & Testa, 2012; Testa et al., 2015), reducing distal stressors is important to support the health and wellbeing of TNG students. Identifying which students are and are not being served by policies and practices is necessary to provide stronger support structures, especially for students with multiple marginalized identities, including TNG students of color and TNG students with disabilities (Dispenza et al., 2022; Miller et al., 2021). Theorists have also stressed the importance of moving from deficits-based to strengths-based approaches to identify factors (such social support and community consciousness) associated with building resilience and positive health and wellbeing (Perrin et al., 2020).

Implications and Future Directions

While LGBTQ+ organizations are often sites of valuable support, they can simultaneously be sources of marginalization, especially for members with multiple marginalized identities. Therefore, administrators, faculty, and the leaders of identity-based campus groups should actively provide resources and supports that directly assist students at risk of experiencing multiple forms of marginalization (e.g., racism, heterosexism, genderism, and ableism). Raising awareness and attending to the needs of diverse marginalized groups are necessary steps to improve campus climates and to develop a greater sense of belonging for student populations that have historically been marginalized. This requires that administrators, faculty, and staff become more familiar with and understanding of the unique experiences and needs of students with multiply marginalized identities through training and engagement with identity-based organizations and communities.

Higher education institutions should also identify and implement ways to dismantle traditionally siloed approaches to addressing issues related to diversity, equity, and inclusion. For example, trainings for faculty, staff, and student organization leaders focused on meeting the needs of students should be conducted with an intersectional lens, and include collaborations between identity-based groups (e.g., offices/organizations focused on LGBTQ+ students, on students of color, on first generation students, on students with disabilities, etc.). Creating these collaborative spaces will facilitate conversations across identity-based groups, and may help raise awareness about the unique experiences and needs of multiply marginalized students.

There also needs to be concerted attention paid to how trans-inclusive resources are developed and implemented. First, there should be careful consideration of who policies and practices are most likely to benefit, and who may need additional supports. Our findings highlight that White TNG students are more likely to benefit from trans-inclusive resources and feel a stronger sense of inclusion in LGBTQ+ student groups and communities. Developing and implementing policies in collaboration with people from historically marginalized populations, including TNG people of color, is essential for more effectively addressing the needs of a diverse student body.

Second, institutions should increase the visibility of resources and supports. Highlighting such resources on public facing materials, such as websites and recruiting material, emphasizes a commitment to supporting students with marginalized identities. Having easily accessible websites detailing resources that are available, and having faculty discuss these resources in their courses and/or on syllabi can also help students find these valuable sources of support. Such approaches have the multipronged effect of helping students identify supportive faculty while also educating faculty about the needs of multiply marginalized students, and fostering a stronger sense of inclusion and belonging. Additionally, the process for accessing and utilizing resources should regularly be evaluated to identify and eliminate barriers to students receiving these sources of support.

Limitations

A notable limitation of the current study was that students were not asked to identify the specific college they attended. Therefore, we were unable to account for other structural factors that may attenuate the relationship between trans-inclusive resources and our outcomes of interest. Because this study was based on cross-sectional data, the results study should be interpreted cautiously, as we cannot be confident about the direction of the relationship between known trans-inclusive resources and the outcome variables. On the one hand, it is possible that TNG students who know of more trans-inclusive resources may perceive their college as more inclusive and be more likely to participate in LGBTQ+ groups. On the other hand, TNG students who are more involved in LGBTQ+ groups may become more aware of trans-inclusive resources through their involvement. We were also unable to determine whether more inclusive LGBTQ+ groups advocate for more trans-specific supports, or if colleges with more supportive policies and practices are more conducive to inclusive student groups. It is likely that more supportive colleges and more inclusive LGBTQ+ groups are mutually reinforcing, but longitudinal studies are needed to clarify the direction of this relationship. TNG students' feelings of marginalization withing LGBTQ+ groups and trans specific communities were also measured through single-item measures and were not tested for validity and

reliability (test–retest). Therefore, the interpretation of findings related to these outcomes should be cautiously interpreted.

The measure of trans-inclusive resources was based on students' knowledge of existing supports on their campus. Including objective measures, such as reports from faculty, staff, and administrators, could provide further insight into the trans-inclusive policies and practices adopted by colleges. Although students need not necessarily know of supports to benefit from them (Poteat et al., 2013), there may be unmeasured factors, such as allyship trainings for faculty, staff, and students, that are associated with more inclusive school environments (Beemyn, 2016). Additionally, future studies should examine how TNG students of specific racial/ethnic groups may experience LGBTQ+ groups and support resources differently by recruiting more racially and ethnically diverse samples.

Conclusion

The findings in this study are useful for informing ways in which college administrators, faculty, staff, and leaders of student groups can promote more inclusive campus climates. Although student-led LGBTQ+ groups and TNG communities can serve as valuable sources of support for TNG students, this study reinforces previous research which found that they often do not meet the needs of TNG students with intersecting marginalized identities (Jourian, 2017; Nicolazzo, 2016a, 2016b). To foster more inclusive campus climates, including within LGBTQ+ groups, colleges need to implement a greater number of trans-inclusive resources, especially with particular attention on the unique needs of students of color.

TNG students should have a voice and an active role in developing supportive practices at colleges, but they should not be solely relied on to do so (Goldberg et al., 2019; Nicolazzo, 2016b). Faculty and staff need to be educated about trans-inclusive campus and community resources to better connect students to them, and the resources need to be advertised directly to students to increase their visibility. Promoting these resources may also make cis members of the college community more aware of the needs of TNG students, potentially increasing sources of support for TNG students and improving campus climates overall.

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