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ARTICLE

Gender identity importance in cisgender and gender diverse adolescents in the US and Canada

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Abstract

Transgender adolescents often categorize themselves in the same way that cisgender adolescents do—that is, as girls/women and boys/men. Potential differences in the extent to which these self-categorizations matter to transgender and cisgender adolescents, however, have yet to be explored, as has the relative importance transgender adolescents place on their gender compared to their transgender self-categorization. In the current study, we explored self-reported identity importance in a sample of 392 primarily White (70%) and multiracial/ethnic (20%) 12–18-year-old ($M = 15.02$) binary transgender ($n = 130$), binary cisgender ($n = 236$), and nonbinary ($n = 26$) adolescents in the United States and Canada. Results revealed that binary transgender adolescents considered their gender self-categorization to be more important to them than both binary cisgender and nonbinary adolescents did. Most binary transgender adolescents rated their gender self-categorization as maximally important to them. Additionally, transgender adolescents considered their gender self-categorization to be more important to them than their transgender self-categorization (that is, their identification with the label "transgender"). These findings demonstrate that the identities that are often denied to binary transgender adolescents may be the very identities that are most important to them. Results also suggest that gender diverse adolescents with different gender identities may differ in the importance they place on these identities.

KEYWORDS

adolescents, cisgender, gender, identity importance, nonbinary, transgender

Adolescence is an important developmental period in which individuals form increasingly nuanced understandings of who they are and how they fit in with the people around them. As such, adolescents tend to explore and refine not only their personal (Kroger et al., 2010) and relational (Tanti et al., 2008) but also their collective (Umaña-Taylor et al., 2014) identities,[1] including their gender identity (Clemans et al., 2010).

Both colloquially and in the research literature, gender identity has often been understood to refer to one's self-categorization with a gender group (Wood & Eagly, 2015). More broadly, however, gender identity can be understood to refer to "the quality and strength of the cognitive connections…that a person makes between the self and a gender category" (Tobin et al., 2010). Indeed, many identity researchers understand gender identity, like other collective identities (Ashmore et al., 2004; Leach et al., 2008), to be a multidimensional construct (e.g., Egan & Perry, 2001; Tate et al., 2014). Within the developmental psychology literature in particular, gender identity is generally understood to comprise not only self-categorization (e.g., as a girl, a boy, or nonbinary) but also felt similarity to people in different gender groups, satisfaction with the gender group to which one was assigned, felt pressure to conform to gender norms, bias in favour of one's gender group, frustration with proscriptive gender norms, and importance or centrality—that is, the extent to which one's self-categorization matters to them (Egan & Perry, 2001; Perry et al., 2019). In the present work, we explore gender identity importance in adolescents,[2] with a focus on potential differences between cisgender and gender diverse (i.e., transgender and nonbinary) adolescents.

Gender diverse and cisgender individuals have been compared on a few dimensions of gender identity, with mixed results. For example, some research (with a sample that overlaps with the current one) suggests that binary transgender and cisgender children and early adolescents do not differ from one another in terms of self-categorization (Gülgöz et al., 2019; Olson et al., 2015) or felt similarity to members of their own or the other binary gender group (Gülgöz et al., 2019, 2022). Research with adults, however, has suggested that gender diverse individuals experience greater pressure to conform to gender norms than cisgender individuals do (Klennert, 2023). Potential differences in the importance that gender diverse and cisgender individuals place on their gender self-categorization have been underexplored.

More generally, gender identity importance has been largely neglected in the literature on gender identity. Indeed, in a recent review of the literature on gender identity in children, the authors opted to briefly describe gender identity importance when laying out the different dimensions of gender identity but to omit it from the remainder of the review, stating, "Gender centrality and gender frustration [another dimension that is not reviewed further] are also excluded because they have received scant research attention, making it difficult to draw conclusions about them" (Perry et al., 2019, p. 291).

Despite this paucity of research on gender identity importance (or centrality) in youth, studies on collective identity importance in adults can provide insight into how it might function. Work considering collective identity importance as a predictor of well-being in adults has produced mixed results. In some cases, collective identity importance has been shown to positively predict well-being, such that the more important an identity is to a person, the better off they are (e.g., Roszak, 2010; Yap et al., 2011). A recent series of studies, however, presents a challenge to these earlier findings. These studies found that when other dimensions of gender identity are controlled for, gender identity importance is *negatively* associated with well-being, such that the more important an identity is to a person, the *worse* off they are (Zitelny et al., 2022). Of particular relevance to the lives of transgender and gender nonbinary people, work considering collective identity importance as a moderator, rather than a predictor, of well-being has shown that the degree to which a given collective identity matters

[1]Here, we use the terms personal, relational, and collective identities to refer, respectively, to: identities related to the individual, such as personality traits, values, and goals; identities related to interpersonal relationships; and identities related to large-scale social categories, such as gender, race/ethnicity, nationality, and religion (also sometimes called *social identity*; (Tajfel, 1981), p. 255; Luhtanen & Crocker, 1992).
[2]We use the term "adolescents" throughout this manuscript to refer to 12–18-year-olds.

to a person predicts how consequential experiences that threaten or affirm that identity are for that person's well-being. The higher people are in identity importance, the more distress they may feel when the relevant identity is threatened (Wang et al., 2013, Study 1b; cf. Wang et al., 2013, Study 2; Wittlin et al., 2024), the more they may assert that identity in the wake of such threats (Trujillo et al., 2015), and the better they may feel when that identity is made visible to others (McGorray et al., 2023). In other words, the more important a particular collective identity (e.g., gender) is to a person, the more impactful experiences related to that identity may be.

Determining which social groups tend to be higher and lower, on average, in identity importance can therefore shed light on who might be particularly susceptible to the negative consequences of identity denial and the positive consequences of identity recognition. Within the context of gender, this determination can provide insight into who may be most vulnerable to the psychological harms of misgendering (a form of social identity threat [Branscombe et al., 1999] wherein someone is thought to not be a member of the gender group with which they identify [Price et al., 2021] or wherein the legitimacy of their gender group is denied [Johnson et al., 2020]) and the psychological benefits of gender identity affirmation. In the current study, we compare gender identity importance in three groups of adolescents: binary transgender adolescents (i.e., transgender girls, who identify as girls and who were assigned to the male sex at birth, and transgender boys, who identify as boys and who were assigned to the female sex at birth); binary cisgender adolescents (i.e., cisgender girls, who identify as girls and who were assigned to the female sex at birth, and cisgender boys, who identify as boys and who were assigned to the male sex at birth); and nonbinary adolescents (i.e., adolescents who identify as nonbinary, regardless of assigned sex; Research Question 1).

Adolescents in the United States today, who are members of "Gen Z" (born between 1995 and 2012; Twenge, 2023), arguably have more freedom to define their gender for themselves than members of any previous generation have had. Legal attacks on minors' right to live in alignment with their gender notwithstanding (Movement Advancement Project, 2024), these youth are deciding for themselves what it means to be a member of a gender group and asserting which gender group they belong to at unprecedent levels (Jones, 2023; Twenge, 2023). It is unclear, however, whether youth who identify with a gender group different from that assigned to them at birth attribute more, less, or equal importance to their gender than youth who identify with the gender group to which they were assigned. We had competing predictions about the relative importance that gender diverse adolescents and binary cisgender adolescents would place on their gender.

One possibility was that gender identity importance would be higher in gender diverse than binary cisgender adolescents. Given the risks associated with coming out as transgender or nonbinary (Grossman et al., 2021; Hatchel et al., 2019; Price et al., 2021), it seemed possible that only adolescents whose gender is particularly important to them would come out during youth or that the process of overcoming obstacles to assert their gender would produce an especially strong affiliation with that gender. This possibility is also suggested by studies showing that people often respond to identity denial with (re)assertions of their denied identities (Cheryan & Monin, 2005; Trujillo et al., 2015). Because gender diverse individuals are particularly likely to have had their identities denied, it seemed possible that they would consider their gender to be particularly important. That being said, some research has found that identity denial is not linked to identity importance (Garr-Schultz & Gardner, 2021), and research on the relationship between misgendering and identity importance in transgender adults has produced mixed results (McLemore, 2015).

A second possibility was that gender identity importance would be comparable in gender diverse and binary cisgender adolescents. In line with this possibility, past research with a sample that overlaps with the current one has demonstrated that binary transgender and cisgender children and early adolescents do neither differ on other components of gender identity, such as self-categorization and perceived similarity to others in their gender group, nor do they differ on gender preferences or how binary their gender is (Gülgöz et al., 2019, 2022; Olson et al., 2015).

A final possibility was that gender identity importance would be lower in gender diverse adolescents than in binary cisgender adolescents. Consistent with this prediction, results from a partially

overlapping sample suggest that binary transgender children's implicit associations between themselves and their gender identity category (relative to themselves and the other binary gender category) were weaker than binary cisgender children's were (Gülgöz et al., 2019). Also, given that gender diverse adolescents often have first-hand experiences with the negative consequences of rigid gender roles (Grossman et al., 2005), we thought it possible that they would view their gender self-categorization as less important or would experience their transgender self-categorization, rather than their gender self-categorization (as a girl/woman, a boy/man, or nonbinary), as particularly important to them. We investigate this possibility not only by comparing gender identity importance in gender diverse and cisgender adolescents but also by comparing the relative importance of gender self-categorization and transgender self-categorization in gender diverse adolescents (Research Question 2).

In the current study, we further investigate variation in transgender identity by exploring whether binary and nonbinary gender diverse adolescents differ in their likelihood of self-categorizing as transgender or in how important their transgender self-categorization is to them (Research Question 3). Nonbinary adults vary in their understandings of what it means to be transgender and, consequently, in the extent to which they identify with that term (Darwin, 2020). Although some identify unequivocally with the transgender label, others express ambivalence about the extent to which the label applies to them, and still others do not identify with it at all (Darwin, 2020). We therefore predicted that nonbinary adolescents would be less likely than (binary) transgender adolescent girls and boys to self-categorize as transgender. We had no prediction, however, about whether binary and nonbinary adolescents who *do* self-categorize as transgender would differ in transgender identity importance.

Finally, conceptually replicating past work, we test two questions about whether members of marginalized and privileged groups differ in collective identity importance. Research with late adolescents and emerging young adults has found that young women sometimes view their gender identity as more important than young men do (cf. Hoffman et al., 2021; Wilson & Leaper, 2016;), likely because in an androcentric, patriarchal society (Hegarty et al., 2013; Sidanius & Pratto, 1999), men and boys constitute the "unmarked" gender category, whereas women and girls constitute the "marked" gender category (Hegarty & Buechel, 2006; Miller et al., 1991). Similarly, past work with children (Akiba et al., 2004; Rogers & Meltzoff, 2017; Turner & Brown, 2007) and adolescents (Fuligni et al., 2005) has found that youth of colour tend to view their racial/ethnic identity as more important to them than White children and adolescents do. Further, unlike White children, children of colour may not consider their gender to be more central to their identity than their race/ethnicity (cf. Rogers et al., 2015; Turner & Brown, 2007). In the current work, we therefore examine whether adolescent girls and boys, as well as nonbinary individuals, differ in gender identity importance (Research Question 4) and whether adolescents of colour consider their racial/ethnic self-categorization, relative to their gender self-categorization, to be more important to them than White adolescents do (Research Question 5).[3]

METHOD

Transparency and openness

Our data analysis plan was developed and registered before any data had been examined or analysed. Planned analyses were therefore data-independent. However, the data had already been collected at the time of registration. All registered analyses are reported in the main text or Supplementary Material

[3]Readers might note that "transgender" also constitutes a marked category and "cisgender" an unmarked category. "Cisgender" is so unmarked, in fact, that many people are not familiar with this term. Because "cisgender" is an unfamiliar term to so many, we did not ask participants in this study if they were cisgender. Therefore, we could not compare transgender and cisgender identity importance.

S1. Data were analysed in R, via Rstudio (RStudio Team, 2020), using the car (Fox & Weisberg, 2019), tidyverse (Wickham et al., 2019), effectsize (Ben-Shachar et al., 2020), PairedData (Champely, 2018), lsr (Navarro, 2015), MBESS (Kelley, 2007), and rcompanion (Mangiafico, 2023) packages.

Sample

The current sample consisted of participants from ongoing longitudinal studies of gender development. (Although it overlaps with samples reported on in previous papers, no data from the same wave of data collection have been reported on, and the results of the measure used here have never been reported.) Participants were initially recruited from the United States and Canada between July 2013 and October 2021, when they were 5–14 years old. At recruitment, participants fell into one of four categories: (i) transgender girls and boys who had completed a binary social transition (i.e., were using binary pronouns associated with their gender self-categorization in all places and with all people); (ii) gender nonconforming children (i.e., children who preferred "opposite" sex peers and counter-stereotypical toys and clothing and who had a desire to be a member of the "opposite" gender group but who had not completed a binary social transition; Rae et al., 2019); (iii) cisgender siblings of binary transgender and gender nonconforming children; (iv) unrelated cisgender girls and boys who were matched in age to the binary transgender and gender nonconforming participants. (Cisgender participants matched to binary transgender participants were matched on gender. Cisgender participants matched to gender nonconforming participants had the "opposite" assigned sex as the gender nonconforming participant with whom they were matched.) Siblings were included in this broader project to help establish a comparison group of cisgender youth who were as similar to the transgender youth as possible on as many dimensions as possible (e.g., family income and parental political orientation).

As part of these longitudinal studies, youth aged 12 years and above are asked to complete a survey approximately annually. A subset of youth do so in any given year. Before each survey, parental consent and child assent are obtained. The current analysis focus on the 2021 survey. It include individuals who completed this survey, which launched in July 2021, by the end of January 2022. Participants' gender for the present analyses was determined by their gender self-categorization (girl/woman, boy/man, nonbinary) on the identity importance measure, described below, at the time of the survey (irrespective of their gender self-categorization or participant group at initial recruitment). We classified adolescent girls and boys as transgender or cisgender based on whether their gender self-categorization differed from their sex assignment at birth (in which case they were classified as transgender) or corresponded with their sex assignment at birth (in which case they were classified as cisgender). We made this classification independently of whether participants self-categorized as transgender, as this self-categorization was a dependent variable. Participants' race/ethnicity for the present analyses was determined by their racial/ethnic gender self-categorization (exclusively Asian, exclusively Black, exclusively Hispanic, exclusively White, or multiracial/biracial; no participants identified exclusively as Native American or Pacific Islander) on the identity importance measure, described below, at the time of the survey.

Four hundred fifty-six adolescents completed the survey.[4] Fifty-two adolescents who participated did not meet our registered inclusion criteria because they did not report belonging to any of the three gender categories listed (girl/woman, boy/man, nonbinary; $n = 25$), they reported belonging to two or more of these categories ($n = 23$), they reported being a girl/woman but did not actively indicate they were *not* a boy/man ($n = 2$), or they reported being a boy/man but did not actively indicate they were *not* a girl/woman ($n = 2$). After excluding these 52 participants, participants who did not complete the gender identity importance measure for their gender ($n = 4$), and participants ages 19 and older ($n = 8$),

[4]This number differs from the number we initially registered. That number was incorrect, as it was based on the raw data file, which included, for example, responses from research team members who piloted the survey.

TABLE 1 Sample demographic characteristics.

	Transgender adolescent girls ($n=83$)	Transgender adolescent boys ($n=47$)	Cisgender adolescent girls ($n=115$)	Cisgender adolescent boys ($n=121$)	Nonbinary adolescent youth ($n=26$)
Age *M* (SD)	14.9 (1.6)	15.5 (1.5)	15.0 (1.7)	15.1 (1.7)	14.3 (1.6)
Household annual income (reported by parents at initial visit)					
<$25,000	4%	0%	3%	3%	4%
$25,001–$50,000	8%	13%	5%	6%	15%
$50,001–$75,000	18%	19%	7%	12%	19%
$75,001–$125,000	36%	19%	33%	32%	27%
>$125,000	34%	49%	51%	45%	35%
Income not reported	0%	0%	<1%	2%	0%
Mean parent political orientation (1 = most liberal, 7 = most conservative; reported by parents at initial visit)	1.92 (0.83)	1.75 (0.86)	2.36 (1.25)	2.18 (1.22)	1.54 (0.63)

TABLE 2 Age distributions.

Age in years	Transgender adolescent girls ($n=83$; %)	Transgender adolescent boys ($n=47$; %)	Cisgender adolescent girls ($n=115$; %)	Cisgender adolescent boys ($n=121$; %)	Nonbinary adolescent youth ($n=26$; %)
12	2	0	11	12	19
13	29	23	25	19	35
14	27	13	13	19	15
15	18	15	22	18	12
16	13	28	13	12	15
17	6	17	9	12	4
18	5	4	7	7	0

we were left with a final sample of 392 with 83 transgender girls, 47 transgender boys, 115 cisgender girls, 121 cisgender boys, and 26 nonbinary adolescents (ages 12–18[5]; $M_{age} = 15.02$; $SD_{age} = 1.67$). The current sample included 46 pairs of siblings. As preregistered, we treat the data as independent in the main manuscript. We also tried using multi-level models with random intercepts for family to account for data dependence between siblings, but these models did not reliably converge. In the Supplement, we include parallel (non-preregistered) analyses with one randomly selected sibling from each sibling pair excluded. Table 1 provides demographic information. Table 2 provides age distributions.

Measures

Participants completed a task in which they saw several identities and descriptors (a girl/woman, a boy/man, nonbinary, transgender, Asian, Black, Hispanic/Latinx, Native American, Pacific Islander, White, multiracial or biracial, a student, North American, smart, friendly, and religious) and were asked whether each applied to them (e.g., "Are you a boy/man?"). Response options were "yes," "no," "skip," or "I

[5]Age was not correlated with any of our key outcome variables; see Supplementary Material S1.

don't know." For every "yes" response, participants were asked how important that identity/descriptor is to them on a 0–100 scale ranging from "Not at all important" to "Very important". These 0–100 ratings constituted our measures of identity importance.[6]

Data and code are available at https://osf.io/tq4m6/. Limited demographics that, in combination, could be identifying have been removed from the data file to ensure participant confidentiality.

RESULTS

Research Question 1: Do binary transgender adolescents, binary cisgender adolescents, and nonbinary adolescents differ in how important their gender self-categorization is to them?

A between-subjects analysis of variance (ANOVA) indicated that binary transgender, binary cisgender, and nonbinary adolescents differed in how important their gender self-categorization is to them (i.e., in gender identity importance), $F(2, 389) = 52.54$, $p < .001$, $\eta^2_p = .21$, 90% CI [0.15, 0.27] (Lakens, 2014). Post-hoc pairwise comparisons with Bonferroni corrections demonstrated that binary transgender adolescents rated their gender self-categorization as more important to them ($M = 88.22$, SD = 20.19) than binary cisgender ($M = 55.72$, SD = 33.38) and nonbinary adolescents ($M = 57.62$, SD = 29.39), $ps < .001$ (see Figure 1). Binary cisgender and nonbinary adolescents did not significantly differ in gender identity importance, $p > .9$. Group-level means for this and other measures of identity importance are presented in Table 3.[7]

Post-hoc visual inspection of the data and Shapiro-Wilk tests revealed that gender identity importance was not normally distributed for binary transgender adolescents, $W = .66$, $p < .001$, or binary cisgender adolescents, $W = .92$, $p < .001$ (though it was for nonbinary adolescents, $W = .93$, $p = .07$). The modal response within all three groups was 100, indicating that a plurality of binary transgender (58.46%), binary cisgender (15.68%), and nonbinary adolescents (11.54%) considered their gender self-categorization to be maximally important to them, though a large percentage of binary cisgender adolescents (9.32%) also selected 0, indicating that their gender self-categorization was not at all important to them, and half of nonbinary adolescents (50.00%) selected values of 50 or lower. Additionally, a post-hoc Levene's test indicated that the variances of these three groups were not equal, $F(2, 389) = 33.15$, $p < .001$ (see Figure 1). Because the groups had non-normal distributions and unequal variances in groups with substantively different sample sizes—therefore violating assumptions of ANOVA—we additionally ran an exploratory (unregistered) chi-square test of independence, with gender identity importance re-coded as a binary variable: 100 versus all other ratings. The results of this analysis aligned with the results of the registered analyses reported above. Here and elsewhere, these additional analyses are presented in Supplementary Material S1.

Research Question 2: How much importance do adolescents who self-categorize as transgender place on that self-categorization, relative to their gender self-categorization (i.e., their self-categorization as a girl/woman, a boy/man, or nonbinary)?

A within-subjects ANOVA revealed that binary transgender and nonbinary participants who self-categorized as transgender (i.e., who answered "yes" to the transgender identity question) considered

[6]As a result of a programming error, participants who indicated that they were a student were asked how important both being a student and being North American was to them, regardless of whether they indicated that they were North American. Therefore, we do not present identity importance ratings for "North American".

[7]Because the majority of binary transgender adolescents were girls, whereas the majority of binary cisgender adolescents were boys, we also conducted an unregistered type-III analysis of covariance (ANCOVA) to see if gender identity importance remained higher in binary transgender adolescents than binary cisgender adolescents when controlling for gender identity. We found that it did, $F(1, 363) = 93.33$, $p < .001$, $\eta^2_p = .20$, 90% CI [0.15, 0.26].

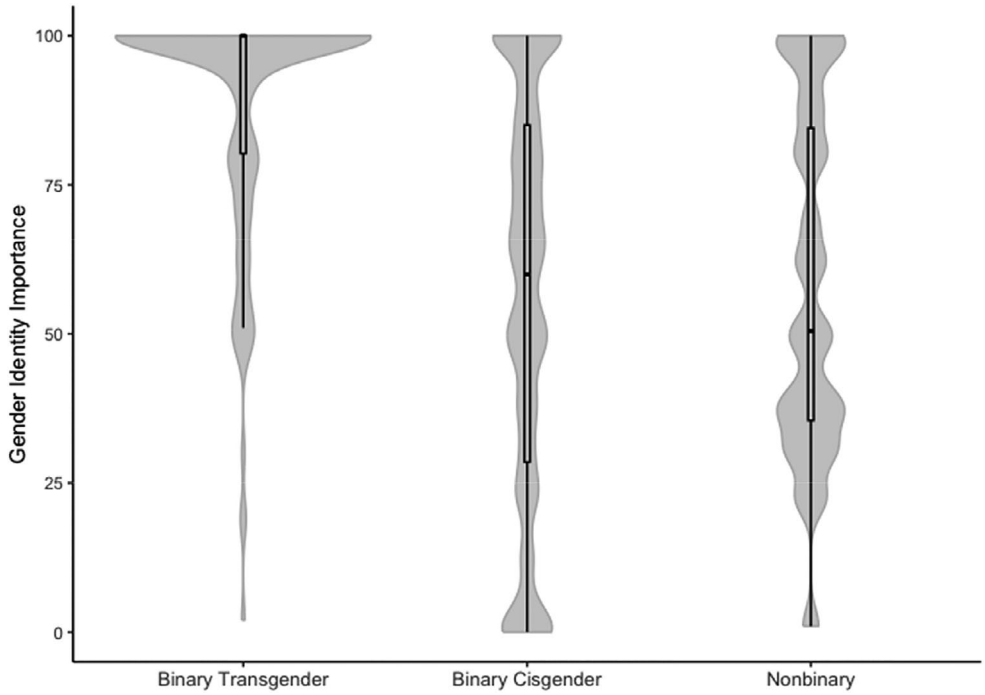

FIGURE 1 Gender identity importance in binary transgender, binary cisgender, and nonbinary adolescents. Binary transgender adolescents considered their gender self-categorization to be more important to them than binary cisgender and nonbinary adolescents did.

TABLE 3 Participants' identity importance ratings.

	Transgender adolescent girls (n = 61–83)	Transgender adolescent boys (n = 40–47)	Cisgender adolescent girls (n = 98–115)	Cisgender adolescent boys (n = 102–121)	Nonbinary adolescent youth (n = 16–26)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Focal items					
Gender (n = 392)	90.69^{a} (18.91)	83.87^{a} (21.82)	62.25^{b} (28.69)	49.52^{c} (36.35)	57.62^{bc} (29.39)
Transgender (n = 144)	64.96^{a} (34.18)	48.87^{b} (37.06)	–	–	48.13^{ab} (27.68)
Race/ethnicity (n = 369)	24.22^{a} (31.72)	29.67^{a} (35.40)	31.03^{a} (33.38)	34.68^{a} (35.27)	30.72^{a} (33.48)
Control items					
Student (n = 383)	64.68^{ab} (32.10)	59.07^{b} (32.13)	74.86^{a} (25.75)	65.33^{ab} (28.87)	48.36^{b} (34.63)
Smart (n = 323)	75.66^{a} (31.08)	70.23^{a} (28.84)	80.71^{a} (21.38)	74.88^{a} (27.29)	70.45^{a} (28.01)
Friendly (n = 360)	85.77^{a} (19.23)	84.72^{a} (20.59)	84.95^{a} (19.46)	83.39^{a} (22.45)	72.37^{a} (23.32)

Note: Superscripts represent post-hoc pairwise comparisons with Bonferroni corrections among all five groups on a given identity importance item (three groups, in the case of the "transgender" item). Means that share a superscript (e.g., ^{a}) are not significantly different ($p > .05$) from other means on the same row. Race/ethnicity refers to the data analysed in research question 5. "Student," "Smart," and "Friendly" were included as control items, expected to produce similar results across transgender and cisgender youth, and are presented here as a point of comparison for the measures of interest. Participants were also asked whether they were religious and how important being religious was to them. Because so few participants provided importance ratings for this item (n = 61 across groups), we excluded it from this table.

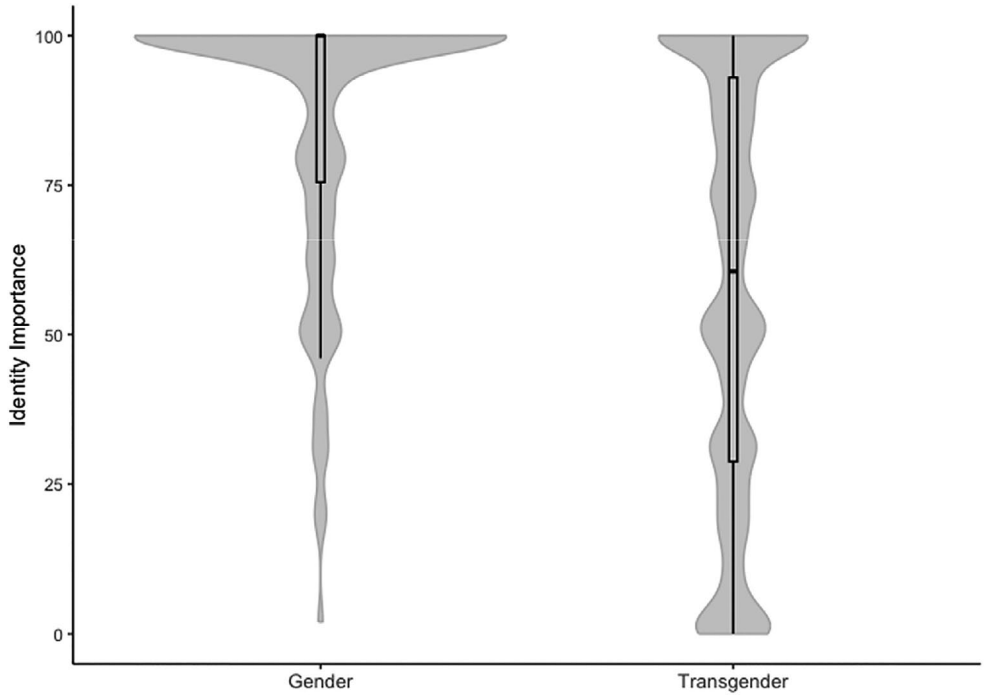

FIGURE 2 Gender identity importance and transgender identity importance in binary transgender and nonbinary adolescents who self-categorized as transgender. These adolescents considered their gender self-categorization (as girls/woman, boys/men, or nonbinary) to be more important than their transgender self-categorization.

their gender self-categorization (as a girl/woman, a boy/man, or nonbinary) to be more important to them ($M = 84.79$, SD = 23.82) than their transgender self-categorization ($M = 57.95$, SD = 35.21), F (1, 143) = 81.15, $p < .001$, $\eta^2_p = .36$, 90% CI [0.26, 0.45]. See Figure 2. A McNemar's chi-square test produced comparable results (see Supplementary Material S1).

Research Question 3a: Do binary transgender adolescents and nonbinary adolescents differ in how likely they are to self-categorize as transgender?

A chi-square test of independence (with a continuity correction because the expected frequency of nonbinary participants who did not self-categorize as transgender was <5; Yates, 1934), indicated that binary transgender adolescents were more likely than nonbinary adolescents to self-categorize as transgender (i.e., answer "yes" to the transgender identity question, rather than "no", "I don't know", or "skip"), X^2 (1, $n = 156$) = 36.56, $p < .001$, $\varphi = 0.51$, 95% CI [0.35, 0.67]. Whereas 98.46% of binary transgender adolescents said "yes" to this question, only 61.54% of nonbinary adolescents did. This result should be interpreted with caution, however, given the relatively small number of nonbinary participants.

Research Question 3b: Do binary and nonbinary adolescents who self-categorize as transgender differ in how important being transgender is to them?

A between-subjects ANOVA revealed that there was no significant difference between binary transgender adolescents who self-categorized as transgender (i.e., who answered "yes" to the transgender identity

question) and nonbinary adolescents who self-categorized as transgender in terms of how important being transgender was to them, $F(1, 142) = 1.41$, $p = .238$, $\eta^2_p = .01$, 90% CI [0.00, 0.05] (binary transgender: $M = 59.18$, SD = 35.94; nonbinary: $M = 48.13$, SD = 27.68). Given the small size of the transgender-identifying nonbinary group ($n = 16$), however, we urge readers to interpret this null finding cautiously.

Post-hoc visual inspection of the data and Shapiro-Wilk tests revealed that transgender identity importance was not normally distributed for transgender-identifying binary transgender adolescents, $W = .88$, $p < .001$, or transgender-identifying nonbinary adolescents, $W = .88$, $p = .03$. The modal response among binary transgender adolescents was 100, indicating that a plurality of them (22.66%) considered their transgender self-categorization to be maximally important to them. In contrast, no nonbinary adolescents who self-categorized as transgender considered their transgender self-categorization to be maximally important to them. A Levene's test did not indicate that the variances of these two groups were unequal, $F(1, 142) = 3.62$, $p = .059$, but results were trending in that direction. We therefore again ran an exploratory (unregistered) chi-square test of independence with transgender identity importance re-coded as a binary variable (100 vs. all other ratings). In this analysis, transgender-identifying binary transgender adolescents were marginally—but not significantly—more likely than transgender-identifying nonbinary adolescents to rate being transgender as maximally important to them (see Supplementary Material S1).

Research Question 4: Do adolescent girls, adolescent boys, and nonbinary adolescents differ in how important their gender self-categorization is to them?

A between-subjects ANOVA revealed that adolescent girls, adolescent boys, and nonbinary adolescents differed in gender identity importance, $F(2, 389) = 10.99$, $p < .001$, $\eta^2_p = .05$, 90% CI [0.02, 0.09]. Post-hoc pairwise comparisons with Bonferroni corrections revealed that adolescent girls rated their gender self-categorization as more important to them ($M = 74.17$, SD = 28.69) than both adolescent boys ($M = 59.13$, SD = 36.33), $p < .001$, and nonbinary adolescents ($M = 57.62$, SD = 29.39), $p = .043$, though the latter result should be interpreted cautiously given the relatively high p-value and the number of analyses being conducted. Adolescent boys and nonbinary adolescents did not significantly differ in gender identity importance, $p > .9$.[8]

Post-hoc visual inspection of the data and Shapiro-Wilk tests revealed that gender identity importance was not normally distributed among girls, $W = .84$, $p < .001$, or boys, $W = .88$, $p < .001$ (though it was for nonbinary adolescents, $W = .93$, $p = .066$). The modal response within all three groups was 100, indicating that a plurality of girls (35.86%), boys (25.00%), and nonbinary adolescents (11.54%) considered their gender self-categorization to be maximally important to them, though a large percentage of boys (10.71%) also selected 0, indicating that their gender self-categorization was not at all important to them, and as described above, half of nonbinary adolescents (50.00%) selected values of 50 or lower. Additionally, a Levene's test indicated that the variances of these three groups were not equal, $F(2, 389) = 11.01$, $p < .001$. Because the groups had non-normal distributions and unequal variances in groups with substantively different sample sizes—therefore violating assumptions of ANOVA—we additionally ran an exploratory (unregistered) chi-square test of independence, with gender identity importance re-coded as a binary variable: 100 versus all other ratings. The results of this analysis partially aligned with the results of the registered analyses, reported above, but adolescent girls were not more likely than adolescent boys to report that their gender self-categorization was maximally important to them (see Supplementary Material S1).

[8]Because 42% of binary adolescent girls but only 28% of binary adolescent boys were transgender, we also conducted an unregistered type-III ANCOVA to see if gender identity importance remained higher in adolescent girls than adolescent boys when controlling for whether the adolescent was cisgender or transgender. We found that it did, $F(1, 363) = 12.23$, $p < .001$, $\eta^2_p = .03$, 90% CI [0.01, 0.07].

Research Question 5 (*secondary*): Do adolescents of colour and white adolescents differ in the relative importance they place on their gender self-categorization (i.e., gender identity importance) and their racial/ethnic self-categorization (i.e., racial/ethnic identity importance)?

Participants' racial/ethnic self-categorizations are reported in Table 4.

We considered adolescents who self-identified exclusively as Asian, exclusively as Black, exclusively as Hispanic/Latinx, or as multiracial/biracial to be adolescents of colour. (No adolescents identified exclusively as Native American or Pacific Islander.) Although participants who identified as multiracial/biracial could have self-categorized as belonging to other racial/ethnic groups as well, here we rely on the importance they assigned to their multiracial/biracial identity. We considered adolescents who identified exclusively as White to be White adolescents. This analysis therefore excluded participants who did not identify with any of these racial/ethnic categories ($n = 1$), who identified with multiple of these racial/ethnic categories but did not identify as multiracial/biracial ($n = 19$), or who identified with one of these racial/ethnic categories but did not indicate how important that self-categorization was to them ($n = 3$).

We used a 2×2 mixed type-III ANOVA to examine whether adolescents of colour and White adolescents differed in the relative importance they placed on their gender self-categorization (gender identity importance) and their racial/ethnic self-categorization (racial/ethnic identity importance). This analysis revealed a significant interaction between identity domain and group, F (1, 367) = 73.11, $p < .001$, $\eta^2_p = .17$, 90% CI [0.11, 0.22].

Follow-up paired t-tests revealed that gender self-categorization was rated as more important than racial/ethnic self-categorization among White adolescents, t (272) = −21.45, $p < .001$, $d = 1.30$, 95% CI [1.14, 1.46] (gender: $M = 64.68$, SD = 34.02; race/ethnicity: $M = 18.88$, SD = 25.81) and adolescents of colour, t (95) = −2.53, $p = .013$, $d = 0.26$, 95% CI [0.05, 0.46] (gender: $M = 73.35$, SD = 28.50; race/ethnicity: $M = 63.80$, SD = 32.29), but this difference was greater among White adolescents—and the effect among adolescents of colour should be interpreted with caution given the relatively high p-value. When the interaction was broken down the other way, Welch's t-tests revealed that racial/ethnic

TABLE 4 Participants' self-reported race/ethnicity on the current survey.

	Transgender adolescent girls ($n = 83$; %)	Transgender adolescent boys ($n = 47$; %)	Cisgender adolescent girls ($n = 115$; %)	Cisgender adolescent boys ($n = 121$; %)	Nonbinary adolescent youth ($n = 26$; %)
Asian	2	6	3	2	0
Black	1	2	3	0	0
Hispanic/Latinx[a]	1	4	<1	0	0
White	70	66	72	73	62
Multiracial or biracial (plurality Asian and White, then Hispanic/Latino and White)[b]	17	19	17	20	38
Multiple racial/ethnic categories (but did not identify as multiracial or biracial)	7	2	5	5	0
Race/ethnicity not reported	1	0	0	0	0

[a]The "Hispanic/Latinx" category comprises adolescents who reported that they are Hispanic/Latinx and did report belonging to any other racial or ethnic categories.

[b]The "multiracial or biracial" category comprises participants who reported that they are multiracial or biracial, regardless of what (if any) other racial/ethnic groups they reported belonging to.

self-categorization, t (139.99) = 12.32, $p < .001$, Cohen's $d = 1.63$, 95% CI [1.36, 1.89], and gender self-categorization, t (196.82) = 2.43, $p = .016$, Cohen's $d = 0.27$, 95% CI [0.03, 0.50], were rated as more important among adolescents of colour than White adolescents, but this difference was greater for racial/ethnic self-categorization than gender self-categorization—and the effect for gender self-categorization should also be interpreted cautiously.

Post-hoc visual inspection of the data and Shapiro-Wilk tests revealed that neither gender nor racial/ethnic identity importance was normally distributed in White adolescents (gender: $W = .87$, $p < .001$; race/ethnicity: $W = .75$, $p < .001$) or adolescents of colour (gender: $W = .85$, $p < .001$; race/ethnicity: $W = .90$, $p < .001$). The modal response for gender identity importance was 100 among both White adolescents (27.84%) and adolescents of colour (34.38%). The modal response for racial/ethnic identity importance, in contrast, was 0 for White adolescents (32.60%) and 100 for adolescents of colour (21.88%). Further, Levene's tests indicated that the variances of these two groups were not equal for gender identity importance, F (1, 367) = 7.00, $p = .009$, or racial/ethnic identity importance, F (1, 367) = 10.67, $p = .001$. We therefore additionally ran an exploratory (unregistered) multi-level binary logistic regression with identity importance re-coded as a binary variable: 100 versus all other ratings. Results of this analysis aligned with the results of the registered analyses, except that adolescents of colour were not more likely than White adolescents to rate their gender self-categorization as maximally important to them (see Supplementary Material S1).

Because more than 25 participants in our sample self-categorized as multiracial/biracial ($n = 76$), we also compared the relative importance of gender self-categorization and racial/ethnic self-categorization in White and multiracial/biracial adolescents, as registered, again using a 2 × 2 mixed type-III ANOVA (The other three subgroups of adolescents of colour had 11 or fewer participants per group; we therefore did not conduct separate group-specific analyses). We again found a significant interaction between identity domain and group: F (1, 347) = 55.20, $p < .001$, $\eta^2_p = .14$, 90% CI [0.09, 0.19].

Follow-up paired t-tests revealed that gender self-categorization was rated as more important than racial/ethnic identity among both multiracial/biracial adolescents, t (75) = −2.75, $p = .007$, $d = 0.32$, 95% CI [0.08, 0.55] (gender: $M = 72.74$, SD = 29.05; race/ethnicity: $M = 61.20$, SD = 32.45) and White adolescents, but this difference was significantly larger among White adolescents—and, as with all adolescents of colour, the effect among multiracial/biracial adolescents should be interpreted with caution given the relatively high p-value. When the interaction was broken down the other way, Welch's t-tests revealed that racial/ethnic self-categorization, t (102.86) = 10.49, $p < .001$, $d = 1.55$, 95% CI [1.27, 1.82] and gender self-categorization, t (137.69) = 2.06, $p = .042$, $d = 0.24$, 95% CI [−0.01, 0.50], were rated as more important among multiracial/biracial adolescents than White adolescents, but this difference was greater for racial/ethnic self-categorization—and the difference for gender self-categorization should again be interpreted cautiously.

Results of an exploratory (unregistered) binary logistic regression with gender and racial/ethnic identity importance re-coded as a binary variable (100 vs. all other ratings) again aligned with these results, except that, as in the analysis with all adolescents of colour, multiracial/biracial adolescents were not more likely than White adolescents to rate their gender self-categorization as maximally important to them (see Supplementary Material S1).

DISCUSSION

In a sample of 12–18-year-olds in the United States and Canada, gender identity importance (i.e., the extent to which an individual's gender self-categorization matters to them) was higher in transgender than cisgender adolescent girls and boys. In other words, being a girl/woman or a boy/man was more important to adolescents who were assigned to the sex "opposite" their gender than it was to adolescents who were assigned to the sex corresponding with their gender. Furthermore, levels of gender identity

importance were high in transgender adolescent girls and boys (averaging 88 on a 0–100 scale, vs. 56 among cisgender adolescent girls and boys).

These results are consistent with the notion, suggested by past work on identity denial (Cheryan & Monin, 2005; Trujillo et al., 2015), that individuals whose gender self-categorization is invalidated might assert this self-categorization more than individuals whose gender self-categorization is *not* invalidated. The current results are also consistent, however, with the possibility that the process of coming out or socially transitioning leads to increased gender identity importance or that only individuals who place a great deal of importance on their gender self-categorization come out as transgender at a young age. Indeed, the current sample is notable because most of the binary transgender youth came out and socially transitioned very early in their development—by age 6.5 on average (Olson et al., 2022).

The analyses presented here are unable to distinguish between these different possible explanations for the observed difference in gender identity importance between transgender and cisgender adolescent girls and boys—or to determine whether another explanation might be at play. Additional research, however, could identify contributors to this difference. For example, to examine whether identity denial could help to explain the higher levels of gender identity importance in transgender girls and boys, future research might explore whether experiences with misgendering *among* transgender adolescent girls and boys are associated with later increases in gender identity importance. Further, to determine whether those who came out earlier in life are higher in gender identity importance than those who came out later, research could compare gender identity importance in transgender adolescents who came out at different ages.

The observed differences in gender identity importance between transgender and cisgender adolescent girls and boys also lend support to multidimensional models of gender identity (Egan & Perry, 2001; Tate et al., 2014). Past research with a partially overlapping sample—at a younger age—found that transgender girls and boys did not differ from cisgender girls and boys in their gender self-categorization, perceived similarity to others in their gender group, or preferences (Gülgöz et al., 2019, 2022; Olson et al., 2015) and that implicit self-gender associations were actually *weaker* among transgender girls and boys than among cisgender girls and boys (Gülgöz et al., 2019). The current analyses, however, which focus on a different dimension of gender identity—gender identity importance—indicate that transgender adolescent girls and boys are *more* identified with their gender group than cisgender adolescent girls and boys are (in that they consider this aspect of their identity to be more important to them). Together, these results suggest that differences in gender identity between transgender and cisgender youth (or lack thereof) vary depending on which dimension of gender identity is being considered. Notably, however, these analyses were not conducted with the exact same sample, nor were they conducted at the same developmental point. Thus, additional research is needed to determine whether, for example, the importance of a transgender youth's gender self-categorization shifts over development.

The current study also found that gender diverse adolescents who identified as transgender considered being a girl/woman, a boy/man, or nonbinary to be more important to them than being transgender. In other words, they identified primarily with their gender group rather than with being transgender. This finding is perhaps unsurprising given that identifying as transgender often follows from identifying with a gender different from that assigned at birth; in other words, for many gender diverse individuals, their gender self-categorization could, in a sense, be described as a primary identity and their transgender self-categorization as a more incidental identity. Nonetheless, several participants (20.27%) reported that being transgender was maximally important to them. Clearly, for many transgender adolescents, being transgender is *not* merely an incidental identity. Reasons for different transgender adolescents identifying more or less with their gender, relative to their transgender identity, would be an interesting direction for future research. Further, whether youth's greater identification with their gender group than with being transgender is unique to the current sample—in which most binary transgender youth came out at very early ages—is an important question for future work.

The current study additionally revealed differences between different groups of gender diverse adolescents. Specifically, gender identity importance was higher in transgender adolescent girls and boys

than in nonbinary adolescents. In a society in which gender is assumed to be binary (Morgenroth & Ryan, 2021), having an identity that exists outside of that binary can be highly salient in people's lives (Matsuno et al., 2022). Therefore, one might expect nonbinary adolescents to consider their nonbinary gender to be particularly central to their sense of self. However, just because an identity is salient to someone does not mean it is particularly important to them. In fact, some nonbinary adolescents might not identify with any gender—or, in other words, might be agender (Galupo et al., 2017). The current results suggest that nonbinary adolescents as a group do not consider their gender to be particularly important to them. Given that their ratings of gender identity importance did not differ from those of cisgender girls and boys, however, the current results do *not* suggest that nonbinary adolescents as a group consider their gender to be particularly *unimportant* to them, either. Given the limited number of nonbinary adolescents in the current sample, this finding warrants replication and further exploration.

Another observed difference between adolescents who identified with the gender "opposite" the one assigned to them at birth, and adolescents who identified as nonbinary was that the former were more likely to also identify with the category "transgender". This finding is consistent with research on nonbinary adults, who report varying levels of identification with the transgender label (Darwin, 2020). Among adolescents in the current sample who identified as transgender, however, there was no significant difference between nonbinary and binary adolescents in terms of how important their transgender self-categorization was to them. This finding suggests that for those who consider themselves to be transgender, whether or not they identify within the gender binary may have no bearing on the extent to which being transgender is central to their sense of self. Given the small number of nonbinary adolescents included in this sample and the even smaller number who identified as transgender, however, along with the somewhat inconclusive results of supplemental analyses, more research is needed to understand the identities of nonbinary adolescents—and how they are similar to and different from those of binary transgender adolescents.

Finally, in line with past work (Akiba et al., 2004; Fuligni et al., 2005; Rogers & Meltzoff, 2017; Turner & Brown, 2007; Wilson & Leaper, 2016), in the current study, we found some evidence that adolescents with privileged identities consider those identities to be less important to them than adolescents with marginalized identities do. Adolescent girls rated their gender as more important than boys did. Similarly, adolescents of colour considered their racial/ethnic identity to be more important to them than White adolescents did. Nonbinary adolescents, however, violated this pattern, as despite being part of a group that is marginalized on the basis of gender (Johnson et al., 2020), they did not consider their gender self-categorization to be more important to them than adolescent boys (who are members of the most privileged gender group) did. These results again point to the importance of conducting additional research on nonbinary adolescents.

This study has potential implications for the well-being of transgender adolescents. Combined with past research, it suggests that some binary transgender adolescents may have the unique experience of considering being a girl/woman or a boy/man to be particularly important to them and of having some others' categorizations of them not align with their categorizations of themselves (Toomey, 2021). Future research can explore whether transgender adolescents with higher levels of gender identity importance are particularly harmed by experiences with non-affirmation.

The current study also has limitations, many of which relate to the overrepresentation of White adolescents (70%) in the sample. Given the predominance of White participants, as well as the early ages at which most of the binary transgender youth came out and socially transitioned (Olson et al., 2022), the current results may not be generalizable to broader populations of gender diverse youth. Additionally, because of the limited number of youth of colour in this sample, in our analyses focused on racial/ethnic identity importance, we grouped all youth of colour together. This grouping allowed us to compare the relative importance adolescents with the most privileged racial/ethnic identity (White adolescents) and adolescents with more marginalized racial/ethnic identities (adolescents of colour) placed on their gender and racial/ethnic identity. However, youth of colour with different racial/ethnic identities have vastly different experiences, and in past work, Black and Latino adolescents have reported higher levels of racial/ethnic identity importance than Asian

and multiracial adolescents (Charmaraman & Grossman, 2010). The current study was unable to capture such differences. Youth of colour do not constitute a single, monolithic group, and future research would benefit from recruiting more racially and ethnically diverse samples and examining how racial/ethnic and gender identity importance vary among youth with different racial and ethnic identities.

Relatedly, for ease of interpretation, when looking at racial identity importance in youth who identified as multiracial or biracial, we focused solely on the importance placed on multiracial/biracial identity rather than on the importance placed on any particular racial or ethnic group. Thus, we captured only one facet of these youth's racial/ethnic identity. Finally, by comparing the relative importance youth placed on their gender and their racial/ethnic identity (in line with previous work; Turner & Brown, 2007; Rogers & Meltzoff, 2017), we treated different dimensions of identity as independent. In reality, however, these identities are not separable from one another but rather intersectional and mutually constitutive (Crenshaw, 1991). Future work would therefore benefit from considering the importance adolescents place on their intersectional identities (e.g., "Asian transgender man," "White transgender woman," "Black nonbinary person," etc.)

Another limitation of the current study is that it focused on gender identity importance and did not consider other important dimensions of gender identity. The current study *did*, however, include a measure of where participants rated themselves on a continuum ranging from feeling "totally like a girl" to feeling "totally like a boy," with the middle of the continuum labelled "a mix of both." We found that although ratings on this gender spectrum measure were correlated with gender identity importance ratings, they did not differ between binary cisgender and binary transgender adolescents (unlike identity importance ratings; see Supplementary Material S1 for analysis details). This between-group difference in one aspect of gender identity but not another provides further support for multidimensional models of gender identity. More research is needed, however, to assess the extent to which gender diverse and binary cisgender adolescents differ on additional, more commonly discussed dimensions of gender identity.

Despite these limitations, this study contributes to a new but burgeoning body of literature focused on the psychological experiences of gender diverse youth (deMayo et al., 2022; Ehrensaft et al., 2018; Eisenberg et al., 2017; Kuper et al., 2019; Rae et al., 2019). Although it does not point to the *causes* of differences in gender identity importance between binary transgender and cisgender youth, it documents these differences and can therefore enhance the field's understanding of gender identity among adolescents who identify with a gender category different from that assigned to them at birth. Importantly, this study also highlights the necessity of distinguishing between transgender individuals' *gender* identities (as girls/women, as boys/men, or as nonbinary) and their *transgender* identities. Affirmation of transgender adolescents entails categorizing them the same way they categorize themselves and prioritizing those identities that are most important to them. These identities, the current study reveals, are often those they *share* with cisgender adolescents—rather than those they do not.

AUTHOR CONTRIBUTIONS

Natalie M. Wittlin: Conceptualization; formal analysis; visualization; writing – original draft. **Natalie M. Gallagher:** Data curation; validation; writing – review and editing. **Kristina R. Olson:** Conceptualization; funding acquisition; supervision; writing – review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to report.

DATA AVAILABILITY STATEMENT

Data and code used for the current analyses are available at https://osf.io/tq4m6/. Some limited demographics that, in combination, could be identifying have been removed from the data file for the maintenance of participant confidentiality.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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