

# Mental Health of Transgender Children Who Are Supported in Their Identities

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abstract

**OBJECTIVE:** Transgender children who have socially transitioned, that is, who identify as the gender “opposite” their natal sex and are supported to live openly as that gender, are increasingly visible in society, yet we know nothing about their mental health. Previous work with children with gender identity disorder (GID; now termed gender dysphoria) has found remarkably high rates of anxiety and depression in these children. Here we examine, for the first time, mental health in a sample of socially transitioned transgender children.

**METHODS:** A community-based national sample of transgender, prepubescent children ( $n = 73$ , aged 3–12 years), along with control groups of nontransgender children in the same age range ( $n = 73$  age- and gender-matched community controls;  $n = 49$  sibling of transgender participants), were recruited as part of the TransYouth Project. Parents completed anxiety and depression measures.

**RESULTS:** Transgender children showed no elevations in depression and slightly elevated anxiety relative to population averages. They did not differ from the control groups on depression symptoms and had only marginally higher anxiety symptoms.

**CONCLUSIONS:** Socially transitioned transgender children who are supported in their gender identity have developmentally normative levels of depression and only minimal elevations in anxiety, suggesting that psychopathology is not inevitable within this group. Especially striking is the comparison with reports of children with GID; socially transitioned transgender children have notably lower rates of internalizing psychopathology than previously reported among children with GID living as their natal sex.



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**WHAT'S KNOWN ON THIS SUBJECT:** Transgender individuals have been found to have highly elevated rates of anxiety and depression, but little is known about the mental health of transgender children whose identities are affirmed and supported by their families.

**WHAT THIS STUDY ADDS:** More families are allowing their transgender children to live and present to others as their gender identity. This is the first study to examine mental health in these children, finding that they have low levels of anxiety and depression.

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National media are increasingly presenting stories of a subset of prepubescent transgender children (those who persistently, insistently, and consistently identify as the gender identity that is the “opposite” of their natal sex). More striking to many, a large number of these children have “socially transitioned”: they are being raised and are presenting to others as their gender identity rather than their natal sex,<sup>1-4</sup> a reversible nonmedical intervention that involves changing the pronouns used to describe a child, as well as his or her name and (typically) hair length and clothing. These stories have sparked an international debate about whether parents of young transgender children should support their children’s desire to live presenting as their gender identity.<sup>5-9</sup> Despite considerable and heated discussion on the topic, and despite these children’s increasing appearance at gender clinics,<sup>6</sup> there have been no reports to date on the mental health of transgender children who have socially transitioned, forcing clinicians to make recommendations to parents without any systematic, empirical investigations of mental health among socially transitioned children.

Most studies of mental health among transgender people have examined adolescents and adults. These studies consistently report dramatically elevated rates of anxiety, depression, and suicidality among transgender people.<sup>10-16</sup> These elevated rates of psychopathology are likely the result of years of prejudice, discrimination, and stigma<sup>11,17</sup>; conflict between one’s appearance and stated identity<sup>18</sup>; and general rejection by people in their social environments, including their families.<sup>19,20</sup> There is now growing evidence that social support is linked to better mental health outcomes among transgender adolescents and adults.<sup>21-26</sup> These findings suggest the possibility that social transitions in children,

a form of affirmation and support by a prepubescent child’s parents, could be associated with good mental health outcomes in transgender children.

Although there are no large studies of transgender prepubescent children, a number of studies have examined children who were at the time diagnosed with what was called gender identity disorder (GID), now termed gender dysphoria (GD; for more on both terms and others used throughout this article, see Table 1). The group of children diagnosed with GID likely included children who were transgender as well as others (eg, children who wished and acted but did not believe they were a member of the other gender and were distressed as a result). Importantly, most of the studies of children with GID/GD were conducted at a time when parental support and affirmation of children’s gender nonconforming behaviors and identities were uncommon. In contrast, the current work focuses on what is likely a much narrower group of children, a small subset of the group that previously would have been diagnosed with GID: those who (1) identify as (not merely wish) they were the “opposite” gender as their sex at birth and (2) have socially transitioned so that they appear to others as the gender they feel, rather than that assumed by their sex at birth.

By and large, studies of children with GID reported high rates of psychopathology, especially internalizing disorders such as anxiety and depression<sup>27-32</sup>. For example, 36% of a group of 7- to 12-year-olds with GID reached the clinical range for internalizing problems.<sup>33</sup> Furthermore, 2 large studies of 6- to 11-year-olds with GID (including >100 children in Utrecht, the Netherlands, and 300 children in Toronto, Canada) found average internalizing scores in the clinical and preclinical range,

respectively, suggesting that many children in both samples showed high levels of internalizing psychopathology. Some have argued that these high rates of internalizing psychopathology among children with GID/GD as a sign that GID/GD is itself a form or consequence of such psychopathology.<sup>27</sup>

In contrast, 2 smaller studies suggest that children whose gender identities are affirmed and supported have relatively good mental health. One study reported on 26 children aged 3 to 12 years with GID who were recruited through a clinic that advised parents to support their children’s gender expression. These children showed reduced rates of psychopathology<sup>34</sup> compared with those reported in other studies conducted at clinics that do not support such gender expression.<sup>35</sup> However, this study has received some criticism for methodologic limitations<sup>36</sup> and had a small sample size. Furthermore, the degree to which these findings generalize to transgender children and especially to transgender children who have been allowed to fully socially transition, is unknown. In addition, a qualitative analysis of interviews of parents of 5 transgender children who had socially transitioned found that parents recalled a reduction in mental health problems after a social transition.<sup>37</sup> Although no formal quantitative measures were provided, these findings again suggest that socially supported transgender children might have better mental health than children with GD or transgender children who are not supported in their identities.

The current study addresses a critical gap in knowledge by examining parental reports of anxiety and depression among a relatively large cohort of transgender children, all of whom are supported by their families and have socially transitioned (ie, they present to others as the gender consistent with their identity, not

**TABLE 1** Definitions of Terms

Term	Use in This Article	Other Uses, Terms, and Comments
Transgender	In this article, we use “transgender” to refer to children who have a binary identity (male or female) and for whom this identity is not aligned with their sex at birth. This means natal boys who identify as girls and natal girls who identify as boys. In our sample, these children have all socially transitioned as well.	“Transgender” is often used to mean a broader range of people—anyone whose gender identity does not align with his or her sex at birth. This categorization can include, for example, people who identify as male and female, neither male or female, or somewhere between male and female. The sample included in the current work does not include such children, hence our use of a narrower version of this term.
Social transition	This phrase is used to refer to a decision by a family to allow a child to begin to present, in all aspects of the child’s life, with a gender presentation that aligns with the child’s own sense of gender identity and that is the “opposite” of the gender assumed at the child’s birth. Social transitions involve changes in the child’s appearance (eg, hair, clothing), the pronoun used to refer to the child, and typically also a change in the child’s name.	Social transitions are currently controversial in clinical psychology and psychiatry, but are increasingly being pursued by parents. More and more pediatricians, therapists, and teachers are supporting these transitions as well. Importantly, these transitions do not involve any medical, physiologic, or hormonal intervention.
Natal sex	We use this term to refer to the sex assigned by a physician at the child’s birth. This phrase is meant as a synonym for “anatomical sex,” “biological sex,” or “sex assigned at birth.”	The term “natal sex” is controversial, with many using the phrase “sex assigned at birth” instead. However, the latter term is still unfamiliar to many people with limited exposure to transgender individuals. Because this paper is aimed at reaching a broad audience of pediatric health professionals, we use the more commonly understood term “natal sex.”
“Opposite” gender	We occasionally use the phrase “opposite” gender in this article when describing our sample of transgender children. Children whose gender is the “opposite” of their natal sex refers to natal boys who identify as girls and natal girls who identify as boys. Because the latter phrasing is longer and more awkward, we opted for the former.	This phrasing of “opposite” gender implies that gender is binary, when in fact it is not. There are many people who do not identify as male or female. We use this phrase because most readers will be more familiar with this terminology, and our goal is to reach a broad audience of pediatric health professionals.
Gender identity	We use this term to refer to a child’s sense of his or her own gender. Although in most children, gender identity “aligns” with a child’s natal sex, in transgender children, it does not.	Gender identity is often separated from gender presentation or gender expression (ie, the gender one appears to others as, or how a child expresses his or her gender identity). In this study, however, participants’ gender identities align with their gender presentation/expressions because children have socially transitioned.
Gender Identity Disorder (GID)/Gender Dysphoria (GD)	Until 2014, GID was the official diagnosis given to children who had behavioral preferences and identities (or desires to be) the “other” gender. With the publication of the <i>Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition</i> , this diagnostic category was renamed gender dysphoria (GD) after substantial debate about whether this is or is not a “disorder.”	The term GD describes a broader segment of the population than children qualifying as “transgender” for the current study. For example, a natal male who wishes to be a female, who behaves in accordance with female cultural stereotypes, and who has considerable concern about his identity but who does not believe he is female, would be diagnosed with GD but would not count as transgender in the current study.

their natal sex and use associated gender pronouns consistent with that identity). We focused on internalizing psychopathology because previous work indicates that transgender children are particularly likely to have internalizing, as opposed to externalizing, symptoms.<sup>33,35</sup> We compared these supported, transgender children’s rates of anxiety and depression to their nontransgender siblings and to typically developing nontransgender children matched to transgender children on age and gender identity.

**METHODS**

This work, including recruitment and methods, was approved by the Institutional Review Board at the University of Washington.

**Participants**

To be included in this study, transgender children had to (1) identify as the gender “opposite” their natal sex in everyday life (ie, they identified as male or female, but not the gender that aligned with their sex at birth), (2) present

in all contexts (eg, at school, in public) as that gender identity, (3) use the pronoun matching their gender rather than their natal sex, (4) be 3 to 12 years old, and (5) be prepubescent (ie, anyone eligible for hormone blockers was excluded from the present study). We recruited a national, community sample via support groups, conferences, a Web site advertised via media stories, and word of mouth. Our sample included 73 transgender children ( $M_{age} = 7.7$  years;  $SD = 2.2$  years; 22 natal females, 51 natal males;

**TABLE 2** Sociodemographic Characteristics for Transgender and Nontransgender Children (*n* = 195)

	Transgender <sup>a</sup> ( <i>n</i> = 73)	Controls <sup>b</sup> ( <i>n</i> = 73)	Siblings <sup>c</sup> ( <i>n</i> = 49)
Gender, %			
Male	30	30	61
Female	70	70	39
Natal boys <sup>d</sup>	70	30	61
Natal girls	30	70	39
Race/ethnicity			
White, non-Hispanic	70	71	76
Hispanic	8	5	10
Asian	6	4	2
Multiracial/other	16	19	12
Mean age, y	7.7 y	7.8 y	8.3 y
Age distribution, %			
3–5 y	30	30	22
6–8 y	40	37	37
9–12 y	30	33	41
Annual family income, %			
<\$25 000	1	1	2
\$25 001–\$50 000	7	7	4
\$50 001–\$75 000	7	14	4
\$75 001–\$125 000	41	43	39
>\$125 000	44	38	51

<sup>a</sup> Transgender children were all prepubescent and had socially transitioned.

<sup>b</sup> Controls were matched to transgender children for gender identity and age within 4 months.

<sup>c</sup> Siblings were the siblings who were closest in age to their transgender siblings.

<sup>d</sup> One natal male was diagnosed with a minor disorder of sex development, hypospadias, but consultation with endocrinologist indicated this condition is not associated with female identity.

70% white non-Hispanic) and included all consecutive cases run by our research group meeting these criteria, starting with the first for whom we had these measures.

In addition, we recruited 2 control groups. Our first control group was a set of 49 siblings ( $M_{\text{age}} = 8.3$  years;  $SD = 2.5$  years; 19 natal females, 30 natal males; 76% white non-Hispanic) of the transgender children reported earlier who were also aged 3 to 12 years. Whenever possible, the sibling closest in age was recruited. The second group of controls consisted of 73 typically developing children with no history of cross-gender behavior ( $M_{\text{age}} = 7.8$  years;  $SD = 2.2$  months; 51 natal females, 22 natal males; 71% white non-Hispanic) who were matched to each transgender child based on age and gender identity (eg, transgender girls had female controls). These unrelated controls were recruited from a university database of families in the Seattle area interested in participating in research about

child development. Importantly, all parents were informed that this was part of a longitudinal study about gender nonconforming children's development, even though their children were not gender nonconforming. Recruitment and data collection is part of the TransYouth Project, a large, longitudinal study of American and Canadian transgender children's development, and matched controls from that larger study were used in the current work.

## Measures

### Internalizing Psychopathology

Symptoms of anxiety and depression were reported using the National Institutes of Health Patient Reported Outcomes Measurement Information System parental proxy short forms for anxiety and depression.<sup>38</sup> When possible, 2 parents completed these forms, and the averages are reported ( $n = 90$ ); in all other cases, only 1 parent completed the forms ( $n = 115$ ). (Importantly, results did not

change if only mothers' responses [most often the only parent present when there was one reporter] were analyzed.) These scales are nationally normed and provide *t*-scores such that a score of 50 represents the national mean, with a *SD* of 10.

### Demographics

Parents completed several demographic questions, including their child's race, sex, and age, and their household income (in quintiles: 1 = <\$25 000/year, 2 = \$25 001–50 000, 3 = \$50 001–75 000, 4 = \$75 001–\$125 000, 5 = >\$125 000/year). This information is reported by participant group in Table 2. With the exception of gender (siblings were more likely to have a male gender identity than transgender or age-matched control participants; the latter 2 groups were matched on this variable), the 3 groups did not differ on demographic variables.

## RESULTS

Anxiety and depression *t* scores are reported in Table 3 by participant sample and natal sex. Transgender children's rates of anxiety and depression were first compared with the scale's midpoint (50), an indicator of average levels of depression and anxiety symptoms.<sup>38</sup> In terms of depression, transgender children's symptoms ( $M = 50.1$ ) did not differ from the population average,  $P = .883$ . In contrast, transgender children had elevated rates of anxiety compared with the population average ( $M = 54.2$ ),  $t(72) = 4.05$ ,  $P < .001$ . Mean anxiety symptoms of transgender children were not in the clinical, or even preclinical, range, but were elevated.

To assess differences between transgender and control children in our sample, we ran a 3 (group: transgender, siblings, controls)  $\times$  2 (natal sex) between-subjects analysis of variance for depression and anxiety. Natal sex was used in



this analysis, rather than affirmed gender, because work with children with GID/GD used this convention,<sup>35</sup> allowing interested readers to make comparisons to past work with that sample and because previous work has suggested differences in internalizing psychopathology between natal boys compared with girls with GID.<sup>35,39</sup> For depression, there were no main effects of group,  $P = .320$  or sex,  $P = .498$ , nor was there an interaction between condition and sex,  $P = .979$ . For anxiety, we found a marginally significant effect of group,  $F(2,189) = 2.91$ ,  $P = .057$ , and no effect of sex,  $P = .990$ , nor an interaction,  $P = .664$ .

## DISCUSSION

Socially transitioned, prepubescent transgender children showed typical rates of depression and only slightly elevated rates of anxiety symptoms compared with population averages. These children did not differ on either measure from 2 groups of controls: their own siblings and a group of age and gender-matched controls. Critically, transgender children supported in their identities had internalizing symptoms that were well below even the preclinical range. These findings suggest that familial support in general, or specifically via the decision to allow their children to socially transition, may be associated with better mental health outcomes among transgender children. In particular, allowing children to present in everyday life as their gender identity rather than their natal sex is associated with developmentally normative levels of depression and anxiety.

Critically, socially transitioned transgender children showed substantially lower rates of internalizing symptoms than children with GID reported in previous studies<sup>35</sup> (see Table 4). Our findings align with at least 1 other report of low mental health problems among

**TABLE 3** Anxiety and Depression  $t$  Scores by Sex and Sample

	Transgender ( $n = 73$ )	Controls ( $n = 73$ )	Siblings ( $n = 49$ )	$P$
Depression	50.1	48.4	49.3	.320
Anxiety	54.2 <sup>a</sup>	50.9	52.3	.057
Depression by gender <sup>b</sup>				.979 <sup>c</sup>
Natal boys	49.8 (trans-girls)	48.0	48.9	
Natal girls	50.8 (trans-boys)	48.5	49.9	
Anxiety by gender				.664 <sup>c</sup>
Natal boys	53.7	51.1	52.8	
Natal girls	55.3	50.8	51.5	

<sup>a</sup> This is the only value that is significantly above the national average (50), although it is still substantially below the clinical (>63) or even preclinical (>60) range.

<sup>b</sup> Transgender children who are natal boys and live with a female gender presentation are often called transgender girls or trans-girls; transgender children who are natal girls living with a male gender presentation are often called transgender boys or trans-boys.

<sup>c</sup> Significance value of interaction between natal sex and group.

**TABLE 4** Comparison of Present Sample With Previous Reports of Population-Normed Internalizing Scores for children with GID<sup>24</sup>

	Current Sample ( $n = 73$ )	Toronto ( $n = 343$ )	Utrecht ( $n = 123$ )
Mean age	7.7 y	7.2 y	8.1 y
Sample	Transgender <sup>a</sup>	GID <sup>b</sup>	GID <sup>b</sup>
Measure of internalizing	PROMIS <sup>c</sup>	CBCL	CBCL
Mean internalizing $t$ score	52.2	60.8	64.1

Both the PROMIS and CBCL are normed such that the population mean is  $t = 50$  and SD is 10. CBCL, Child Behavior Checklist; PROMIS, Patient Reported Outcomes Measurement Information System.

<sup>a</sup> The current participants were transgender, socially transitioned, and prepubescent.

<sup>b</sup> Participants in both the Toronto and Utrecht samples either met criteria for GID or showed subthreshold symptoms of GID.

<sup>c</sup> To compute an internalizing score for the PROMIS, depression and anxiety scores were averaged.

children with GID supported in their gender identities,<sup>34</sup> a sample that may have included some socially transitioned transgender children. Comparisons between previous reports of children with GID and the current sample should be made cautiously, however, because the criteria for inclusion (transgender identities vs GID) and specific measures of internalizing psychopathology (PROMIS vs CBCL) differ across studies.

One might reasonably ask whether this study provides support for all children with gender dysphoria to socially transition. A few points are key to consider. First, all children in our study (unlike many children with the GD classification), had binary identities, meaning they identified as male or female. Thus, we cannot make predictions about the expected mental health of children

who identify as male and female, as neither male nor female, or who identify as the gender associated with their natal sex but nonetheless exhibit behavior more often associated with the “other” gender after a social transition. Thus, just because a child behaves in a way consistent with a gender other than their natal sex does not mean that child is transgender nor that a social transition is advisable. Second, the children in this study were unique in many critical ways. They transitioned at a time when such transitions are quite controversial<sup>5–9</sup> and yet did so anyway. Surely not all families with transgender children make this decision, meaning there are likely characteristics that are unique to these families. In addition, the transgender children in this study all socially transitioned much earlier than nearly all transgender adults alive today in the United States and

Canada. Why might they have done so? Possibilities that we cannot rule out are that these children displayed earlier signs of their transgender identities, that they were more insistent about those identities, that they represent the most extreme end of the spectrum of transgender identities, or that parents today are just more educated about the existence of transgender children. It is too early to tell the ways in which these children and these families are unique. Finally, the children in this study were not randomly assigned to social transitions, precluding the ability to make causal claims about the impact of social transitions on mental health. These data are suggestive, nonetheless, that social transitions are associated with positive mental health outcomes for transgender children.

We cannot rule out several alternative explanations for our findings. First, rather than a direct impact of parental support, these generally positive mental health findings could be a more indirect result of parent support: namely, feeling supported in general (independent of a social transition) may lead to higher self-esteem,<sup>40</sup> which in turn may lead to better mental health.<sup>41</sup> Second, as alluded to earlier, there could be some unique third variable that explains the observed occurrence of typical mental health among socially transitioned transgender children. For example, perhaps some attribute unique to the subset of transgender children who are able to convince their parents to allow them to transition (eg, verbal skill, self-confidence) is responsible for these children having particularly good mental health, and it was this unique cognitive ability or aspect of personality that is either correlated with better mental health or leads to better mental health when a child feels he or she achieved his or her goal. Future studies examining

children before and after social transitions may be able to address this concern. Finally, parents of transgender children could have biased reporting, reflecting a desire for their children to appear healthier than they are. We have no reasons to believe this was an issue but in the future aim to include other reporters (eg, teachers) to address this concern that others are likely to raise.

In addition to studying other explanations for these data, the current work begs for more research not only on children with other transgender identities (eg, children who identify as both or neither male and female), but also for work with children who have clear binary transgender identities, like the children in the current study, but who are not supported or affirmed by their families in these identities. Finding such children and particularly convincing their parents to allow them to participate in research, will be a challenge but one that is ultimately necessary for a clear understanding of the specific impact of transitions for these children.

Despite their overall relatively good mental health, socially transitioned transgender children did experience slightly more anxiety than the population average, although still well below the preclinical range. What might explain this result? Despite receiving considerable support from their families, these children likely still experience relatively high rates of peer victimization or smaller daily micro-aggressions, particularly if their peers know that they are transgender<sup>42</sup> which can in turn lead to marked elevations of anxiety symptoms and anxiety disorders.<sup>43-45</sup> Additionally, any transgender children who are living “stealth” or “undisclosed” (ie, whose peers are unaware of their transgender status), may experience anxiety about others discovering their transgender identity; previous

work with adults has suggested that concealing a stigmatized identity can lead to psychological distress.<sup>46</sup> Furthermore, transgender children do not have the typical bodies of children with their gender identities, which could be a source of distress. Even when transgender children are allowed to use the bathroom, locker room, or be on the team with children who share their gender, the mere existence of these distinctions likely highlights the ways in which their bodies do not align with cultural expectations for children of their gender identity group. Relatedly, some children in our sample are approaching puberty, and most are aware that puberty will cause physical changes in an unwanted direction (unless puberty blockers are administered), which could generate considerable worry and anxiety.

Importantly, although these socially transitioned prepubescent children are doing quite well in terms of their mental health at this point, parents and clinicians of such children should still be on the lookout for potential changes in the status of their children’s mental health. In general, the prevalence of depression is relatively low in prepubescent children and rises dramatically during adolescence.<sup>47</sup> It is possible that transgender children will exhibit greater anxiety and depression than their peers during the adolescent transition because of the sources of distress mentioned earlier, which will likely become worse with time (a possibility we aim to test with prospective follow-up of this sample). Thus, while adolescence is a time of increased perceptions of stress for many adolescents,<sup>48</sup> many of these issues are exacerbated for transgender teens. Transgender adolescents, whether they do or do not delay puberty through medical intervention, often experience body dysphoria (as their bodies do not match the bodies of their

same-gender peers), making sex and relationships even more worrisome than among their nontransgender peers.<sup>49</sup>

## CONCLUSIONS

In sum, we provide novel evidence of low rates of internalizing psychopathology in young socially transitioned transgender children who are supported in their gender identity. These data suggest at least the possibility that being transgender

is not synonymous with, nor the direct result of, psychopathology in childhood.<sup>27</sup> Instead, these results provide clear evidence that transgender children have levels of anxiety and depression no different from their nontransgender siblings and peers. As more and more parents are deciding to socially transition their children, continuing to assess mental health in an increasingly diverse group of socially transitioned children will be of utmost importance.

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## ABBREVIATIONS

GD: gender dysphoria  
GID: gender identity disorder

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