Mental Health of Transgender Children Who Are Supported in Their Identities

Kristina R. Olson, PhD, Lily Durwood, BA, Madeleine DeMeules, BA, Katie A. McLaughlin, PhD

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.
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.1-4 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.5-9 Despite considerable and heated discussion on the topic, and despite these children’s increasing appearance at gender clinics,6 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.10-16 These elevated rates of psychopathology are likely the result of years of prejudice, discrimination, and stigma;11,17 conflict between one’s appearance and stated identity; and general rejection by people in their social environments, including their families.19,20 There is now growing evidence that social support is linked to better mental health outcomes among transgender adolescents and adults.21-26 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 GD 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 GD: 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 GD reported high rates of psychopathology, especially internalizing disorders such as anxiety and depression.27-32 For example, 36% of a group of 7- to 12-year-olds with GD reached the clinical range for internalizing problems.33 Furthermore, 2 large studies of 6- to 11-year-olds with GD (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 GD/GD as a sign that GD/GD is itself a form or consequence of such psychopathology.27

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 GD who were recruited through a clinic that advised parents to support their children’s gender expression. These children showed reduced rates of psychopathology compared with those reported in other studies conducted at clinics that do not support such gender expression.35 However, this study has received some criticism for methodologic limitations36 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.37 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
Gender identity

“Opposite” gender

Social transition

Transgender

We use this term 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.

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.

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.”

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 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 (Mage = 7.7 years; SD = 2.2 years; 22 natal females, 51 natal males;
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 (Mage = 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 (Mage = 8.3 years; SD = 2.5 years; 19 natal females, 30 natal males; 76% 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. 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. In terms of depression, 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.

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

<table>
<thead>
<tr>
<th></th>
<th>Transgendera (n = 73)</th>
<th>Controlsb (n = 73)</th>
<th>Siblingsc (n = 49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>30</td>
<td>30</td>
<td>61</td>
</tr>
<tr>
<td>Female</td>
<td>70</td>
<td>70</td>
<td>39</td>
</tr>
<tr>
<td>Natal boysd</td>
<td>70</td>
<td>30</td>
<td>61</td>
</tr>
<tr>
<td>Natal girls</td>
<td>30</td>
<td>70</td>
<td>39</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>70</td>
<td>71</td>
<td>76</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Asian</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Multiracial/other</td>
<td>16</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Mean age, y</td>
<td>7.7 y</td>
<td>7.8 y</td>
<td>8.3 y</td>
</tr>
<tr>
<td>Age distribution, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3–5 y</td>
<td>30</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>6–8 y</td>
<td>40</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>9–12 y</td>
<td>30</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>Annual family income, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$25 000</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>$25 001–$50 000</td>
<td>7</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>$50 001–$75 000</td>
<td>7</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>$75 001–$125 000</td>
<td>41</td>
<td>43</td>
<td>39</td>
</tr>
<tr>
<td>&gt;$125 000</td>
<td>44</td>
<td>38</td>
<td>51</td>
</tr>
</tbody>
</table>

a Transgender children were all prepubescent and had socially transitioned.

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

c Siblings were the siblings who were closest in age to their transgender siblings.

d 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.
this analysis, rather than affirmed
gender, because work with children
with GID/GD used this convention,35
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.35,39 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, \( F(2189) =
2.91, P = .057 \), and no effect of sex, \( P
= .990 \), nor an interaction, \( P = .664
).

**DISCUSSION**

Socially transitioned, pubescent
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
studies35 (see Table 4). Our findings
align with at least 1 other report of
low mental health problems among
children with GID supported in
their gender identities.34 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 controversial5–9 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

<p>| TABLE 3 Anxiety and Depression t Scores by Sex and Sample |
|---------------------------------|------------------|------------------|------------------|</p>
<table>
<thead>
<tr>
<th></th>
<th>Transgender (n = 73)</th>
<th>Controls (n = 73)</th>
<th>Siblings (n = 49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>50.1</td>
<td>48.4</td>
<td>49.3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>54.2a</td>
<td>50.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Depression by genderb</td>
<td>.979c</td>
<td>48.9</td>
<td>48.9</td>
</tr>
<tr>
<td>Natals boys (trans-girls)</td>
<td>48.8</td>
<td>48.0</td>
<td>48.9</td>
</tr>
<tr>
<td>Natals girls (trans-boys)</td>
<td>50.8</td>
<td>48.5</td>
<td>49.9</td>
</tr>
<tr>
<td>Anxiety by gender</td>
<td>.644c</td>
<td>52.8</td>
<td>51.5</td>
</tr>
<tr>
<td>Natals boys</td>
<td>53.7</td>
<td>51.1</td>
<td>52.8</td>
</tr>
<tr>
<td>Natals girls</td>
<td>55.3</td>
<td>50.8</td>
<td>51.5</td>
</tr>
</tbody>
</table>

* This is the only value that is significantly above the national average (50), although it is still substantially below the
  clinical (>65) or even preclinical (>60) range.

b Transgender children who are natal boys and live with a female gender presentation are often called trans-boys or trans-girls; transgender children who are natal girls living with a male gender presentation are often called transgender
don't have internalizing symptoms that
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
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all socially transitioned much earlier
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alive today in the United States and

<p>| TABLE 4 Comparison of Present Sample With Previous Reports of Population-Normed Internalizing Scores for children with GID |
|---------------------------------|------------------|------------------|------------------|</p>
<table>
<thead>
<tr>
<th></th>
<th>Current Sample (n = 73)</th>
<th>Toronto (n = 343)</th>
<th>Utrecht (n = 123)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>7.7 y</td>
<td>7.2 y</td>
<td>8.1 y</td>
</tr>
<tr>
<td>Sample</td>
<td>Transgendera</td>
<td>GIDb</td>
<td>GIDb</td>
</tr>
<tr>
<td>Measure of internalizing</td>
<td>PROMISc</td>
<td>CBCL</td>
<td>CBCL</td>
</tr>
<tr>
<td>Mean internalizing t score</td>
<td>52.2</td>
<td>60.8</td>
<td>64.1</td>
</tr>
</tbody>
</table>

Both the PROMIS and CBCL are normed such that the population mean is \( t = 50 \) and SD is 10. CBCL, Child Behavior Checklist; PROMIS, PatientReported Outcomes Measurement Information System.

a The current participants were transgender, socially transitioned, and pubescent.
b Participants in both the Toronto and Utrecht samples either met criteria for GID or showed subthreshold symptoms of
GID.
c To compute an internalizing score for the PROMIS, depression and anxiety scores were averaged.

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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, which in turn may lead to better mental health. 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 which can in turn lead to marked elevations of anxiety symptoms and anxiety disorders. 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. 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. 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, 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.49

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.22 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.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

COMPANION PAPER: A companion to this article can be found online at www.pediatrics.org/cgi/doi/10.1542/peds.2015-4358.

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