

Frequently Asked Questions and Media Guide for “Predicting Early Childhood Gender Transitions”

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Key terms in this FAQ and the associated manuscript

Assigned Sex – We use this term to refer to the sex announced the day a child is born. “Assigned males” are children who have genitalia and chromosomes indicating a male sex at birth while “assigned females” are children who have the genitalia and chromosomes indicating a female sex at birth. The children in this work were all assigned male or female at birth.

Gender nonconforming – We use this term to refer to children who consistently defy gender stereotypes throughout early childhood. For example, gender nonconforming boys are assigned as males who, for example, might prefer to play with girls, who like to dress in feminine outfits, and who wish they were or say they are girls.

Social Transition – We use this term to refer to a change in a child’s outward appearance and gender pronoun use. For example, an assigned male would be said to socially transition if this child grew long hair, started wearing dresses and was referred to with pronouns like “her” and “she.” In the present study, the pronoun change is the key marker that a transition has occurred. Importantly, all children in the present study were between 3 and 12 years old. A social transition, for the purposes of this paper, does not indicate any medical (hormonal, surgical) changes have occurred.

Transgender – We use this term to refer to gender nonconforming children who have already socially transitioned.

Future Transitioner – We use this term to refer to children who were identified as gender nonconforming at the time of their enrollment in our longitudinal study but socially transitioned (i.e., were transgender) later.

Non-Transitioner – We use this term to refer to children who were identified as gender nonconforming at the time of their enrollment in our longitudinal study but have (at least to date) not socially transitioned.

What did the paper find?

The paper makes two major discoveries. First, we found that the more that a gender nonconforming child identifies with the “opposite” gender and reports preferences that defy stereotypes associated with their assigned sex, the more likely that child is to socially transition. Second, we found that children tested before socially transitioning identify just as much with their future identity and express gender-stereotypical preferences (e.g., for toys, clothes) that are just as strong as those of children who were tested after socially transitioning, suggesting that there is minimal or no impact of transitioning on children’s identity and preferences.

More detail:

The first question this paper explored was whether we could predict which gender nonconforming children would socially transition, even before that transition occurred. That is, many children are gender nonconforming, yet only some of them go on to socially transition. One of the questions surrounding social transitions is whether there are meaningful distinctions between gender nonconforming children—is it random who is transitioning or not? On the one hand, it makes sense that kids who feel the most like they are part of another gender are the most likely to live as that gender. On the other hand, there's no standard measure that parents can give their children to determine how gender nonconforming their child is compared to other children. Moreover, gender nonconformity—especially strong gender nonconformity—is quite rare, so parents might not be able to determine where their child falls within the distribution of gender nonconformity. To test these competing predictions, we recruited a cohort of gender nonconforming children (85 children ages 3-12). Upon enrolling in the study, these children completed a battery of gender preference and identity measures. When re-contacted approximately two years later, 36 of the children had socially transitioned. We found that children who showed stronger cross-sex identification and preferences were more likely to socially transition than children who showed a weaker cross-sex identification and preferences. This finding suggests that social transitions are not occurring randomly.

The second major question at the center of this paper was about the impact of social transitions on gender identification and preferences. Are transitions themselves leading children to identify more strongly or behave in more gender-stereotypic ways? For this set of analyses, we compared the children (from question 1 above) who were tested before they socially transitioned (what we call future transitioners) to a group of children who completed the same measures after they had already socially transitioned (i.e., transgender children). We found that the two groups did not meaningfully differ from one another. This means that an assigned male who is tested before transitioning and an assigned male who has already transitioned and is living as a girl both identify as girls to the same extent and show preferences for girl "stuff" (e.g., dresses, playing with other girls) to the same extent. This finding suggests that the act of transitioning is not associated with changes in identification or preferences.

What methods were used?

Gender nonconforming children (85 children 3-12 years old) were tested on measures of gender identity and preferences. Two years later, we re-contacted their families to find out if they had socially transitioned. These children were compared to a group of 84 transgender children (who had already socially transitioned) and 85 cisgender children on the measures of gender identity and preferences.

More details:

We recruited 85 gender nonconforming children throughout the United States via online and in-person support groups for families with gender diverse children, through conferences for gender diverse children, in response to media stories, via referrals from friends and family, or through online searches. Each child participated in this study as part of a larger longitudinal study, and their visit with the research team lasted about an hour. The current work focused on their answers to five measures of gender identity and gender-typed preferences. The gender identity measures assessed how much children saw themselves as similar to girls; how much they saw themselves as similar to boys; whether

they identified as boys, girls, both, neither, it changes over time, or they aren't sure; and how they anticipated identifying as adults. The gender preferences measures assessed their preferences for toys that ranged from stereotypically feminine to stereotypically masculine (inclusive of more gender-neutral options); preferences for clothes with a similar range; and their preference of playing with boys, girls, or a mix of both. Approximately two years after they completed these measures, we contacted their parents and asked if they had socially transitioned. Of the 85 children we recruited, 36 had socially transitioned.

We also recruited two comparison groups. A group of transgender children—children who had already socially transitioned before completing the same battery of measures—and a group of children who were gender conforming (that is, their gender and sex had always aligned in everyday life).

Why does this matter?

Social transitions in early childhood remain quite controversial, and little is known about who is transitioning and the impact transitions might have on children's own gender identification and preferences. The new findings suggest that early childhood social transitions are not occurring randomly—rather, they are occurring among the children with the strongest cross-sex identification and preferences—and that the transitions themselves do not appear to have a major immediate influence on a child's identification or preferences.

More detail:

Discussions of gender nonconformity and especially of early social transitions are quite heated both within the scientific and medical communities, and in the broader public. Before this work, there were no data indicating which factors (if any) were predictive of whether a gender nonconforming child would later socially transition in early childhood or whether transitions were likely to change a child's identity and preferences. Some have worried that transitions are occurring randomly while these results suggest they are occurring more systematically. This finding means that the children who are transitioning are different from those who are not transitioning which has implications for other work. That is, we cannot simply compare children who did versus did not transition in early childhood and ask who is transgender in adulthood, because these results suggest the two groups differed even before the early transition happened. These findings are critical for understanding future work that compares children who have and have not transitioned.

Further, one concern about transitions could be that they are changing a child's identity or preferences. By comparing children tested before and after transitioning and seeing that the two groups do not differ in their identification, we can be less concerned about the impact of social transitions on identities and preferences. One way to think about this is that before or after a transition, an average transgender girl feels strongly like a girl and often prefers "girl-y" stuff. While the transition itself may impact that child in many ways, identity and preferences do not appear to change.

Can you predict if a given child will be a transgender adult?

The current paper focused on young children, not on adults. We do not know from these data which children will or will not identify as transgender adults, but we do plan to keep following them and expect to one day address this question.

Can you predict if my kid (or a given kid) will transition?

No. This paper suggests that if we know how two different children perform on these measures we could say that one child has a higher likelihood than the other to socially transition. However, we found that some children with strong cross-sex identification and preferences did not transition (and vice versa), suggesting that it is not possible to predict whether a given child will transition.

More detail:

The data in papers like the current one report tendencies for *groups* of children. It is not possible to apply what's generally true at the aggregate (e.g., future transitioners tend to have stronger cross-sex identification and preferences than non-transitioners) to indicate the definitive outcome for a specific child (e.g., a gender nonconforming child with strong cross-sex identification and preferences will eventually socially transition). To help illustrate why, one may find that men are taller on average than women, and if someone told you to guess who is taller, Sarah or Andrew, you could guess Andrew and you are more often right than wrong, but you are not right every time. The same point applies here.

Moreover, there are likely lots of factors that go into a child's and family's decision about socially transitioning. These other factors include the anticipated supportiveness of the child's family and community of the child's gender expression and identity; political or religious beliefs of the child's family and community; broader societal tolerance of (or, conversely, discrimination against) transgender people, etc. Given the number of factors that can influence whether a child's and family's decision to socially transition, it is not possible to perfectly predict which gender nonconforming children socially transition. Nonetheless, these data suggest that extremity of cross-sex identification is a useful predictor, meaning more children with very strong cross-sex identification will transition than children with less strong cross-sex identification.

How is this different than what was known before?

This was the first study to evaluate children before they socially transition in early childhood or to compare children who later transition to those who have already transitioned. Before this study, we did not know which children socially transition or whether transitions impact gender identity/preferences.

More detail:

Most related to our research are past studies aimed at predicting which gender nonconforming children identify as transgender (or show gender dysphoria) in late adolescence and early adulthood (for example, published work by Thomas Steensma and dissertation work led by Devita Singh). Those studies suggested that the children showing the strongest cross-sex identification were the ones most likely to identify as transgender teens and adults. However, it has not been clear how early childhood social transitions relate to these past findings because none or almost none of the children in those past studies socially transitioned at such early ages.

The only other study to examine social transitioning in childhood and gender identification is a study by Steensma et al (2013), but that study examined children who had or had not transitioned in childhood and asked which of those individuals were transgender (had gender dysphoria) later in life.

Therefore, the early childhood social transitions examined had already happened at the start of data collection. The team found that the four children who had socially transitioned in early childhood were more likely to be transgender (or show gender dysphoria) in adulthood than gender nonconforming children who had not socially transitioned. However, one challenge in interpreting that finding was that it was unclear if the children who had socially transitioned differed *before* their transitions from the other children who had not transitioned or if the transition itself was changing the likelihood the child would maintain that identity into adulthood (or both). Our work may help explain those findings by suggesting that the children who transition, at least in our study, seem to be different from those who do not, even before the transition occurs.

Could there be other differences between children who transition and those who do not?

Yes, there could be other differences. We assessed some alternative possibilities, such as differences in parents' political orientation (maybe those with more liberal parents transitioned?) and differences in the age of children who transitioned versus those who did not. Our finding—that extremity of gender nonconforming predicted who did versus did not transition—was true even when accounting for these factors.

More detail:

Children who did versus did not transition did not differ in terms of age or parental political orientation. We did find that more time had passed since initial testing for children who had transitioned, but when we statistically controlled for this variable, extremity of gender nonconformity still predicted transitioning over and above this variable.

What are some limitations to this work?

Although we are fairly confident about the robustness of our results in the current sample (we conducted something called “multiverse analyses” to examine the robustness of our findings), what is less clear is the degree to which the current patterns will apply to future groups of children. For example, the children in the present work came from disproportionately white, wealthy, highly educated families. Further, all families live in North America. We do not yet know if the same predictors would apply to a more racially diverse, lower income group, for example. Further, as more families learn about social transitions or as societal attitudes toward early childhood transitions change, the percentage of children transitioning could change and therefore different factors may predict transitioning.

Nonetheless, as with all scientific studies, but especially studies with small samples, it will be important to try to replicate these results in new groups of participants. Our confidence in the ability to generalize these findings will be enhanced if we replicate these results in new groups of gender nonconforming children.

Importantly, these data are part of an ongoing longitudinal study. Therefore, we look forward to analyzing the results again in a few years to see if additional children socially transition or if any children who have socially transitioned transition again, identifying as the gender associated with their assigned sex (or a nonbinary gender).