Frequently Asked Questions

Regarding: Durwood, L., Gallagher, N., Sifre, R., & Olson, K.R. (forthcoming). A Study of Parent-Reported Internalizing Symptoms in Transgender Youth Before and After Childhood Social Transitions. *Clinical Psychological Science.*

Key Terms:

Gender Diverse Children: In our study, we recruited a group of children who were - at the time the study started - gender nonconforming. These were youth whose parents identified them as displaying less-common patterns of gender identity and/or expression than their peers. Importantly, none of the children in this sample had socially transitioned at the time they joined the study.

Social Transition: In our study, social transitions were said to occur if a child changed pronouns from those associated with their assigned sex at birth to those associated with the other binary gender (e.g., a child who was assigned male at birth was said to have socially transitioned if now using she/her pronouns at school, at home, and when meeting new people). Most children who changed pronouns in this way also changed first names, hairstyles, and clothing. Children who used a mix of pronouns, or non-gendered pronouns (e.g., they/them), were not considered socially transitioned at the start of this study (at which time this was exceedingly rare; it is more common now). Social transitions are distinct from *medical* transitions that may involve hormone blockers, hormones, or surgical intervention.

Transgender: We refer to children who socially transition as transgender.

What did the study find?

Our main finding was that transgender children showed an average *improvement* in their anxiety and depression from before their social transition to after their social transition.

What methods were used?

This is a *prospective, longitudinal* study – meaning we began following children before the key event (in this case, social transition) occurred and we have continued to follow them over time. Our sample initially started with 142 gender nonconforming children. At that time, it was not clear if anyone would transition, when they would transition, or who would transition. We then followed up with them, checking in with families every 1 to 3 years.

The primary analyses focus on the 51 children who went on to socially transition during the test period. To be included in this group, children had to (1) socially transition during childhood (defined as between the ages of 3 and 12 years old) and before July 1st, 2021 (the end of the test period for this publication), and (2) their parents had to have completed mental health measures about them at least one time before and one time after that social transition. Participants joined the study between July 2013 and February 2020, so depending on the child, the time between their initial start in the study and the end of the test period was between 1 and 8 years.

Our analyses focused on parents' reports of anxiety and depression on standardized scales called the PROMIS scales. The 'parent proxy' PROMIS forms are short 6-8 item measures asking parents to rate how frequently (e.g., never, almost never, sometimes, often, almost always) their children experienced signs of anxiety (e.g., My child felt nervous) or

depression (e.g., My child felt sad) in the past 7 days. Parents on average reported on their children's mental health 4.7 times (with a range from 2 to 8 times) over the course of the study.

Who are the children in this study?

The primary sample of this study – the 51 children who socially transitioned – were on average 6.8 years old when they socially transitioned. After transition, 39 were living as transgender girls (assigned males at birth) and 12 were living as transgender boys (assigned females at birth). These youth tended to be from higher income families, their parents tended to report relatively liberal political orientations, and these youth were primarily White. They lived in the United States and Canada. Because there are no censuses of transgender youth who transitioned in the 2010's and early 2020's, we do not know to what extent the demographics of the children in our study do or do not represent the full population of children who socially transitioned at these ages at this time in US/Canadian history. Participants were recruited into the longitudinal study via parental support groups, camps and conferences for gender diverse youth, through clinicians, word-of-mouth, internet searches conducted by parents, and in response to media stories.

What did we know before this study about mental health and social transitions?

There had never been a prospective, longitudinal study of children who socially transitioned, or a study of any type reporting on changes in mental health before vs. after a social transition. Therefore, all conclusions about whether mental health changes with social transition relied on the comparison of two different groups of children – those who had socially transitioned and those who had not socially transitioned (e.g., Kuvalanka et al, 2017; Morandini et al, 2023; Sievert et al, 2021; Wong et al, 2019). A challenge with studies that compare children who did and did not transition is that there could be other differences, besides whether they transitioned, between the two groups. For example, children who have not socially transitioned may not want to transition (Olson et al, 2019) or may not be permitted to do so by their parents. Previous work suggests that gender nonconforming children who do not go on to transition often show less strong gender nonconformity than those who later go on to socially transition (Rae et al, 2019). In other words, comparing children who have transitioned to a group of children who have not transitioned is a bit like comparing apples to oranges.

As an example, imagine there are two kids – Jamie, who wants to transition, and Sam, who does not. One might expect Jamie to be happy after transitioning and Sam to be happy not transitioning, since those are their preferred states. If you compare after-transition Jamie to no-transition Sam – which is what past 'between groups' comparisons did – you wouldn't expect differences in their happiness. This might lead you to conclude that social transitions are not associated with differences in happiness (or in the case of our study – mental health). But that might be misleading – and it is, according to our paper. Our paper says that kids like Jamie, who want to transition, actually show improvements in anxiety and depression from before to after transition, even if they do not differ from kids like Sam at either point.

In fact, in our paper we did just this – we compared the children who went on to socially transition to the children who did not – both before they transitioned and after. We found that these groups did not differ at either timepoint.

Why does this matter?

There's a lot of debate these days about transgender youth, including questions about whether they should socially transition. The Interim Cass Report – a report commissioned to inform gender care in the UK – stated "There are different views on the benefits versus the harms of early social transition. Whatever position one takes, it is important to acknowledge that it is not a neutral act, and better information is needed about outcomes." (Cass Interim Report, UK, Feb 2022). Our paper is the first assessment of a longitudinal outcome over time as it relates to social transitions. Our data suggest that, at least within the first few years after social transition, we see mental health improvements. As we continue to follow up with youth, we will have a better understanding of their mental health over even longer periods of time.

Why might social transitions lead to reductions in anxiety and/or depression?

We speculate on several possible reasons why social transitions might be associated with reductions in anxiety and/or depression. It may be that living and being treated by others in line with your gender directly enhances well-being and reduces distress (conversely, being misgendered may be associated with worse mental health). Another possibility is that when a child socially transitions and their community begins to acknowledge their gender identity, this signals support from the community, which in turn improves well-being. Receiving support for your identity is often linked to better mental health (Pariseau et al, 2019; Ryan et al, 2010; Durwood et al, 2021).

Was the research team surprised by these results?

The research team did not enter this research with a clear hypothesis about whether social transitions would or would not lead to a change in mental health. These families had generally been supportive of children's gender expressions even before their social transitions. For this reason, we thought they might already experience benefits associated with support, making improvements unlikely to be observed. In addition, the existing literature suggested that children who had socially transitioned might not differ from those who did not transition in terms of mental health, which could have meant social transitions did not impact well-being (see above for more on limitations of such an analysis). There's also some reason to think issues like bullying around one's transgender identity could be worse after transitioning, particularly if one hid one's gender nonconformity before the transition. At the same time, we had heard anecdotal evidence of children whose mental health did change with social transitions. Finally, it was possible that social transitions were associated with improvements in other aspects of well-being but not in anxiety and depression (e.g., they may have been on self-esteem or something else). For all of these reasons we were uncertain what we would find before conducting these analyses.

Do these data mean that gender nonconforming children *should* socially transition? Or that once they transition, they should stay that way?

These data do not suggest that all gender nonconforming children should socially transition, though they do suggest some children may benefit from doing so. We would not anticipate that all gender nonconforming children would benefit, as many children do not wish to socially transition. For example, some children assigned male at birth may enjoy living as boys who wear dresses or like other objects, clothing or hairstyles stereotyped as feminine. Our results do not say that such a child would benefit from socially transitioning. The children in our study wanted to socially transition, and also tended to benefit from it.

Best practice as outlined by the WPATH Standards of Care 8, is that "social transition should originate from the child and reflect the child's wishes in the process of making the decision to initiate a social transition process" (S76). Based on other work with these and related samples, we believe the children who benefit the most from social transition are those who want to transition, who are in environments with substantial support for their well-being throughout the process of social transition, and who, once transitioned, remain happy with that decision. Some children will try a social transition and ultimately decide they want to transition again. Three youth in our study did so. While that sample size is too small to draw firm conclusions about, it may be the case that these were youth who, after transition, realized it was not beneficial for them and so transitioned again. The improvement seen in the overall sample was stronger when these three re-transitioners were excluded from analyses, suggesting they may not have shown an improvement in line with the others in the sample after transition.

Openness to transition and retransition are strongly encouraged by the experts in this field. Our data here and in other papers are consistent with the idea that youth who are supported in their gender identities and expressions, irrespective of what that gender is or how it does or does not change over time (Durwood et al, 2023), tend to have the best mental health and well-being (Durwood et al, 2021). Both initial transitions and later retransitions seemed to be most helpful and/or successful when children's communities are accepting and supportive.

Do all children who socially transition show an improvement?

No. The results of this study, like most quantitative analyses, focus on the average effect for the group. Not every child shows the average pattern. It is also important to remember that these youth were experiencing any number of personal events in addition to social transitions during these years they were in the study. For example, children may have had deaths in their family, experienced particularly challenging pandemic periods, been bullied, had a particularly notable success in school, their parent could have gotten a raise, they might have moved to a new school, their parents could have divorced, etc. These kinds of life changes could produce major shifts in anxiety or depression in positive or negative directions for any given child that have nothing to do with their social transition. Part of the reason we compute results across large groups rather than focusing on specific cases is that doing so allows us to average across the unrelated positive and negative events in a child's life, to ask about the average impact of social transitions.

The paper includes 'multiverse analyses.' What are those?

In scientific papers, researchers have to make a series of analytic decisions. For example, in this study, we had to decide whether to include data from the height of the covid-19 pandemic or not (because presumably children's anxiety or depression might have systematically changed across the whole group during that time – having nothing to do with their social transition) and whether the three children who initially socially transitioned and then re-transitioned shortly afterward should be included or excluded from analyses (because presumably they are different from the rest of the sample in meaningful ways).

A concern over the last decade in scientific circles is that researchers can take liberties – intentionally or accidentally – that maximize their likelihood of supporting or refuting a hypothesis simply by making a very particular set of analytic decisions. One strategy to reduce this concern is to conduct the analyses over and over again, making each possible set of analytic decisions, i.e., a 'multiverse' analysis (Steegen et al., 2016). In this kind of analysis, we

are interested in whether the observed effect tends to be consistent or inconsistent across the different versions of the analysis. If the results are fairly consistent (rather than inconsistent), we have more confidence in the finding.

In this particular case, we ran 48 statistical models – each of which asked whether children showed a change in anxiety before vs. after social transition. We found that 46 of those 48 models showed a significant reduction in anxiety with social transitions. This provides evidence that the results are quite robust to idiosyncratic analytic decisions. We then ran the same 48 models looking at depression. We found that 36 of 48 of the depression models showed improvements in depression with social transition. In other words, this effect was also fairly robust, though we have a little less confidence in the depression finding than the anxiety one. Most critically, there were no analyses for anxiety or depression in which social transition was associated with worsened mental health (the remaining 2 anxiety models and 12 depression models showed no significant change).

Aren't your results only relevant to kids who come from supportive families?

Absolutely. For a child to socially transition by the age of 12 – at home, school, and with strangers – a child must have some degree of parental support. Parents must use the child's new pronouns for us to consider the child socially transitioned. Therefore, our research question presupposes children have some parental support.

What does this tell us about adolescent social transition?

In this study, we only looked at childhood social transitions – at or before the age of 12. Our findings may or may not also apply to transitions in adolescence.

Are there limitations to this work?

Like all research, this work has limitations. One limitation is that this sample included only around 50 youth. We generally have greater confidence in studies that have larger samples because increasing the sample size of a study increases our statistical power. However, another way to increase statistical power is to use a 'within participant' study design – meaning you test the same participants in both conditions (here, that means the same people are tested before and after the social transition). We further increased our statistical power by having parents report on their children's mental health several times – more data from each participant increases our confidence in our estimates. Despite the steps taken to increase the statistical power in these analyses, future studies that replicate (or not) these results would increase (or decrease) our confidence in these results.

Another limitation is that we relied on parental report of children's mental health. We did this because very young children cannot complete questionnaires (they can't even read!) and these children were very young at the start of the study. Parental report is the most common way to assess children's mental health in research studies of young children. Nonetheless, it would be nice, in the future, to confirm the degree to which parents' reports of their children's mental health and children's own reports – at least at older ages – do or do not align. In our previous work with related samples, we have generally found similar patterns of mental health in transgender children as reported by their parents and themselves (e.g., Durwood et al, 2017; Gibson et al, 2021).

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