

## Lack of Rating Scale Normalization and a Socioeconomically Advantaged Population Limits the Generalizability of Preadolescent Transgender Findings

The article by Olson et al<sup>1</sup> exploring the mental health of preadolescent transgender children residing in families that are supportive of their identity attempted to address questions Olson recently raised in a Clinical Perspectives piece published in the *Journal of the American Academy of Child and Adolescent Psychiatry*.<sup>2</sup> We read the current article in *Pediatrics* with great interest, and their effort was laudable. An enhanced understanding of the symptoms and phenomenology of transgender preadolescents is critical, as this material could inform interventions for this marginalized population. Olson et al ambitiously examined symptoms of anxiety and depression in both preschool-aged and early school-aged children. Their approach, however, which included a wide developmental swathe combined with a narrow socioeconomic sample, raises concerns about the meaning and generalizability of their findings.

One challenge when looking at depression and anxiety in preadolescents, particularly in preschool-aged children, is having adequate tools with sufficient validity and reliability to study these symptoms. In the investigation by Olson et al,<sup>1</sup> transgender children between the ages of 3 and 12 years were compared with age-matched control subjects. The child participants were not surveyed; their parents completed proxy assessments by using the Patient Reported Outcomes Measurement Information System developed by the National Institutes of Health. We noted that the institutes, in their description of the psychometric properties of this tool, indicated that this proxy scale for depression and

anxiety is validated only for use in children between the ages of 5 and 17 years.<sup>3</sup> Olson et al, however, used this instrument across their entire cohort, with 30% of their study population between the ages of 3 and 5 years. This method means that data from approximately one-third of the sample were from an age group in whom the scale had not been validated, which is problematic in terms of interpretation of the results.

In addition, we noted that the population studied, although ethnically diverse, was heavily skewed to a more financially advantaged group. We observed that 44% of families had a household income greater than \$125 000. This income level was above the 80th percentile for the nation, which starts at \$100 000.<sup>4</sup> Given the linkage that exists between lower socioeconomic standing and poorer outcomes in children's mental health,<sup>5</sup> we wondered what the results would be if a sample that was more representative of the nation were used. Might the lack of detected psychopathology be related as much to the wealth and privilege of the families observed?

Overall, we commend Olson et al<sup>1</sup> on their effort to bring data to bear about our understanding of this understudied group. As they do, we remain curious regarding the relationship, if any, between transgender and psychopathology of childhood, particularly in preschool-aged children. We would advocate, however, for utilization of normalized scales in looking at the age under study and for identifying a population that more accurately reflects the clinical population most children's mental health providers typically serve.

Alastair J. McKean, MD  
Child and Adolescent Psychiatrist, Assistant  
Professor of Psychiatry, Mayo Clinic  
E-mail: mckean.alastair@mayo.edu

Jennifer L. Vande Voort, MD  
Child and Adolescent Psychiatrist, Assistant  
Professor of Psychiatry, Mayo Clinic

Paul E. Croarkin, DO  
Child and Adolescent Psychiatrist, Assistant  
Professor of Psychiatry, Mayo Clinic

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

### REFERENCES

1. Olson KR, Durwood L, DeMeules M, McLaughlin KA. Mental health of transgender children who are supported in their identities. *Pediatrics*. 2016;137(3):e20153223
2. Olson KR. Prepubescent transgender children: what we do and do not know. *J Am Acad Child Adolesc Psychiatry*. 2016;55(3):155–156.e3
3. Varni JW, Thissen D, Stucky BD, et al. PROMIS® Parent Proxy Report Scales for children ages 5-7 years: an item response theory analysis of differential item functioning across age groups. *Qual Life Res*. 2014;23(1):349–361
4. DeNavas-Walt C, Proctor BD. *Income and Poverty in the United States: 2014—Current Population Reports*. Washington, DC: US Department of Commerce; 2015
5. Ashford J, Smit F, van Lier PA, Cuijpers P, Koot HM. Early risk indicators of internalizing problems in late childhood: a 9-year longitudinal study. *J Child Psychol Psychiatry*. 2008;49(7):774–780

doi:10.1542/peds.2016-1203A

## Author Response to McKean, Vande Voort, and Croarkin (2016)

We are grateful for the comment from McKean et al on our article reporting on anxiety and depression among a group of socially transitioned, prepubescent transgender children ages 3 to 12 years.<sup>1</sup> Although we have additional research in progress that can better speak to some of their concerns (eg, the focus in the first article on parental reports), we are able to provide additional information from the *Pediatrics* data set to address their 2 major concerns: (1) the (high) socioeconomic status of our participants; and (2) the results with

# Lack of Rating Scale Normalization and a Socioeconomically Advantaged Population Limits the Generalizability of Preadolescent Transgender Findings

Alastair J. McKean, Jennifer L. Vande Voort and Paul E. Croarkin

*Pediatrics* 2016;138;

DOI: 10.1542/peds.2016-1203A originally published online June 30, 2016;

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://pediatrics.aappublications.org/content/138/1/e20161203A">http://pediatrics.aappublications.org/content/138/1/e20161203A</a>
<b>References</b>	This article cites 4 articles, 1 of which you can access for free at: <a href="http://pediatrics.aappublications.org/content/138/1/e20161203A#BIBL">http://pediatrics.aappublications.org/content/138/1/e20161203A#BIBL</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Administration/Practice Management</b> <a href="http://www.aappublications.org/cgi/collection/administration:practice_management_sub">http://www.aappublications.org/cgi/collection/administration:practice_management_sub</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.aappublications.org/site/misc/Permissions.xhtml">http://www.aappublications.org/site/misc/Permissions.xhtml</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://www.aappublications.org/site/misc/reprints.xhtml">http://www.aappublications.org/site/misc/reprints.xhtml</a>

## American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



# PEDIATRICS<sup>®</sup>

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Lack of Rating Scale Normalization and a Socioeconomically Advantaged Population Limits the Generalizability of Preadolescent Transgender Findings**

Alastair J. McKean, Jennifer L. Vande Voort and Paul E. Croarkin

*Pediatrics* 2016;138;

DOI: 10.1542/peds.2016-1203A originally published online June 30, 2016;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/138/1/e20161203A>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2016 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN<sup>®</sup>

