

Turban et al.'s incredible assumptions about sex*

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Turban et al. analyze the “Sex Assigned at Birth Ratio” of transgender adolescents in the United States using the Youth Risk Behavior Survey (YRBS).(1) The survey asked respondents “What is your sex?” According to the authors, “several studies have found that TGD youth are likely to understand ‘sex’ to be sex assigned at birth,” but the three articles cited fail to support this assertion. Reference 13 is about Dutch adolescents, irrelevant for English speakers. Reference 14 is about telehealth and the text does not contain the word “sex.” Reference 15 describes the implementation of a two-step method of ascertaining gender identity. There is no citation to the pioneering analysis of the transgender question in YRBS, which acknowledged that “it is unclear whether transgender students’ responses to the sex question reflected their sex or gender identity.”(2)

Turban et al. find that transgender respondents who identified as male outnumbered those who identified as female, in a ratio of 1.5:1 in 2017 and 1.2:1 in 2019. On the authors’ assumption that sex was interpreted as “sex assigned at birth,” these ratios are the reverse found in comparable studies. The Minnesota student survey in 2016 explicitly asked about birth-assigned sex. Among students who identified as transgender and genderqueer, the ratio of “assigned male at birth” (AMAB) to “assigned female at birth” (AFAB) was 0.5:1 ($n = 2,141$). (3) A survey of American undergraduates in 2021 also asked about “sex assigned at birth.” Among those who identified as transgender, the AMAB:AFAB ratio was 0.2:1 ($n = 3,146$). (4) Youth attending gender clinics show the same preponderance of natal females. In a Californian clinic from 2015 to 2018, the AMAB:AFAB ratio was 0.4:1 ($n = 417$). (5) At a Pennsylvanian clinic in 2018, the ratio of transmasculine to transfeminine was 0.2:1 ($n = 124$, excluding 29 nonbinary whose sex was not ascertained). (6)

The obvious explanation for the authors’ anomalous claim is that many transgender respondents did not treat the question about sex as referring to “sex assigned at birth.” One indication is that transgender respondents were more likely to skip the question: in eight states which asked about transgender identity in 2017 and 2019, 8.6% of transgender respondents ($n = 4,092$) declined to state their sex, compared to 0.5% of non-transgender respondents. (All results here use YRBS weights.) Another indication comes from the distribution of height, given that natal females are shorter on average than natal males. Predicting height separately for each sex, OLS regression (adjusting for age and race) reveals that transgender respondents who identified as male were on average 2.5 cm shorter than non-transgender male respondents (95% CI: 1.3 ... 3.8 cm, total $n = 87,568$). (There was no discernible height difference between transgender respondents who identified as female and non-transgender female respondents.) This height difference is evidence that some of the transgender respondents who identified themselves as male were natal females.

* This comment (without the final sentence) was submitted to *Pediatrics*; it was rejected within an hour.

Given the ambiguity of the YRBS question on sex—evidently confusing to respondents and to scientists alike—no conclusion about the sex ratio of transgender youth can be drawn from this survey. The article does, however, provide considerable insight into the editorial standards maintained by *Pediatrics*.

References

1. Turban JL, Dolotina B, King D, Keuroghlian AS. Sex assigned at birth ratio among transgender and gender diverse adolescents in the United States. *Pediatrics*. 2022;e2022056567.
2. Johns MM, Lowry R, Andrzejewski J, Barrios LC, Demissie Z, McManus T, et al. Transgender identity and experiences of violence victimization, substance use, suicide risk, and sexual risk behaviors among high school students: 19 states and large urban school districts, 2017. *Morbidity and Mortality Weekly Report*. 2019;68:69–71.
3. Eisenberg ME, Gower AL, McMorris BJ, Rider GN, Shea G, Coleman E. Risk and protective factors in the lives of transgender/gender nonconforming adolescents. *Journal of Adolescent Health*. 2017;61:521–6.
4. American College Health Association. American College Health Association—National College Health Assessment III: Undergraduate student reference group data report, spring 2021 [Internet]. 2021. Available from: https://www.acha.org/documents/ncha/NCHA-III_SPRING-2021_UNDERGRADUATE_REFERENCE_GROUP_DATA_REPORT.pdf
5. Handler T, Hojilla JC, Varghese R, Wellenstein W, Satre DD, Zaritsky E. Trends in referrals to a pediatric transgender clinic. *Pediatrics*. 2019;144:e20191368.
6. Sequeira GM, Ray KN, Miller E, Coulter RWS. Transgender youth's disclosure of gender identity to providers outside of specialized gender centers. *Journal of Adolescent Health*. 2020;66:691–8.



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Methods note: this study has the problem of not knowing if "females" and "males" in their study are cis or trans. Please use two-step questions in your studies to avoid this. Step 1 asks sex assigned at birth; step 2 asks gender identity. More here:

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