Gender norms and the wellbeing of girls and boys

Elissa Kennedy and colleagues (December, 2020)1 described the emergence of gender disparities in health and wellbeing across the first two decades of life, arguing that they are caused by harmful gender norms. The gender inequalities framework¹ implicitly presupposes that, in a just society, males and females would show equal outcomes on every metric considered. This expectation is at odds with a vast body of research on sex differences in psychobehavioural traits and life outcomes in humans and other species.²⁻⁴ A scientific approach to human health and behaviour cannot afford to ignore the insights provided by evolutionary biology.²⁻⁵ Pure socialisation accounts overlook key evidence on the relations between biological sex and health, leading to biased understanding and potentially counterproductive interventions.

Ascribing negative health outcomes to socially imposed harmful gender norms¹ ignores the selection pressures that have shaped male and female physiology, cognition, and behaviour in sexually dimorphic ways.2-5 For example, it is a general mammalian pattern for females to live longer than males, and for males to display more aggression, dominance, and physical risk-taking.²⁻⁴ These patterns can be attributed to differential sexual selection, and arise during prenatal and postnatal development through the action of genes and sex hormones.2-5 Many observed sex disparities in health reflect the interplay between biologically shaped predispositions and aspects of the social context. Only a multilevel biosocial model—one that looks beyond socially constructed gender norms to our evolutionary history can effectively promote health in both sexes.

We declare no competing interests.

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- 1 Kennedy E, Binder G, Humphries-Waa, et al. Gender inequalities in health and wellbeing across the first two decades of life: an analysis of 40 low-income and middle-income countries in the Asia-Pacific region. Lancet 2020; 8: e1473–88.
- 2 Archer J. The reality and evolutionary significance of human psychological sex differences. Biol Rev 2019; 94: 1381–415.
- 3 Geary DC. Evolution of vulnerability: implications for sex differences in health and development. San Diego, CA: Academic Press, 2015.
- 4 Welling LL, Shackelford TK (eds). The Oxford handbook of evolutionary psychology and behavioral endocrinology. New York, NY: Oxford University Press, 2019.
- Mauvais-Jarvis F, Merz NB, Barnes PJ, et al. Sex and gender: modifiers of health, disease, and medicine. Lancet 2020; 396: 565–82.



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Author's reply

We are pleased our Article¹ has generated interest and discussion, including around the need to include boys in gender policy, programming, and research.

Severi Luoto and colleagues suggest that we should expect differences in outcome between females and males, and that these differences are driven by biological sex. We agree that biological sex differences might explain some gender disparities in health; however, if observed differences were driven predominantly by biological sex, we would not observe the wide variation in health across boys—or between boys and girls-or across countries or over time. Nor would we expect to see adolescent girls to be at increased risk of suicide as we observed in India, Pakistan, and Bangladesh. It is also difficult to conceive of a biological basis for our observed gender differences in the domains of education, protection, or safety.

Biology needs to be considered in a context of socially constructed gender systems. Gender inequality becomes evident in adolescence—a time of great biological and neurocognitive change driven by puberty. These biological changes bring a sensitivity to the social environment and drive identity formation, including what it is to be a given gender (male, female, or non-binary).2 The gender norms and values embedded in the individual during childhood and adolescence persist into later adult life and, through parenthood, are generally passed on to the next generation. In summary, although we agree that biology contributes to this process, much of the variation in health outcomes observed can be attributed to socially constructed gender systems, and these are amenable to transformative intervention.3

Our Article did not systematically explore the drivers of gender inequalities or what the responses should be. We speculate that, in addition to driving the disadvantage and discrimination experienced by girls, patriarchal systems also reinforce rigid, restrictive norms around masculinity that contribute to boys' risk-taking and use of and exposure to violence. As such, we support Kylie King and colleagues' call to include boys in programming to address gender inequality. Further to Gwyther's review that King and colleagues cite, we note a 2020 review4 that identified 36 randomised trials of gender-transformative programming with men and boys to improve sexual and reproductive health and rights, as well as a synthesis of programmes targeting gender inequality and restrictive norms to improve outcomes for children and adolescents.5 We hope that this growing body of evidence informs effective responses to the gender disparities identified in our

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- 1 Kennedy E, Binder G, Humphries-Waa K, et al. Gender inequalities in health and wellbeing across the first two decades of life: an analysis of 40 low-income and middle-income countries in the Asia-Pacific region. Lancet Glob Health 2020; 8: e1473-88.
- 2 Blum RW. Gender norm transformative programing: where are we now? Where do we need to be? J Adolesc Health 2020; 66: 135–36.

- Heymann J, Levy JK, Bose B, et al. Improving health with programmatic, legal, and policy approaches to reduce gender inequality and change restrictive gender norms. *Lancet* 2019; 393: 2522–34.
- Ruane-McAteer E, Gillespie K, Amin A, et al. Gender-transformative programming with men and boys to improve sexual and reproductive health and rights: a systematic review of intervention studies. BMJ Glob Health 2020; 5: e002997.
- 5 Levy JK, Darmstadt GL, Ashby C, et al. Characteristics of successful programmes targeting gender inequality and restrictive gender norms for the health and wellbeing of children, adolescents, and young adults: a systematic review. Lancet Glob Health 2020; 8: e225-36.

