EPSIG 3rd International Symposium 22nd March 2019

Can evolutionary thinking shed light on gender diversity? A view from the clinic

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Professor Michael J Reiss is Professor of Science Education at the UCL Institute of Education and a Fellow of the Academy of Social Sciences. A priest in the Church of England and the former Director of Education at the Royal Society, he has a PhD in evolutionary biology.

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Dr Annie Swanepoel is a Clinical Director for CAMHS and Consultant Child and Adolescent Psychiatrist. She also holds a PhD in Human Physiology and is particularly interested in the integration of body and mind, nature and nurture, and psychoneuroimmunology, as well as evolutionary science.

Dr Graham Music is a Consultant Child and Adolescent Psychotherapist at the Tavistock Clinic and Adult Psychotherapist in private practice. His publications include *Nurturing Natures* (2011) and *The Good Life* (2014).



Some terminology

Gender A composite term referring both to one's deeply held sense of self as male or female (or neither or both) and society's perception of one's sex and sex role. A person's gender can be at odds with their assigned sex at birth.

Sex Traditionally understood as the categories of 'female' and 'male', into which humans and many other species are classified as a result of future potential reproductive functions – as determined by anatomy or other measurements (e.g. chromosomes, hormone levels).

Birth-assigned sex/gender This term refers to the sex/gender that is assigned to a baby at birth on the basis of their (visible) genitalia. Amongst many gender diverse people this term is preferred over 'natal' sex/gender.



Some terminology

Trans or transgender refers to the *broad spectrum* of individuals whose gender identity is not congruent with their sex assigned at birth.

Gender diversity and *gender variance* are umbrella terms used to describe a wide range of gender identifications outside conventional gender categories.

Gender dysphoria is a general descriptive term referring to an individual's discontent and/or distress with their assigned gender. Not every gender diverse person experiences distress. The term is more specifically defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM), fifth edition (American Psychiatric Association, 2013).



Some terminology

Non-binary: a term used to describe someone who does not identify exclusively as male or female.

A *cisgender* individual identifies with their phenotypical sex.

Social transition: a person's change from living socially as the gender that matches the sex assigned at birth to living socially as another gender across several domains of social life.



How common is gender diversity?

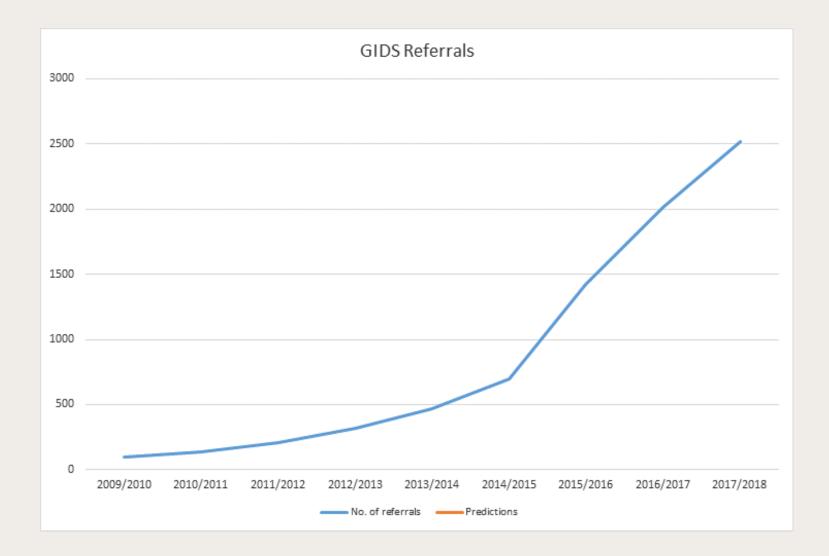
An international meta-analytical study reported on the population rate for 'transsexualism':

- 4.6 in 100,000 individuals:
- 6.8 for trans women and 2.6 for trans men;
- time analysis found an increase in reported frequencies over the last 50 years (Arcelus 2015).

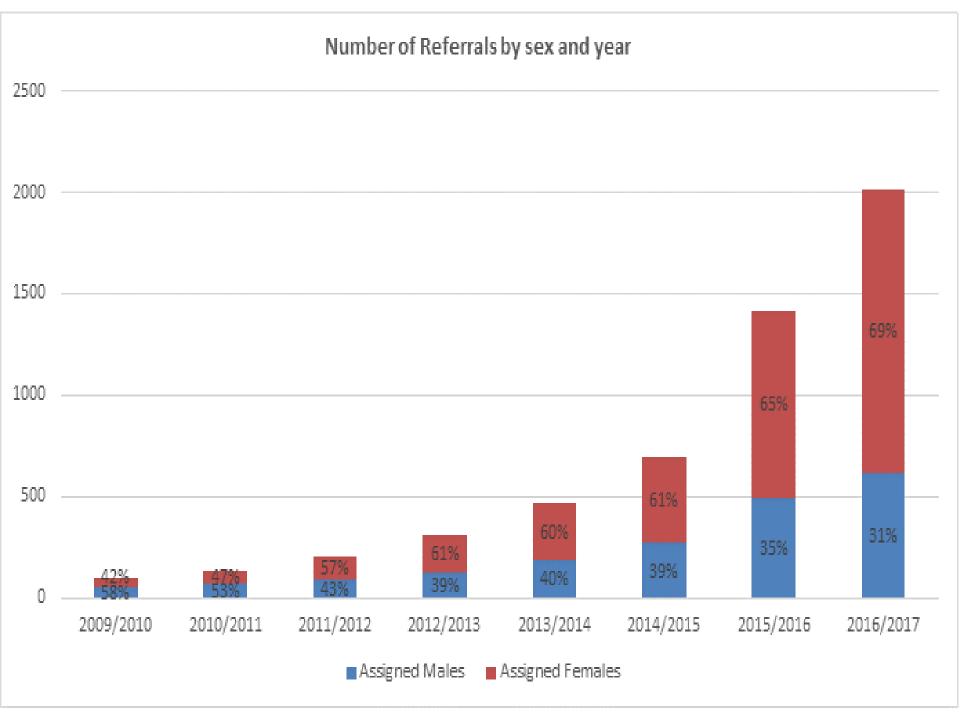
Figures are mainly based on individuals attending clinical services — and within those services, only those who were clearly diagnosable as 'transsexual' — and so do not provide an overall picture of the proportion of gender diverse people in the general population.

Arcelus J, Bouman WP, Van den Noortgate W et al. (2015) Systematic review and meta-analysis of prevalence studies in transsexualism. *European Psychiatry* 30:807-815.









Gender dysphoria (DSM5)

- 'Gender Dysphoria' refers to:
 - the marked incongruence between one's experienced/expressed gender and birth-assigned gender (based on physiological sex characteristics). Different ways to identify/define in children and adolescents/adults.
 - Of at least 6 months duration and associated with **clinically significant distress** or impairment in social, occupational or other important areas of **functioning**.
- Only some gender diverse people experience gender dysphoria at some point in their lives.



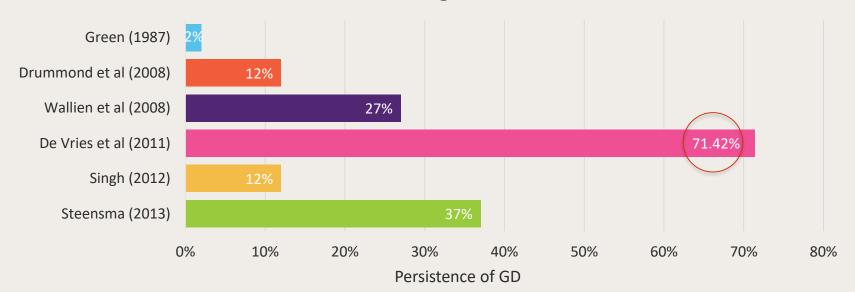
Diversity of atypical gender experience

- age and/or developmental stage when first questioning gender,
- the intensity and urgency of the desire to make a social transition and bodily changes,
- the fixed or fluid nature of the identification,
- The degree of bodily distress
- the sense of a binary or non-binary gender identity,
- the presence, nature and degree of associated psychosocial difficulties.
- In addition, gender pathways may vary considerably between birth-assigned females and birth-assigned males.
- The relationship between gender identity, sexual attraction and sexual behaviour: trans people may be sexually and/or romantically drawn to any gender.



"Persistence" of GD

Rates of Persisting GD Across Studies



Research investigating rates of persistence is limited and has acquired diverse estimates, ranging from 2% to 71%.

Methodological differences between studies make it hard to draw comparisons.

Estimates suggest different rates of persistence for AM and AF participants.

Young Person's whose GD continues into adolescence are more likely to experience GD in adulthood



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Thank you

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