



Teenagers and gender identity: the evidence base

Introduction and Part 1: Why might teenagers question their gender?

Matilda Gosling and Stella O'Malley

Introduction

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Sex Matters is a UK-based not-for-profit organisation. We have a singular mission: to re-establish that sex matters in rules, laws, policies, language and culture to protect everybody's human rights. We campaign, advocate and produce resources to promote clarity about sex in law, policy and institutions.

About the authors

Matilda Gosling is a social researcher and writer specialising in research on issues affecting children and young people. She has worked for governments, charities, foundations and private sector organisations internationally, and has overseen field research in more than 60 countries. She is in the process of writing two evidence-based parenting books.

Stella O'Malley is a psychotherapist, best-selling author, public speaker and parent with many years' experience working in counselling and psychotherapy. She is the director of Genspect and a clinical advisor in the Society for Evidence-Based Gender Medicine. She co-founded and hosts the podcast *Gender: A Wider Lens*.

About this paper

This paper is the first of a three-part series summarising the evidence base on teenagers and gender identity for parents. This part of the paper looks at reasons teenagers might start to question their gender. Part 2, which will be published later in 2022, will look at treatment and outcomes. Part 3 will make evidence-informed recommendations for parents.

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Sex Matters is a human rights organisation campaigning for clarity about sex in law, policy and language.

sex-matters.org | info@sex-matters.org

Introduction

This paper is aimed at parents and those who simply want to understand more about gender identity in adolescence. Perhaps you have a gender-questioning teenager.^a Your child may have started to identify as a boy if she was born a girl, may feel non-binary – neither male nor female – or may be exploring another of the panoply of gender identities, such as transfeminine or demigirl. A trickle of teenagers, and especially girls, identifying out of their sex has become a torrent in recent years.

The purpose of this three-part series is to distil existing research in this area and to outline what we know about those who develop gender dysphoria as older children or teenagers.^b Decent summaries of the evidence base on this for parents are lacking, partly because it's all so recent. Part one of the series, which you're reading now, looks at reasons children might start to question their gender. Part two will examine what happens in the longer term to children who socially or medically transition, and to those who are supported in other ways. Part three will make practical suggestions to help these children based on research, where it exists, and expert advice, where it does not.

Wars have been waged over lesser passions than those incited by issues relating to sex and gender identity. It's a particularly fraught area for parents of teenagers. The ever-growing number of children believing they are a different gender to the sex they were born sets up the question of how the important adults in their lives can best support them. Some parents and experts believe children should be fully affirmed in whichever gender they choose. Others believe they should be supported but not affirmed in their chosen identity, and offered help with other issues that might be underlying their need to question their sense of self.

The words "sex" and "gender" are used throughout this paper. By sex, we mean biological, binary male/female sex. Gender is a little harder to define, but we use it to mean social customs and identities that are related to what we traditionally associate with concepts of being male or female. If we think of an ancient shin bone recovered from a modern peat bog, the sex of its one-time owner could be quickly and definitively identified through scientific analysis. We would remain clueless, though, about the gender identity of the shin-bone owner, as

^a We've used "gender-questioning" to describe teenagers who are exploring their gender identities. This includes teenagers with gender dysphoria (see footnote below), as well as those who might just be trying to work things out.

^b The NHS defines gender dysphoria as "a sense of unease that a person may have because of a mismatch between their biological sex and their gender identity". NHS. *Overview: Gender Dysphoria*. <https://www.nhs.uk/conditions/gender-dysphoria/> (accessed 2nd August 2022).

we would have no idea how, or even whether, they would have defined themselves in this way.

At the heart of this, essentially, is whether parents and other important adults believe that their children's sex is real and unchanging, or whether they were "assigned" a sex at birth and have an innate sense of gender identity that doesn't necessarily match their assigned sex.¹

From a research perspective, there's little comfortable middle ground between these two ideas. Researchers and other experts tend to fall on one side or the other – if they aren't explicit about which it is, it can usually be surmised from the literature they select, the language they use or the way they interpret their findings. We want to be clear where on this heated map our own views are located, as it's the lens through which we've viewed the research in the writing of this paper. Our view is that while gender identity is held by many people, and can manifest itself in debilitating gender dysphoria, a sense of gender identity is neither innate nor universally experienced. The evidence also suggests that teenagers' gender identity can change over the course of adolescence. This makes it problematic – at best, and in our opinion – that many teenagers have been offered permanent physical alterations to address something that may not last.

We also believe, among other things, that a focus on gender identity over sex perpetuates stereotypes. It risks implying that if I like unicorns and long hair, I must be a girl; if I like football and fancy girls, I must be a boy. Stereotypes saturate this issue. They are often implicit in what people and organisations say about gender,² and they are explicitly part of the diagnosis of gender dysphoria in younger children; five of the eight diagnostic criteria relate purely to stereotypes.³ One diagnostic criterion for children born as boys, for example, is "a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play". In our view, this tells us nothing about gender identity – instead, it tells us about preferences around play, and could apply to a girl or a boy.

The first part of this paper, set out below, shows there's something happening in the minds of children who become dysphoric that's more than a looming belief that their innate gender identity doesn't match their sex. Underlying mental health conditions are widespread in these teenagers; a change in gender identity may present an apparent solution to internal pain, but this panacea may be illusory. Teenagers with autism spectrum disorder, many of whom find the world easier when there are clear categories,^c are several times more likely to be dysphoric than other children.

^c The corollary of this is that they may feel more comfortable moving themselves into a box based, potentially, on stereotypes, than on understanding themselves as a more nuanced individual who melds together different aspects of personhood into their own, unique character. There are other potential reasons for the link between autism spectrum disorder and gender dysphoria, too, which are explored later in this paper.

Those who are, or who may become, lesbian, gay or bisexual, are also over-represented; in fact, the majority of gender-questioning teenagers are same-sex attracted. There are strong indications that gender identity is a social phenomenon that can be influenced by friends and by the internet. If a sense of gender identity is subject to external influence, it can't be innate.

Have we been putting children on a life-long medicalisation pathway,^d which leads inevitably to infertility and loss of future sexual pleasure, because they're unhappy, or autistic, or gay, or they've become lost down an internet rabbit-hole? This highly medicalised pathway looks to be changing, at least in the UK, and while its future form has yet to take shape, at the time of writing it appears it will be recast into a more nuanced approach.^e Will such an approach help children to feel happier, or to understand that human beings are complex creatures who can like things that don't fit a clear pattern, or that it's really OK to be attracted to people who share your sex, before seeing if there's still an issue once those things have been done? If it does, our reading of

the research suggests it will help children much more than a medicalised pathway.

The second part of this paper, which will be published separately, looks at outcomes for children who have questioned their gender and how these link to the actions taken by the adults around them, whether that's watchful waiting,^f social transition (perhaps changing a teenager's name and pronouns) or medical transition (puberty blockers, cross-sex hormones and/or surgery). Unfortunately, there's a huge amount we still don't know in this area.

The final part of the paper will make recommendations for parents based on the idea that gender identity is not fixed or innate. These recommendations will coalesce around two themes: how to support children to feel sufficiently comfortable in their own skins to head off future potential dysphoria, and, if teenagers do start to question their gender, what parents can do to help them.

^d Explained in part 2 of this paper, which will be published separately.

^e The Gender Identity Development Service (GIDS), run by the NHS's Tavistock and Portman Trust, is the main clinic in the UK to which children with gender dysphoria are referred. The leader of a review into its services, Dr Hilary Cass, has recently announced that GIDS will close in 2023, and will be replaced with regional services that will take a more psychotherapeutic approach than GIDS. More information is available on the Cass Review's website: <https://cass.independent-review.uk/publications/> (accessed 2nd August 2022).

^f This means behaving with an assumption that, while some children may have persistent gender dysphoria, others' dysphoria will resolve with appropriate support.

A research note

The research into gender identity in teenagers is problematic. Widespread teenage-onset gender dysphoria is such a recent phenomenon that it hasn't yet been properly studied. High-quality studies in the form of randomised controlled trials would also, almost certainly, be unethical. How could an ethical board justify dividing unhappy, dysphoric young people into three groups to see whether social transition, medicalisation or watchful waiting would best support their long-term needs and health? A further point is that a lot of the studies are simply poorly designed. We have an untested theory that the toxic nature of this debate – and the associated lack of dialogue – interferes with researchers' ability to be detached enough to run a study that's genuinely open-ended and that doesn't presuppose an answer. The toxicity attached to dialogue about this may also interfere with the research-funding process.

Many study findings can be made to fit the reader's own personal perspectives. This, along with the high stakes of placing teenagers' physical and emotional well-being at risk if the wrong approach is taken, may be what makes this area so contentious. We'll illustrate this with the example of multiple studies showing that almost all children who take puberty blockers, which are often positioned as a pause button to give children time to make up their minds, go on to take cross-sex hormones.

In one view, this almost perfect correlation between taking puberty blockers and then taking cross-sex hormones shows that the children who take blockers are the ones who genuinely have an immutable gender identity in conflict with their birth sex, making later hormone treatment necessary. In this view, the system identifies those in need with incredible accuracy, and so it's a successful system. Under another view, the same correlation shows that children's dysphoria is made worse by taking puberty blockers and it becomes much, much harder for them to change their minds later. This perspective sees puberty blockers as the first step on an inevitable escalator towards cross-sex hormones. It also sees dysphoric children as being failed by adults who don't help them to deal with the issues underlying their dysphoria, or who don't help them to realise that their personalities and preferences mean they can dress and act in any way they like without the need to alter their bodies. These failures have, up to now, put many of them on a pathway to baked-in infertility and other health issues.

We have always been led by the research when writing previously on issues affecting children and young people. This won't have been done perfectly – nobody can entirely put their own ways of seeing the world entirely to one side when attempting to be neutral – but it has been a central philosophy of ours to attempt to put personal beliefs to one

side in order to see what the evidence actually says. That's not possible here, due to this issue that so much of the research can be interpreted differently according to your starting point.

Interpreting the research is made more difficult by the existence of seemingly high-quality studies that make fundamental errors: for example, failing to consider the co-existence of anxiety, depression other mental health conditions when looking at self-harm or suicidal thoughts in gender-questioning teenagers. Research problems aren't limited to studies supporting gender affirmation and medicalisation in children; they're also present in many of the studies included here that support our arguments.

There are problems, then, with the research. We can, though, say with reasonable confidence that gender identity is subject to external influence and, as a result, can't be entirely innate. We can also objectively verify the existence of negative outcomes for many who transition. Though we can't know for certain what happens in people's minds, we believe the data supports the arguments for a cautious approach, rather than immediately affirming children's proposed identities.

It's vital that, as parents, we understand what the research on gender identity in teenagers means for our children as far as is reasonably possible, especially if they're starting to feel uncomfortable in their bodies. Hopefully, there will one day be reams of high-quality research studies and pithy summaries of them to underpin parental decision-making. In the meantime, here is a first attempt to assess the state of the evidence and how it relates to our children.

Part 1: Why might teenagers question their gender?

This section of the paper explores reasons why teenagers might be dysphoric or otherwise questioning their gender. People who believe that gender identity is innate and immutable might question the entire premise of this piece, but their questions would echo into an empty research void: there's no way to prove an intangible idea. And while biology may influence susceptibility to gender dysphoria,⁴ there's reasonable evidence, summarised below, to suggest that gender identity can be influenced by friends and by the internet, meaning it's not a permanent internal state.

Factors influencing the development of a misaligned sense of gender identity are incredibly complex. We've divided this section into potentially underlying factors – the average teenager is much more likely to be gender-questioning if they are lesbian, gay or bisexual, if they have a neurodevelopmental condition, if they have mental health problems or if there are other underlying vulnerabilities such as being in care – and social and developmental factors. These include the natural process of identity exploration, the impact of puberty and the sudden unfamiliarity of teenagers' bodies, as well as a railing against gender stereotypes, misogyny and misandry. External influences on gender identity are also examined.

This research shows that gender identity in teenagers is not the independent state it might otherwise have appeared to be, raising some uncomfortable conclusions and implying that immediate affirmation of identity is very unlikely to be the best way forward.

Underlying factors

Sexual orientation

The evidence linking teenagers being gender questioning with their sexual orientation, which relates to whether they're attracted to their own sex, the opposite sex or both sexes,⁵ is strong. Some teenagers may not yet know their sexual orientation; others may be certain. But teenagers who question their gender are more likely than not to be attracted to people of their own sex, whether that takes the form of being lesbian, gay or bisexual. While precise estimates vary by study and by country, they're universally high compared with rates for other teenagers. One study of young people referred to the UK's Gender Identity Development Service over the course of a year found that 80% were lesbian, gay or bisexual,⁶ meaning these gender-questioning teenagers were 10 times more likely than other young people to be attracted to their own sex.⁷

What might be the reasons for this striking link? People who are same-sex attracted are more likely to have been gender non-conforming as children and to remain gender non-conforming into adulthood.⁸

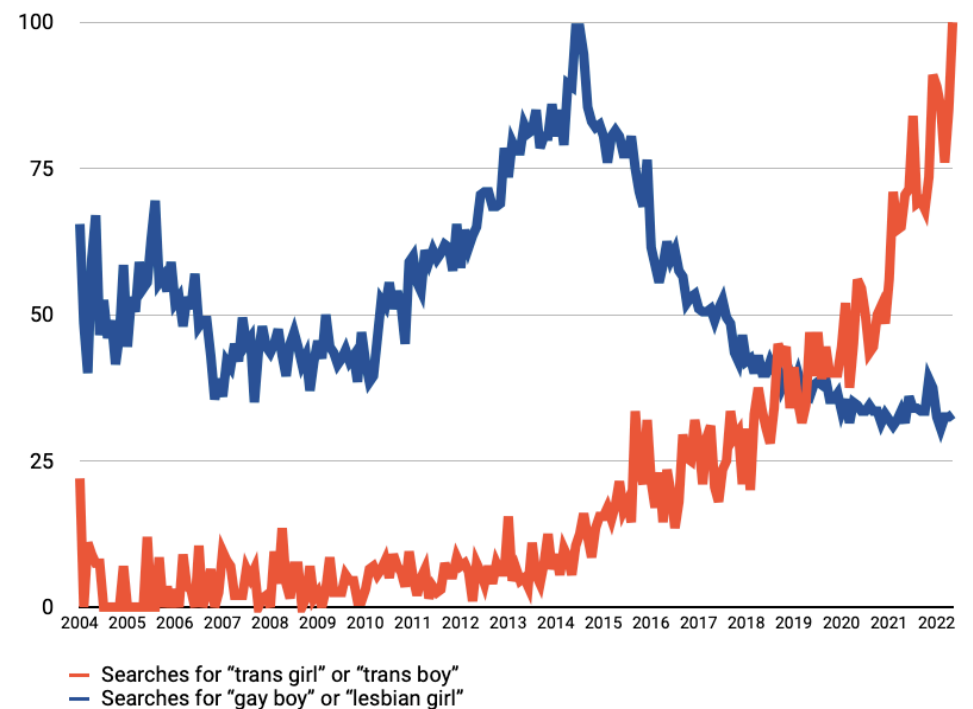
Perhaps this non-conformity makes them more likely to consider themselves to be of a gender that varies from their sex and/or that other people do the same; a lesbian teenage girl with short hair and stereotypically male clothes may find it harder to be accepted in her sex than a girl (lesbian or otherwise) who dresses herself in a way that meets society's norms.

Entrenched societal homophobia may push same-sex attracted young people in a similar direction, making it harder for them to accept their sexual orientation. An editorial within a journal aimed at family doctors in the UK, the *British Journal of General Practice*, makes a similar point: "Adolescents, who previously may have come to terms naturally with the emotional difficulties of pubescent bodies or with emergent homosexuality, may consider themselves to be 'trans'."⁹

We don't yet have enough good data to demonstrate a causal link here, but we can look instead at whether there are links between the two that are more than just an overlap. One study shows an increase in teenagers questioning their gender after they've suffered homophobic

name-calling.¹⁰ Google trends data provides another area of interest. It shows us that as searches for "trans boy" and "trans girl" start to shoot up in 2015, searches for "lesbian girl" and "gay boy" fall off a cliff:

Teenagers' gender identity and sexual orientation: Google Trends data on specified terms¹¹



It therefore seems feasible, at least, that girls and boys who might otherwise have been exploring their sexual orientation are becoming convinced they are trans, not same-sex attracted.¹² While we can't yet prove this definitively, even the possibility should cause us to proceed with caution when it comes to transition. The *British Journal of General Practice* editorial we mentioned above states: "Medical intervention may, in effect, become another form of 'conversion,' whereby some children who would otherwise have grown up gay or lesbian receive 'gender affirming' cross-sex hormones instead."¹³

While the risk of this happening has reduced with the planned closure of the Gender Identity Development Service and a proposed move towards a more therapeutic, exploratory model of care, there's an urgent need to support teenagers who may be attracted to other people of their sex to feel comfortable in their sexual orientation or, if they're not yet certain about it, to be open to different possibilities.

Neurodevelopmental conditions

Evidence for an overlap between being gender questioning and having a neurodevelopmental condition is also robust. Gender-questioning teenagers are far more likely than other young people to have a neurodevelopmental disorder such as autism spectrum disorder (ASD)¹⁴ or attention-deficit hyperactivity disorder (ADHD).¹⁵ The precise rate varies between studies, but there's consensus that teenagers are more likely to question their gender when they have one of these disorders. One review of studies, for example, finds that teenagers who are referred to gender identity services are at least eight times more likely than the general population to have ASD.¹⁶

Why might this link exist? One theory is that biological girls who have ASD and gender dysphoria may have been exposed to higher levels of testosterone when they were foetuses, but this doesn't explain the link in boys.¹⁷ And while a recent study of studies looking at a proxy for testosterone exposure in the womb – the ratio of the length of people's second finger to their fourth finger – found a small but significant link between presumed testosterone exposure and ASD, it found none for people who are gender questioning.^{18/19} Purely biological theories also seem meagre when medical and social science research is moving towards an interplay between biological, psychological and social factors in explaining how the mind works.

A partial explanation might be that children with neurodevelopmental disorders have a sense of otherness. They know they're different from other children; finding a reason in misaligned gender identity may be easier to bear than a permanent sense of unfixable difference.²⁰ It may also be that children with ASD are likely to become fixated on a particular interest and to follow it obsessively,²¹ something that may also be a marker of children who get lost on TikTok gender videos until they become convinced – inevitably – that they, too, don't follow gender norms.

A recent study²² has shown that a process called “mentalising” may play an important role.²³ Mentalising is what we do when we think about what's going on in our minds or the minds of people around us, and people with neurodevelopmental disorders can find it harder to do this successfully. Being able to mentalise helps us to comply with social norms, so those with neurodevelopmental disorders may be more likely to reject norms relating to gender. A key part of mentalising is also being able to understand the difference between appearance and reality.²⁴ Children with neurodevelopmental disorders may not understand that how people appear on the outside isn't necessarily an indication of whether they're male or female. It's probably easier to be comfortable in your sex if you understand that a boy may like dresses and a girl may hate them.

There's not been enough research conducted to know for certain why there's such an overlap between neurodevelopmental disorders and being gender questioning.²⁵ But if these theories have any grounding in reality, it raises the troubling possibility that we have been transitioning children who are neurodiverse for the very reason that they feel different from other teenagers, or because their neurodiversity makes it harder to understand themselves if they don't fit neatly into socially prescribed categories.

Mental health and vulnerability

Mental health is worse in gender-questioning young people than it is in young people who are happy with their sex.²⁶ Returning to our point about how the research can be interpreted differently according to your own views on sex and gender, in one interpretation, this shows life is harder for young people who feel dysphoric. In another interpretation, you might agree with this first point but add another dimension to it – that underlying mental-health conditions can make teenagers feel incredibly distressed, and one way this distress shows itself is in dysphoria. The changing of gender might also seem like a solution to this distress – the chance for a new start, for a metamorphosis into somebody else.

What does having worse mental health look like in practice? Gender-questioning teenagers are more likely than other young people to be anxious and depressed, to have a history of self-harm and feeling suicidal,^{27/28} and to have an eating disorder.²⁹ Mental-health and behavioural issues in gender-dysphoric teenagers tend to be at a similar level to those in teenagers who are referred to health services for other mental-health conditions.^{30/31}

Is the overlap between gender dysphoria and mental-health conditions caused purely by unhappiness relating to the dysphoria and its impact (when teenagers perceive themselves to be rejected by society, for example), or do underlying mental health concerns also contribute, in some way, to the development of the dysphoria? This is hard to answer without some better-quality research. One famous, fiercely contested but best-available-evidence survey of around 250 parents found that around six in 10 young people had a mental-health condition or neurodevelopmental disorder before they started to question their gender. The same study found that mental health got worse in almost half the young people after they'd changed their identity.³² Larger-scale research from a non-self-selecting sample would give us more confidence in these findings, which may indicate that mental-health conditions underlie gender dysphoria in some teenagers and are compounded by transition.

Other vulnerabilities may underlie gender dysphoria, too. One study found that more than eight times the number of children in care are referred to gender-identity services than might otherwise be expected: they make up 4.9% of service referrals but only 0.6% of children in England. Adopted children are also over-represented.^{33/34} Trauma, which can underpin poor mental health, is more prevalent in gender-dysphoric teenagers. One study of around 1,800 teenagers, for example, shows those with gender dysphoria are twice as likely to have experienced sexual abuse as other teenagers, and almost twice as likely to have experienced psychological or physical abuse.³⁵

This backs up the idea that some mental-health problems pre-date teenagers feeling dysphoric, or at the very least are caused by something else; a child who experiences trauma, say in the form of losing a parent or having a severe illness, is more likely to become anxious or sad, and perhaps a change in gender identity presents a seemingly straightforward solution to mental anguish. As one psychoanalyst³⁶ puts it: "When the child or adolescent is in danger of being overwhelmed, there will be a tendency to focus on a fixed solution to deal with the most pressing concern, particularly the unbearable pain of confusion."³⁷ This is not just a theory put forward by people with reservations about taking an affirming approach to gender dysphoria; in a book chapter aimed at medical professionals, the (for now) Director of Training, Development and Research at the Gender Identity Development Service summarises research showing that trauma may contribute to children questioning their gender.³⁸

Suicidal thoughts are worth a particular mention in this section, as suicide is often mentioned by gender-affirming lobby groups as a reason to transition children straight away. The UK charity Mermaids, for example, has called “for affirmative care to be a requirement in both guidance and law. It is nothing short of a national scandal that the current system is leading smart, talented, creative, motivated, kind and loved young people to consider ending their lives”.³⁹ The studies that have suggested gender-questioning children are more likely to have suicidal thoughts, though, are flawed: they don’t compare with other groups of teenagers who have other mental health concerns, such as anxiety. In studies that do make this comparison, prevalence is similar.⁴⁰ Any parent whose child even contemplates the idea of dying will, of course, be facing down one of their greatest fears, but there’s little to suggest that socially or medically transitioning children alleviates these thoughts.⁹ More information on this is given in the second paper of this series.

Of course, not every teenager who is gender questioning has underlying factors that may predispose them to being uncomfortable with their sex. Questioning one’s gender may, instead, be a rational response to a society that has rigid and restrictive gender norms.

Deeply uncomfortable conclusions can be drawn, though, from this research. A lesbian teenager who is affirmed, unquestioningly, in her dysphoria becomes a straight boy. A neurodiverse teenager who struggles to understand the nuance in binary categories may be affirmed in a new gender as a result. An unhappy, anxious teenager who sees a socially sanctioned solution to their misery in the form of a change in gender may never get the help they need. These teenagers need support with their dysphoria, but their sense of gender misalignment needs to be seen in light of the factors that may have contributed towards it. Our children may need us to show them, as parents, that we accept their sexual orientation without question, or to assist them to understand the complexities of the world around us, or to help address their existential unhappiness.

⁹ There are studies showing that transitioning reduces suicidal thoughts, and there are studies showing the opposite. None of these studies, that we have found, combine a good design that would give us confidence in the findings with a focus on people who became dysphoric as teenagers (this latter point may, again, be due to how recent this phenomenon is, and we won’t improve study design without better long-term follow-up of individuals or population-level studies).

Social and developmental factors

This section looks at the social and developmental factors that may influence the development of gender identity. It also looks at how this identity can be moulded by external influences such as friends, school and the internet. If gender identity in teenagers is constant, it shouldn't be too troubled by external pressures – unless children are coming to it as a fresh idea that mirrors their long-held sense of who they are. But the evidence base as it stands suggests that society helps identities to be forged and later shape-shifted. Identity is not constant. And if a sense of gender shifts and evolves, it's hard to see the justification for taking action that might solidify an identity at one point in time.

Puberty and gender stereotypes

Puberty brings on gender dysphoria, according to one interpretation of the dramatic and relatively recent increase in teenagers questioning their gender, because children have a sudden dissonance between their minds and their emerging adult bodies.⁴¹ An alternative explanation is that puberty brings on a range of challenges to which changing gender identity is an attractive, deceptively simple answer to feelings of distress, and one that's now sufficiently mainstream as to be socially acceptable.

What are these challenges? Puberty heralds an unprecedented recasting of body parts and shapes. Children's once-familiar forms are uncharted territory. A sense of separation can arise from the sense that their bodies are no longer familiar.⁴² The Quentin Blake book *Zagazoo* presents this beautifully. As the child moves into adolescence, he becomes a mysterious, silent creature who grows bigger, stranger and hairier with every passing day, until he suddenly metamorphosises into a delightful young man with perfect manners.⁴³ The point is that puberty is very hard for many, or even most, teenagers in the moment, but the discomfort eventually passes, reconfigured bodies become increasingly familiar and equilibrium is restored.

Other difficulties experienced by teenagers, and potentially exacerbated by puberty, include higher levels of depression than when they were younger (something that's especially true for girls)⁴⁴ and greater sensitivity to stress.⁴⁵ Gender-questioning teenagers tend to be less sexually experienced than other teenagers,⁴⁶ leading to concerns that they may have repressed their emerging sexuality in some way.⁴⁷

Girls face a particular challenge around puberty.⁴⁸ Periods are messy, and there's a fair amount of ingrained disgust thrown their way by society; we've only just moved past sanitary towel companies advertising delicate drops of blue liquid shimmering as they seep prettily into their products.

The reality of periods is a spectrum of flowing blood, from rust through to deep scarlet, with all the inconvenience, leaks and pain that too often accompany it. Girls also know what changing shape means. The male gaze often lands on breasts and hips. How much easier might it seem to opt out of this messy, bloody, spotlight-inducing puberty by choosing to identify out of being a girl?

The expectations attached to rigid stereotypes present teenagers with another problem to which an escape hatch may offer itself in the form of a change in gender.⁴⁹ Conventional ideas about how the typical girl or boy should behave can become internalised. This usually happens before adolescence even begins.⁵⁰ By adolescence, these ideas can present a challenge to gender-questioning teenagers,⁵¹ and particularly girls, who may reject stereotypes relating to society's heavily sexualised ideas about women.⁵²

Even the research literature sometimes descends into astonishing gender stereotyping. One book chapter, written by a doctor specialising in gynaecology and sexual medicine, talks about girls who have developed a healthy gender identity as perceiving themselves to be "feminine, active, pretty, joyful, tender, vital, energetic, and smiling to life". This was published in a book aimed at medical professionals by the behemoth publishing house Springer.⁵³ There's clearly a long way to go in helping young people to tear down stereotypes if this is the kind of language some medical professionals still use when writing on this topic.

Identity exploration

Teenagers start to forge a stable identity over adolescence, which they do through shifts in biology, cognition, their relationships and other social factors.⁵⁴ The development of identity is a process influenced by social contexts, and identities are often revised as teenagers get older.⁵⁵ The brain also continues to change and develop during the teenage years.⁵⁶

This concept of shifting identity and brain structures is a contradiction of the model that suggests affirming teenagers in their gender identity. Adults often regret decisions they've made as teenagers that have permanent effects (how's that tattoo of your first girlfriend's name treating you?), and they make risky choices based on what their friends like and applaud.⁵⁷ An identity that works for a 13-year-old brain may not work for the same brain at 18. Affirmation through social and medical transition, as part 2 of this paper on treatment and outcomes shows, can crystallise children's gender dysphoria. Why make permanent, with the health and quality of life impacts that entails, something that may well otherwise pass with time?

External influences

There's growing evidence that their friends, schools and the internet influence how young people identify. Some scholars have used the idea of "social contagion" to explain what's happening in friendship groups when it comes to gender identity. A social contagion happens when concepts, beliefs and behaviours spread through a group of people by imitation or a pressure to conform.⁵⁸ Contagion can also happen through friends talking unremittingly about certain problems – exam worries, perhaps, or body-image concerns – in a way that often makes people feel anxious or down.⁵⁹ It has been seen in lots of areas of mental health – anorexia can spread in friendship groups,⁶⁰ as can self-harming behaviours⁶¹ and a desire to die by suicide.⁶²

The evidence for social contagion in gender dysphoria lies in it often clustering in friendship groups.⁶³ Critics have pointed out that the evidence for social contagion is limited to anecdotal reports and self-selecting survey samples.⁶⁴ This is right: the research that would be needed to demonstrate definitively whether it's a phenomenon hasn't been done. This research, ideally, would be a study that randomly samples a large number of schools and teenagers over time to track movements in gender identity, and assesses whether (and how) clusters of gender-questioning teenagers emerge in some friendship groups but not others within the same school environments.

And studies used to disprove the social contagion idea have their own flaws: a recent research paper used data showing a purported fall in the number of teenagers identifying as transgender to suggest that social contagion isn't a factor.^{65/66} But whether numbers are increasing or decreasing shouldn't matter here – previous conditions that were likely influenced by an element of social contagion⁶⁷ have, eventually, broadly come to an end.

Other, imperfect evidence lends weight to the theory that – even if the influence is small and doesn't affect everyone – there's a level of social contagion at play. One study used a series of surveys with 670 students in a single school to test whether other teenagers influence elements of someone's gender identity. It found that they do.⁶⁸ A separate piece of research has found that teenagers who are at the receiving end of homophobic name-calling are more likely to identify as a different gender later in the school year.⁶⁹

What might the mechanisms be for the spread of gender identity across friendship groups? The psychotherapist Lisa Marchiano describes gender dysphoria as a product of our culture, as other forms of psychological distress have been products of earlier or different cultures: “When we suffer from underlying psychosocial vulnerabilities, disruption, trauma, or interpersonal anguish, our unconscious looks for culturally sanctioned garb in which to clothe our distress.”⁷⁰ Some experts have even suggested an extreme social contagion that echoes earlier social epidemics such as recovered memory syndrome, based on a sub-culture that demonstrates cultish elements in its language, its in-group status and its rejection of everyone who might question it.⁷¹ Within friendship groups where gender diversity is common, other teenagers and adults who align with their birth sex are written off as privileged and dull, especially if they’re also straight.⁷² Being a minority, paradoxically, confers status.

Thinking more tangibly, schools can provide an educational context for a later teenage crisis to have a ready solution in the form of a move away from one’s birth sex; if ideas about gender identity are already swirling around in a school, they provide an easy hook when things get tough.⁷³ Perhaps we find friendship groups in which a large number of teenagers are gender questioning because adolescence and working out where you fit is hard, and support from and acceptance by friends who may already have made the leap – or are supportive of doing so – helps to unspool some of this difficulty.⁷⁴ There’s also a mechanism of

spread through which children see others being treated more favourably due to their newly acquired status, and may want to replicate some of this positive attention for themselves.⁷⁵

Social media, the internet,⁷⁶ television and print media⁷⁷ may also influence teenagers’ gender identity. And here, again, you can cut the knowledge to fit with your beliefs. Do these channels help children who were already gender-questioning to clarify their identity through support, advice and affirmation, or do they help prepare the ground for increasing body dissatisfaction and eventual dysphoria? Social media algorithms certainly steer teenagers in a particular direction, and there’s evidence that social contagion happens online as well as in real life. For example, teenagers saw a significant increase in stress-related physical tics over the Covid-19 pandemic, some of whom said they’d watched videos of other people with tics on sites such as TikTok before their symptoms began.⁷⁸

There’s lots of anecdotal and expert evidence available about the role of TikTok, YouTube and other social-media algorithms in driving previously non-questioning teenagers towards consuming content likely to lead them down transition pathways, but the research base is lacking – this is such a new phenomenon that the studies haven’t been run yet.

Instead, we can see the online material our children may view – the 15,000 videos about being “genderfluid” on YouTube, or the influencers telling teenagers to replace the families who do not immediately and wholeheartedly accept their new identities with an online “glitter family”. The male influencer Jeffrey Marsh identifies as “non-binary” and uses the description “internet mom”, telling teenagers: “Sometimes the tragedy is that the place where we look for acceptance the most, the family, is where we can be most rejected and misunderstood... I have love left over to give if you want some. I know that you are worthy. I know that you are deserving, no matter what they say. And if you’ve been rejected by everybody, you can be in my family. I want you over here.”⁷⁹

Looking beyond algorithms, the internet inarguably provides teenagers with advice about how to manage parents around this issue and how to convince medical professionals their dysphoria is real. This advice is underpinned by a warning: these children must transition soon, because if they don’t, they might kill themselves (see the section under ‘Underlying factors’ on mental health for a counter to this). Online trans influencers often suggest:⁸⁰

- If viewers are questioning whether they’re trans, it means they probably already are.
- If they’re girls, breast binding is a good starting point.
- Testosterone, for girls, is transformative.
- You, as your child’s parent, only really love your child if you allow them to transition.

Trans influencers also promote more subtle lines about gender dysphoria. Feeling different and feeling uncomfortable in your body are symptoms, apparently, by dint of which – surely – the vast majority of teenagers could believe themselves to be the wrong gender. The widespread availability of porn provides a more subtle driver for many teenage girls to become dysphoric.^{81/82}

The existence of external influences on gender identity raises an essential, painful question. If behaviour by other teenagers or watching some videos on the internet can influence the development of someone’s perceived gender, how is that identity an immutable underlying characteristic warranting social and medical intervention?

The formation of a teenager's gender identity, on a best reading of the limited research, is a complex interplay between many different factors. These are likely to weave together strands of biology, psychology and the social world in which the teenager is growing up.

Advice provided by some medical professionals and campaigning charities to affirm immediately a young person in their chosen identity – without trying to work out what is happening underneath – seems wrong-headed. The risks of doing so are that we crystallise an identity that would otherwise have been a passing state; that we affirm teenagers out of believing they're lesbian, gay or bisexual; that we make false sense of binary categories for teenagers with autism spectrum disorder; or that we fail to fix the mental-health issues that may be lying in the shadows of teenagers' distress. There is no glitter family. There is only us, and our understanding that a complex condition requires a complex response – one that's unlikely to include affirmation without question.

Part 2 of this paper, looking at treatment options and outcomes, will be published in Winter 2022.

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Endnotes

While we have only included direct citations and not a full bibliography, we read widely on this issue, including papers recommending a more affirmative approach, and tried to be balanced in our assessment of the evidence. Our focus, really, has been on what the research means rather than the problems with it, of which there are many (we've made an exception for some of the conceptual issues with the research). The journalist Jesse Singal has published a number of excellent methodological interrogations, which are worth a read if you want to understand more about how limited the evidence base is in this area.⁸³

Limitations include the early stage of the research base, given how recently teenage-onset gender dysphoria has become widespread; the poor quality of much of the research; the fact that meta-analyses and systematic reviews often include studies that were run before teenage-onset dysphoria became recognised as a separate phenomenon; and the fact that studies focus on different populations who are not directly comparable: for example, young people who have been referred to gender clinics, those who are included in national youth surveys and those whose medical records indicate they may have gender dysphoria.

¹ These different beliefs often manifest themselves in whether people think sex should take precedence over gender identity (the first group) or vice versa (the second group). Even this short explainer is contentious; many researchers, including us, would say that sex is observed at birth, not assigned.

² For example, the campaigning charity Stonewall talks about a transwoman named Roberta in a document aimed at primary-school children in these terms: "Everyone thought she was a boy. She was given a boy's name. Growing up, Roberta loved cars and vehicles... Roberta told people that she was trans. She changed her name to Roberta, grew her hair long and started wearing skirts and dresses. People were unkind to her because she was trans. She was still happy that people now knew she was a woman." Source: Stonewall. *Home Learning Pack: LGBT History*. https://www.stonewall.org.uk/system/files/lgbt_history_home_learning_pack_-_primary.pdf (accessed 2 August 2022).

³ A pre-adolescent child can be diagnosed with gender dysphoria if they have 'a strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender)' and they meet the five characteristics relating to stereotypes. These are:

- 'In boys (assigned gender), a strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing.
- 'A strong preference for cross-gender roles in make-believe play or fantasy play.
- 'A strong preference for the toys, games or activities stereotypically used or engaged in by the other gender.
- 'A strong preference for playmates of the other gender.
- 'In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities.'

The other two criteria are:

- 'A strong dislike of one's sexual anatomy.
- 'A strong desire for the physical sex characteristics that match one's experienced gender.'

It's possible for a child to be diagnosed with gender dysphoria without meeting these criteria relating to physical discomfort. The criteria for adolescents and adults are less stereotyping, but stereotypes are not absent from them, for example: 'A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's assigned gender).' Source: American Psychiatric Association. *What is Gender Dysphoria?* <https://psychiatry.org/patients-families/gender-dysphoria/what-is-gender-dysphoria> (accessed 2nd August 2022).

⁴Frew, T., Watsford, C., & Walker, I. (2021). 'Gender dysphoria and psychiatric comorbidities in childhood: a systematic review'. *Australian Journal of Psychology*, 73(3), 255-271.

⁵ UK Parliament (2010). Equality Act 2010, Part 2, Chapter 1, Section 12. 'Attracted' was used in place of 'sexually oriented' in order to avoid a circular definition.

⁶ Calculated from Holt, V., Skagerberg, E., & Dunsford, M. (2016). 'Young people with features of gender dysphoria: Demographics and associated difficulties'. *Clinical Child Psychology and Psychiatry*, 21(1), 108-118.

⁷ To compare this nationally, we can look at data from the Office for National Statistics for 16- to 24-year-olds, which is the youngest age group for which it reports sexual orientation. This shows us that 8% of young people are same-sex attracted or bisexual. Source: Office for National Statistics (2022). *Sexual Orientation, UK: 2012 to 2020*. [Data set.] Data is reported for the most recently available year (2020).

⁸ Skidmore, W. C., Linsenmeier, J. A., & Bailey, J. M. (2006). 'Gender nonconformity and psychological distress in lesbians and gay men'. *Archives of Sexual Behavior*, 35(6), 685-697.

⁹ Bewley, S., Clifford, D., McCartney, M., & Byng, R. (2019). 'Gender incongruence in children, adolescents, and adults'. *British Journal of General Practice*, 69(681), 170-171.

¹⁰ DeLay, D., Lynn Martin, C., Cook, R. E., & Hanish, L. D. (2018). 'The influence of peers during adolescence: does homophobic name calling by peers change gender identity?'. *Journal of Youth and Adolescence*, 47(3), 636-649.

¹¹ Accessed 16th June 2022.

¹² Popular counter-arguments made on social media (see, for example, some of the responses to this tweet: https://twitter.com/jack_turban/status/1554696508166967297) include saying it's much harder to be trans than it is to be lesbian, gay or bisexual in today's society, as people face more discrimination. This point may well be true on its own terms and when relating to adults, but it misses some key points when it's used to argue that teenagers aren't really identifying out of their sexual orientation. The first of these is that homophobia may still exist, whatever people believe about their gender identity. The second is that the reasons suggested by researchers and experts for this phenomenon are so much broader than a point about discrimination. Instead, there may be a complex interplay between gender non-conformity (as part of which stereotypes, not discrimination, would underpin a link between same-sex attraction and gender dysphoria) and internalised homophobia. There's also a big generational divide; it may be positive for some teenagers within some friendship groups to identify as a different gender. More information on this is given in the section on external influences.

¹³ Bewley et al (2019), op. cit.

¹⁴ van der Miesen, A. I., de Vries, A. L., Steensma, T. D., & Hartman, C. A. (2018). 'Autistic symptoms in children and adolescents with gender dysphoria'. *Journal of Autism and Developmental Disorders*, 48(5), 1537-1548.

¹⁵ McPhate, L., Williams, K., Vance, A., Winther, J., Pang, K., & May, T. (2021). 'Gender variance in children and adolescents with neurodevelopmental and psychiatric conditions from Australia'. *Archives of Sexual Behavior*, 50(3), 863-871.

¹⁶ Calculated from Kaltiala-Heino, R., Bergman, H., Työlajärvi, M., & Frisén, L. (2018). 'Gender dysphoria in adolescence: current perspectives'. *Adolescent Health, Medicine and Therapeutics*, 9, 31.

¹⁷ Kaltiala-Heino et al (2018), *ibid*.

¹⁸ Fusar-Poli, L., Rodolico, A., Sturiale, S., Carotenuto, B., Natale, A., Arillotta, D., ... & Aguglia, E. (2021). 'Second-to-fourth digit ratio (2D: 4D) in psychiatric disorders: A systematic review of case-control studies'. *Clinical Psychopharmacology and Neuroscience*, 19(10): 26-45.

¹⁹ The study used the term 'gender non-conformity' to describe people included in the study, but this is inaccurate. It included 'gender dysphoria, gender identity disorder, transsexualism or transgenderism' (gender dysphoria is a modern term for gender identity disorder, so the scholars may not have fully understood relevant terminology). The number of people included in the study was very small.

²⁰ Bradley, S. J. (2022). 'Understanding vulnerability in girls and young women with high-functioning autism spectrum disorder'. *Women*, 2(1), 64-67.

²¹ van der Miesen et al (2018), *op. cit*.

²² Kallitsounaki, A., Williams, D. M., & Lind, S. E. (2021). 'Links between autistic traits, feelings of gender dysphoria, and mentalising ability: replication and extension of previous findings from the general population'. *Journal of Autism and Developmental Disorders*, 51(5), 1458-1465. Note that this study involved adults, not teenagers; at the time of writing, and as far as we are aware, research into the links between ASD/ADHD, mentalising and gender dysphoria in adolescents that builds on this early adult study has not yet been carried out.

²³ The study is about ASD, but separate studies show a link between ADHD and mentalising, so we have made a more general point about neurodevelopmental disorders. Example source for the ADHD mentalising link: Weiner, L., Perroud, N., & Weibel, S. (2019). 'Attention deficit hyperactivity disorder and borderline personality disorder in adults: a review of their links and risks'. *Neuropsychiatric Disease and Treatment*, 15, 3115.

²⁴ Kallitsounaki et al (2021), *op. cit*.

²⁵ Kallitsounaki, A., & Williams, D. M. (2022). 'Autism Spectrum Disorder and Gender Dysphoria/Incongruence. A Systematic Literature Review and Meta-Analysis'. *Journal of Autism and Developmental Disorders*, 1-15.

²⁶ Reisner, S. L., Veters, R., Leclerc, M., Zaslowsky, S., Wolfrum, S., Shumer, D., & Mimiaga, M. J. (2015). 'Mental health of transgender youth in care at an adolescent urban community health center: a matched retrospective cohort study'. *Journal of Adolescent Health*, 56(3), 274-279.

²⁷ Becerra-Culqui, T. A., Liu, Y., Nash, R., Cromwell, L., Flanders, W. D., Getahun, D., ... & Goodman, M. (2018). 'Mental health of transgender and gender nonconforming youth compared with their peers'. *Pediatrics*, 141(5).

²⁸ This particular study included children who were gender non-conforming, which isn't the same thing as being gender-questioning, as well as those with gender dysphoria.

²⁹ Milano, W., Ambrosio, P., Carizzzone, F., De Biasio, V., Foggia, G., & Capasso, A. (2020). 'Gender dysphoria, eating disorders and body image: an overview'. *Endocrine, Metabolic & Immune Disorders*, 20(4), 518-524.

³⁰ Zucker, K. J. (2019). 'Adolescents with gender dysphoria: Reflections on some contemporary clinical and research issues'. *Archives of Sexual Behavior*, 48(7), 1983-1992.

³¹ Gender dysphoria used to be understood as a mental health disorder, but it's now more commonly understood as a mental health condition.

³² Littman, L. (2018). 'Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria'. *PLoS One*, 13(8), e0202330. / Littman, L. (2019). 'Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria'. *PLoS One*, 14(3), e0214157.

³³ Matthews, T., Holt, V., Sahin, S., Taylor, A., & Griksaitis, D. (2019). 'Gender Dysphoria in looked-after and adopted young people in a gender identity development service'. *Clinical Child Psychology and Psychiatry*, 24(1), 112-128.

³⁴ Another possibility – as yet untested, so far as we can see – is that these children have been treated by psychotherapists who have been told by their industry bodies to affirm unquestioningly children who say they have a gender identity that doesn't align with their sex. For example, the 2019 British Psychological Society Guidelines for Psychologists working with Gender, Sexuality and Relationship Diversity called for an affirming approach.

³⁵ Thoma, B. C., Rezeppa, T. L., Choukas-Bradley, S., Salk, R. H., & Marshal, M. P. (2021). 'Disparities in childhood abuse between transgender and cisgender adolescents'. *Pediatrics*, 148(2).

³⁶ Marcus Evans is a former Associate Clinic Director of Adult and Adolescent Departments at the Tavistock and Portman NHS Trust, where the Gender Identity Development Service is based, and raised concerns about gender-affirming treatments with the Trust.

- ³⁷ Evans, M. (2021). 'Freedom to think: the need for thorough assessment and treatment of gender dysphoric children'. *BJPsych Bulletin*, 45(5), 285-290.
- ³⁸ Di Ceglie, D. *Clinical Management of Gender Dysphoria in Adolescents*. In Trombetta, C., Liguori, G. & Bertolotto, M. (Eds.) *Management of Gender Dysphoria: A Multidisciplinary Approach*. Springer.
- ³⁹ Mermaids (2019). *An open letter from Mermaids on World Suicide Prevention Day*. <https://mermaidsuk.org.uk/news/world-suicide-prevention-day/> (accessed 26 July 2022).
- ⁴⁰ Zucker (2019), op. cit.
- ⁴¹ Byne, W., Bradley, S. J., Coleman, E., Eyler, A. E., Green, R., Menvielle, E. J., ... & Tompkins, D. A. (2012). 'Report of the American Psychiatric Association task force on treatment of gender identity disorder'. *Archives of Sexual Behavior*, 41(4), 759-796.
- ⁴² Evans (2021), op. cit.
- ⁴³ Blake, Q. (2000). *Zagazoo*. Random House.
- ⁴⁴ Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). 'Depression in adolescence'. *The Lancet*, 379(9820), 1056-1067.
- ⁴⁵ Romeo, R. D. (2010). 'Adolescence: a central event in shaping stress reactivity'. *Developmental Psychobiology*, 52(3), 244-253.
- ⁴⁶ Kaltiala-Heino, R., Työläjäarvi, M., & Lindberg, N. (2019). 'Sexual experiences of clinically referred adolescents with features of gender dysphoria'. *Clinical Child Psychology and Psychiatry*, 24(2), 365-378.
- ⁴⁷ E.g. Evans, M. (2022). "If only I were a boy...": Psychotherapeutic Explorations of Transgender in Children and Adolescents'. *British Journal of Psychotherapy*, 38(2), 269-285.
- ⁴⁸ Shrier, A. (2021). *Irreversible Damage: The Transgender Craze Seducing our Daughters*. Swift Press.
- ⁴⁹ Stern, M. J., Oehme, K., Stern, N., Urbach, E., Simonsen, E., & Garcia, A. (2018). 'The judicial and generational dispute over transgender rights'. *Stanford Law & Policy Review*, 29, 159. Note that the cited research shows gender-questioning young people rejecting gender stereotypes. The idea of a change in gender identity as an escape hatch is our own.

- ⁵⁰ Villanueva-Blasco, V., & Grau-Alberola, E. (2019). 'Gender and age differences in the internalization of gender stereotypes in early and mid adolescence'. *Electronic Journal of Research in Educational Psychology*, 17(47), 107-128.
- ⁵¹ de Graaf, N. M., Cohen-Kettenis, P. T., Carmichael, P., de Vries, A. L., Dhondt, K., Laridaen, J., ... & Steensma, T. D. (2018). 'Psychological functioning in adolescents referred to specialist gender identity clinics across Europe: a clinical comparison study between four clinics'. *European Child & Adolescent Psychiatry*, 27(7), 909-919.
- ⁵² Evans, S. & Evans, M. (2021). *Gender dysphoria: A therapeutic model for working with children, adolescents and young adults*. ISD LLC.
- ⁵³ Graziottin, A. (2015). *The Hot Questions of Prepubertal Gender Dysphoria in Girls* (p.218). In Trombetta, C., Liguori, G. & Bertolotto, M. (Eds.) *Management of Gender Dysphoria: A Multidisciplinary Approach*. Springer.
- ⁵⁴ Crocetti, E. (2017). 'Identity formation in adolescence: The dynamic of forming and consolidating identity commitments'. *Child Development Perspectives*, 11(2), 145-150.
- ⁵⁵ Crocetti, E. (2018). 'Identity dynamics in adolescence: Processes, antecedents, and consequences'. *European Journal of Developmental Psychology*, 15(1), 11-23.
- ⁵⁶ Blakemore, S. J. (2012). 'Imaging brain development: the adolescent brain'. *Neuroimage*, 61(2), 397-406.
- ⁵⁷ Shrier (2021), op. cit.
- ⁵⁸ Colman, A. (2009). *A Dictionary of Psychology*. Oxford University Press.
- ⁵⁹ Dishion, T. J., & Tipsord, J. M. (2011). 'Peer contagion in child and adolescent social and emotional development'. *Annual Review of Psychology*, 62, 189.
- ⁶⁰ Allison, S., Warin, M., & Bastiampillai, T. (2014). 'Anorexia nervosa and social contagion: clinical implications'. *Australian & New Zealand Journal of Psychiatry*, 48(2), 116-120.
- ⁶¹ Schwartz-Mette, R. A., & Lawrence, H. R. (2019). 'Peer socialization of non-suicidal self-injury in adolescents' close friendships'. *Journal of Abnormal Child Psychology*, 47(11), 1851-1862.
- ⁶² Mueller, A. S., & Abrutyn, S. (2015). 'Suicidal disclosures among friends: using social network data to understand suicide contagion'. *Journal of Health and Social Behavior*, 56(1), 131-148.

⁶³ Littman (2018) / Littman (2019), op. cit.

⁶⁴ E.g. Restar, A. J. (2020). 'Methodological critique of Littman's (2018) parental-respondents accounts of "rapid-onset gender dysphoria"'. *Archives of Sexual Behavior*, 49(1), 61-66.

⁶⁵ Turban, J., Dolotina, B., King, D. & Keuroghlian, A. (2022). 'Sex Assigned at Birth Ratio Among Transgender and Gender Diverse Adolescents in the United States'. *Pediatrics*. 10.1542/peds.2022-056567

⁶⁶ The survey questions were also unclear about how sex is defined. It's unlikely that the teenagers completing the survey would have answered in the same way; some may have answered with their biological sex and others with their gender identity. This limits the extent to which the survey was able to identify accurately those who were gender questioning and, by extension, how much the findings can have meaning.

⁶⁷ E.g. Waller, J. (2009). 'A forgotten plague: making sense of dancing mania'. *The Lancet*, 373(9664), 624-625.

⁶⁸ Kornienko, O., Santos, C. E., Martin, C. L., & Granger, K. L. (2016). 'Peer influence on gender identity development in adolescence'. *Developmental Psychology*, 52(10), 1578.

⁶⁹ DeLay et al (2018), op. cit.

⁷⁰ Marchiano, L. (2019). *Transgender Children: The Making of a Modern Hysteria*. In Moore, M. & Bruskell-Evans, H. (Eds.) *Inventing Transgender Children and Young People*. Cambridge Scholars.

⁷¹ E.g. Bailey, J. & Blanchard, R. (2017, December 7). 'Gender dysphoria is not one thing'. *4th Wave Now*. <https://4thwavenow.com/2017/12/07/gender-dysphoria-is-not-one-thing/comment-page-2/> (accessed 21 July 2022).

⁷² Littman (2018) / Littman (2019), op. cit.

⁷³ Shrier (2021), op. cit.

⁷⁴ Zucker (2019), op. cit.

⁷⁵ Kenny, D. (2019). *Gender Development and the Transgendering of Children*. In Moore, M. & Bruskell-Evans, H. (Eds.) *Inventing Transgender Children and Young People*. Cambridge Scholars.

⁷⁶ E.g. McNroy, L. B., & Craig, S. L. (2020). "It's like a safe haven fantasy world": Online fandom communities and the identity development activities of sexual and gender minority youth'. *Psychology of Popular Media*, 9(2), 236.

⁷⁷ Zucker (2019), op. cit.

⁷⁸ Heyman, I., Liang, H., & Hedderly, T. (2021). 'COVID-19 related increase in childhood tics and tic-like attacks'. *Archives of Disease in Childhood*, 106(5), 420-421. Note that other scholars have suggested social media as one of a range of risk factors for this increase, and not a stand-alone cause, e.g. Stone, J. (2022). *Rise in tics is caused by a known condition – and it's not all due to TikTok*. The Conversation. <https://theconversation.com/rise-in-tics-is-caused-by-a-known-condition-and-its-not-all-due-to-tiktok-187465> (accessed 27 July 2022).

⁷⁹ Marsh, J. (2020, May 10). *Being the internet mom [Video]*. YouTube. <https://www.youtube.com/watch?v=UVoIT3Dc160>

⁸⁰ Shrier (2021), op. cit.

⁸¹ Ibid.

⁸² Choking and other forms of sexual violence are now commonplace, providing heterosexual girls with seemingly little to look forward to if their understanding of sex is porn-informed and they don't try to identify out of being female.

⁸³ <https://jessesingal.substack.com>

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