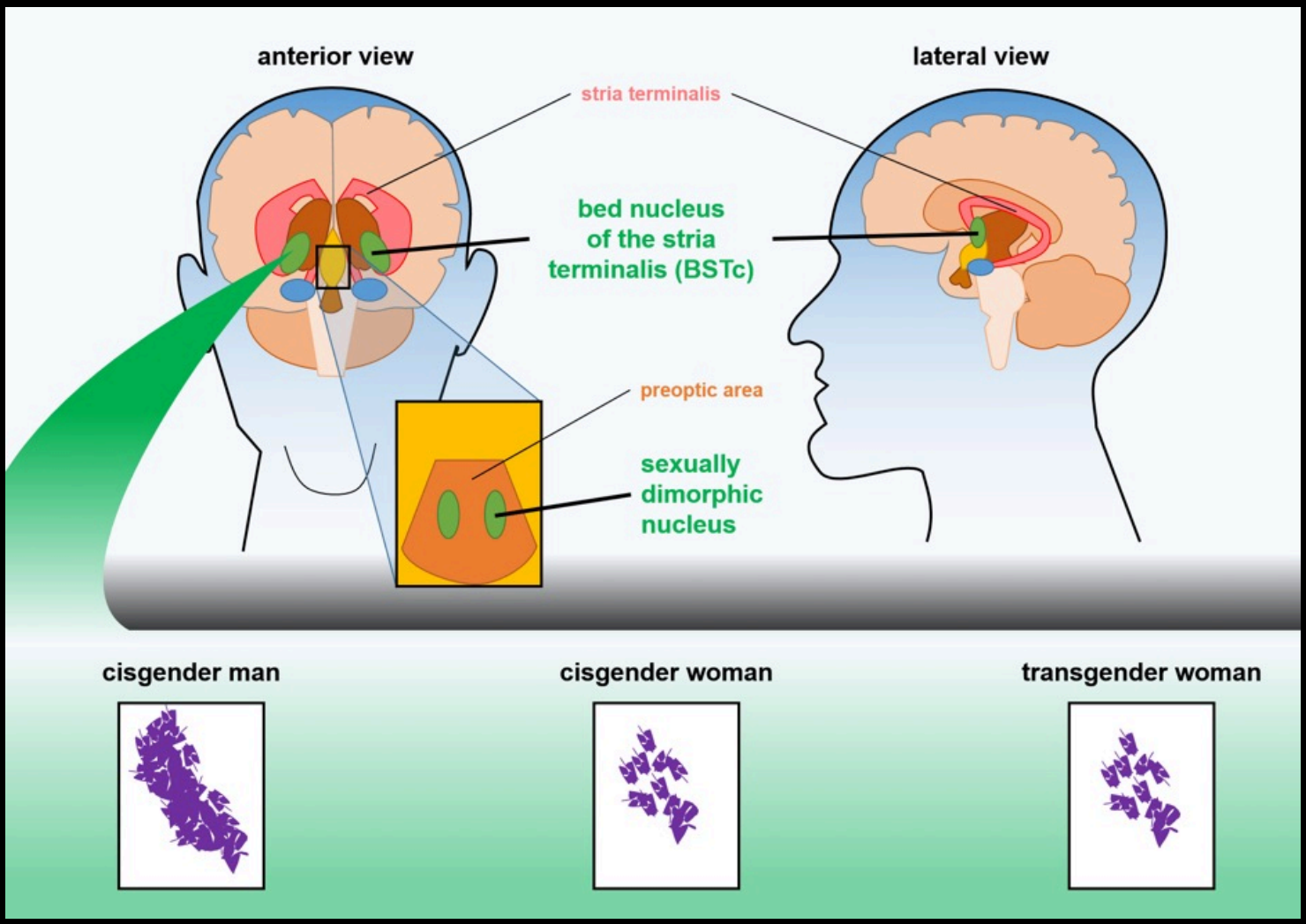
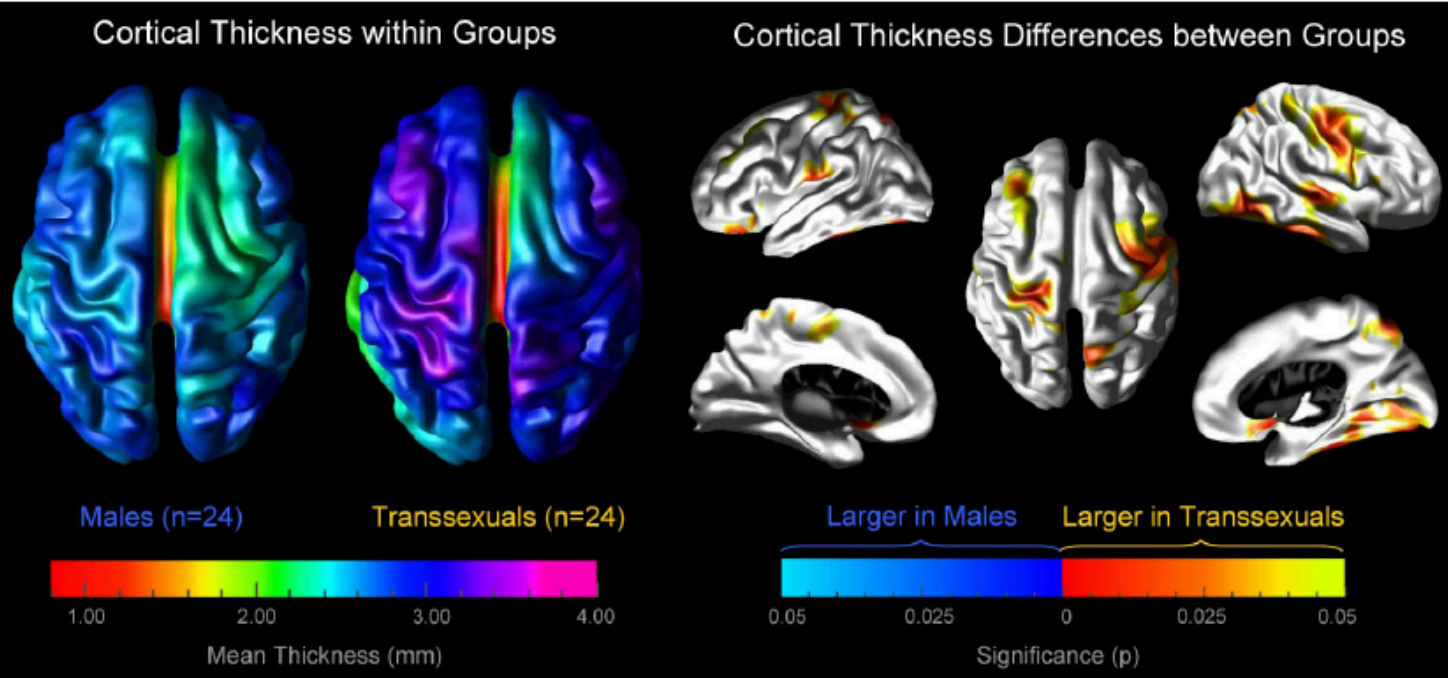
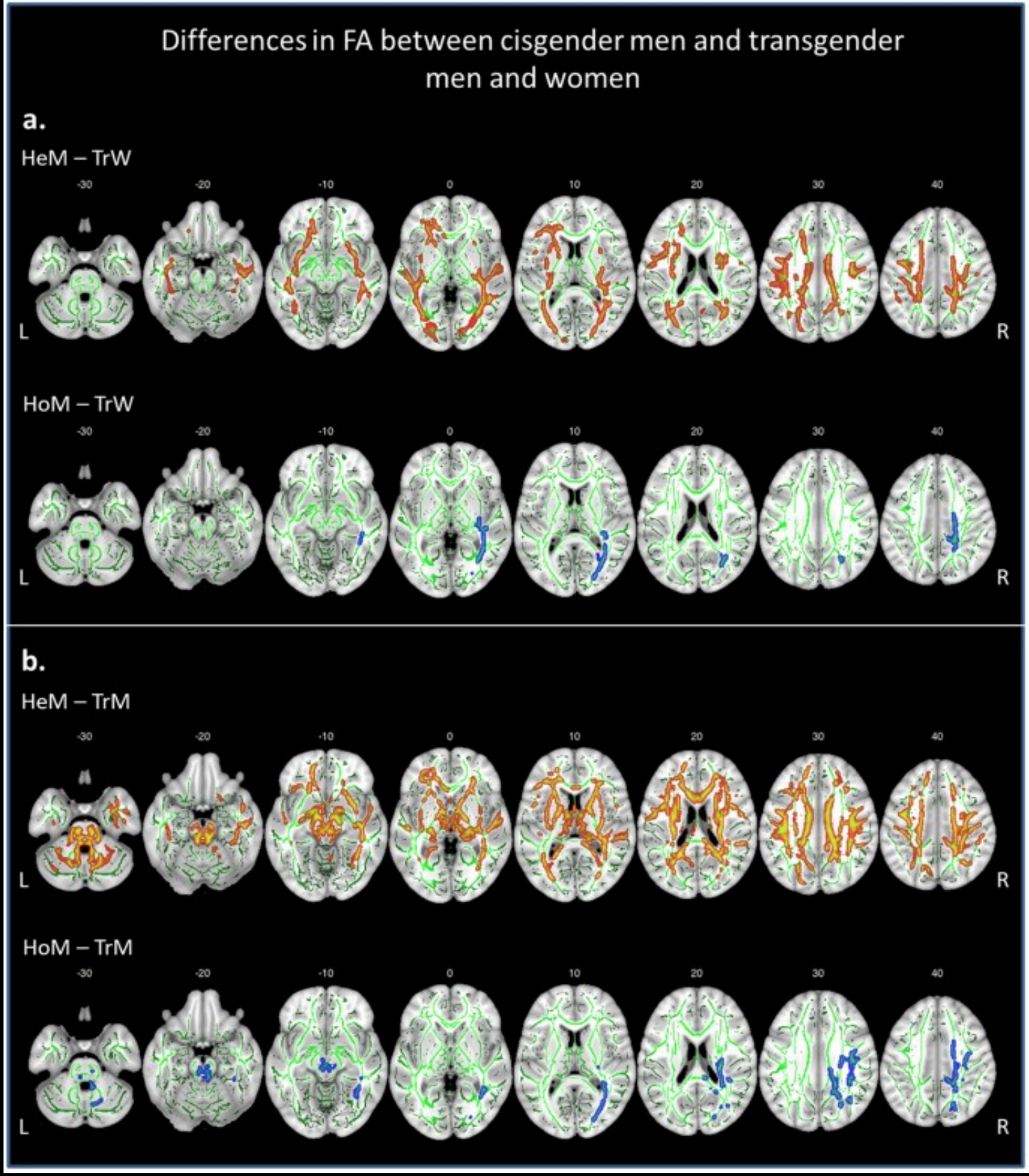
Trans People: A Scientific Understanding

A trans person is a person whose gonadal and cerebral sexual differentiations are incongruent (or put simply, in opposite directions) due to underlying genetic, endocrine, epigenetic (through gene expression, regulation and interaction with stressors), pre natal brain development, fetal exposure factors and neurological factors during specific gestational windows (along with 10 other factors mentioned later on, it's a biological mosaic with a complex interplay of said elements). [For example: A different sexual differentiation of the brain as a result of changes in the DNA sequence of the estrogen receptors ERs and androgen receptor AR genes.], along with other factors, it can even be hereditary (Bocklandt, S., et al. 2012; Garcia-Couto, E., et al. 2017; Menni, S., et al. 2018; Savic, I., et al. 2019; Diamond, L. M., et al. 2016). Which causes Gender dysphoria: the phenotypic expression of multiple underlying factors which results in permanent structural changes to the affected person’s neural architecture; This is not a disorder of emotion, behavior or thought, therefore, not a mental illness, it's rather a neurobiological mismatch. it leads to severe distress in the same way phantom pain isn’t a mental disorder but has a psychological manifestation or aspect, but are not purely psychological disorders. [There is universal consensus that 'transness' itself isn't a disorder but it's the depressive symptoms as a result of the incongruence, rather than from an intrinsic disorder] but a natural variation of human biology. It is a neurobiological mosaic. The ICD-11 classifies gender incongruence as a sexual medical condition (17). The following references are for neuroscience research studies that demonstrate these findings:

(Bao & Swaab 2011; Guillamon et al., 2016; Savic & Arver, 2011; Gizewski, et al. 2008; Rametti, et al. 2010; Swaab, Wolff & Bao. 2021; Berglund. 2008; Luders. 2009; Zubiaurre-Elorza, et al. 2012; Burke, et al. 2014; Luders, et al. 2012; Zhou, et al. 1995; Murad, et al. 2010; Garcia-Falgueras & Swaab. 2008; Kranz, et al. 2012; Smith, et al. 2018; Hare, et al. 2008; Fernandez, et al. 2022; Polderman, et al. 2018; William Byne 2006; Saraswat 2015; Diamond 2013; Kurth, et al. 2022; Clemens, et al. 2020; Spizzirri, et al. 2018; Gooren L 2006; Garcia-Falgueras 2008; Kruijver et al. 2000; Kruijver, F. P., et al. 2011; Smith, et al. 2015; Katherine J. Wu, 2016; Foreman, et al. 2018; Boucher & Chinnah. 2020... More in the references section).




Cortical Thickness within Groups
Cortical Thickness Differences between Groups
Males (n=24)
Transsexuals (n=24)
1.00
2.00
3.00
4.00
Mean Thickness (mm)
Larger in Males
Larger in Transsexuals
0.05
0.025
0
0.025
0.05
Significance (p)


Differences in FA between cisgender men and transgender men and women
a.
HeM – TrW
-30
-20
-10
0
10
20
30
40
L
R
HoM – TrW
-30
-20
-10
0
10
20
30
40
L
R
b.
HeM – TrM
-30
-20
-10
0
10
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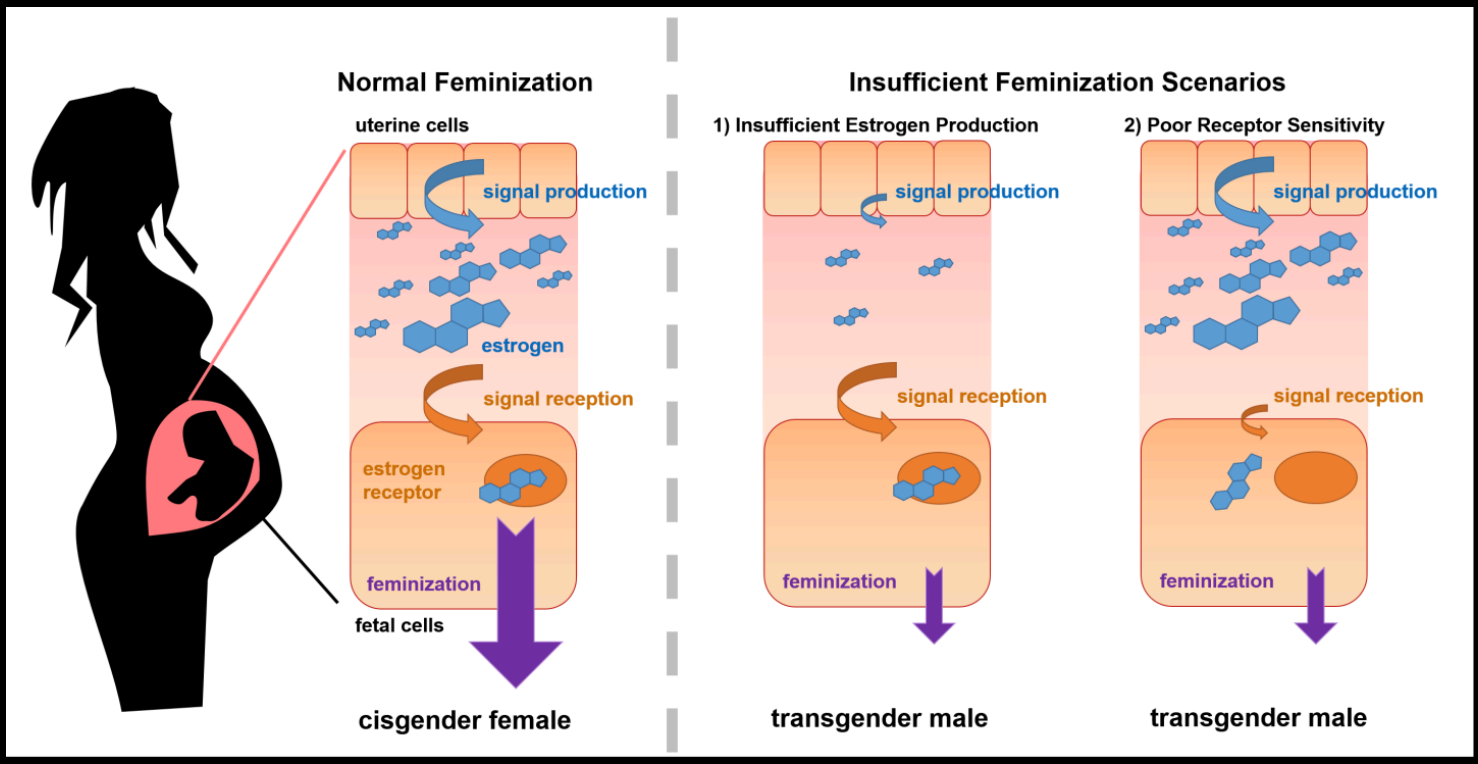
L
R
HoM – TrM
-30
-20
-10
0
10
20
30
40
L
R



The following are (medical lectures) overviews of the origin of gender dysphoria:

Watch lecture snippet of 'Neurobiology of transsexuality by Prof. Robert Sapolsky' on '15. Human Sexual Behavior I', Stanford University, Department of Biology, 2011. & Watch 'Healthcare of the transgender patient by Dr. William J Powers, D.O. AAHIVMS'.

The following are (medical articles) overviews of the origin of gender dysphoria:

Rosa Fernández, et al. 2022 & Boucher & Chinnah 2020 & Swaab et al. 2021

Gender dysphoria is a complex condition that is often difficult to understand for those who do not experience it. Gender dysphoria mirrors the experience of phantom limb pain (a condition where the brain retains the representation of a missing limb), where the brain senses a mismatch between the body and the brain (the brain intrinsically senses that the body should have certain features), which causes intense distress and pain that impacts every aspect of

life. The two conditions share some underlying neural mechanisms as well, in the somatosensory cortex (this distress is linked to brain regions responsible for self-perception and body image), for example. They also share similar treatment methods, such as mirror therapy which creates the illusion that the missing limb is present, and virtual reality therapy where the person can interact with their missing limb in a virtual environment created using a computer. Transitioning helps to align the brain and the body similarly. It's more about an intense misalignment (hence why phantom pain is a perfect analogy) rather than a mere preference or desire.

All of the genetic, postmortem and in-vivo scanning observations support the neurobiological theory about the origin of gender dysphoria. it is the sizes of brain structures (including ones that are not plastic), the neuron numbers, the molecular composition, functions, and connectivity of brain structures that determine our gender identity. It is a lifelong, congenital, condition that is not caused by any psychological or social factors. (Bao & Swaab, 2011; Guillamon, et al. 2016; Savic & Arver, 2011; Turban et al. 2020; Garcia-Falgueras & Swaab 2008; Polderman, et al. 2018)

The medical explanation for being transgender is primarily rooted in biological and neurological differences that develop during early life, particularly in the womb. It is not caused by social or environmental influences. While biological factors play a primary role, societal and environmental influences, such as exposure to rigid gender norms or supportive versus hostile environments, can shape how someone understands and expresses their gender identity. Meaning it affects gender expression and how one would cope with dysphoria. The social enviornment affects behaviors, preferences and desires but it doesn't alter the innate sense of self.

41% of trans people attempt suicide by age 30 (Dhejne et al. 2014), this is an alarming statistic that illustrates the immense challenges faced by this community [for the sake of comparison, the rate of mortality for cancer is 32%], however, this rate is reduced by more

than half with hormone therapy, and can be reduced to less than 5% with the support of family and friends (Denis R. Lafontaine, A. Ashley Cross, Michael J. W. Schmidt, et al. 2015). [Having a supportive family reduced suicide rates by 57% and access to legal documentation reflecting ones gender reduces suicide rate by 44%, Parental support is associated with a 93% reduction in suicide attempts (Bauer, et al. 2015; PULSE 2012). The ability to transition, to use their actual name, social support all drastically reduce suicide attempts and thoughts (Rusell 2018; Moody & Smith 2013; Bauer 2015). Supporting trans people is an ethical imperative. Denying care or support is not a neutral act; it actively contributes to harm.

Being attacked on the basis of gender, restriction of teens to access bathrooms of their gender, discrimination, homelessness and violence all increase suicidality (Herman, et al. 2019; Barboza, et al. 2016). After controlling for minority stress (discrimination) and access to healthcare (a proxy for poverty, and a measure of the ability to transition), trans people have a mental health quality of life similar to that of the general population (Ainsworth & Spiegel 2010; Nobili, et al. 2018). Scientists have tried to treat gender dysphoria by affirming the sex assigned at birth to no avail (Gelder & Marks, 1969; Greenson, 1964; Cohen-Kettenis & Kuiper, 1984; Pauly, 1965) as it doesn't address the underlying cause: the incongruence mentioned above. Such treatment is no longer considered ethical and you cannot make trans people cisgender. (Zucker, K.J., & Bradley, S.J. 1995). They've even tried electroconvulsive therapy & psychosurgery and failed at treating gender dysphoria (Diamond & Joel, 2010; Jorgensen & Drescher, 2012). Other forms of therapy is involved in the process of transitioning but none of them are intended to make trans people accept their AGAB (assigned gender at birth).

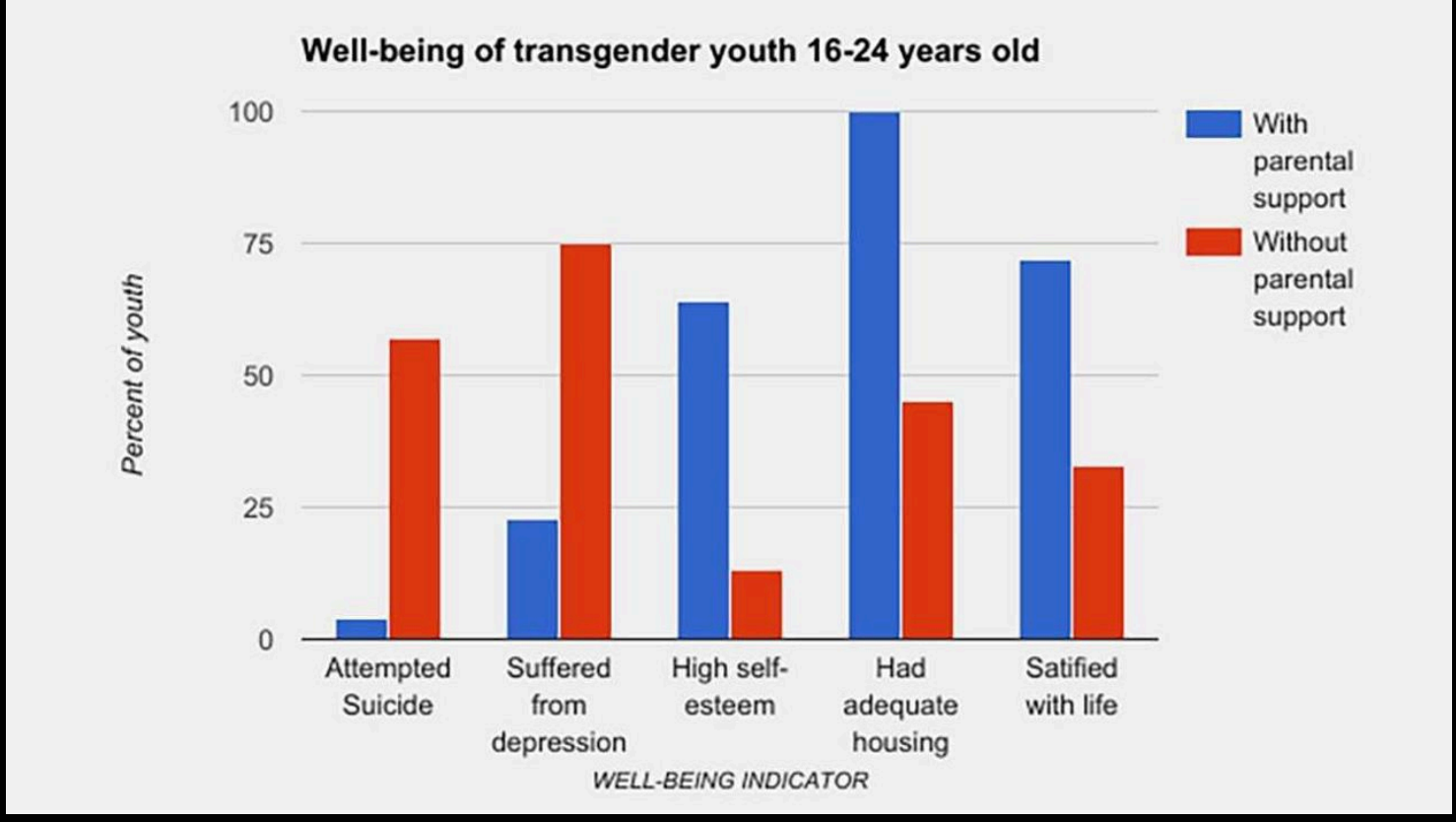
Gender dysphoria worsens over time if not treated (Dhejne, C., Van Vlerken, R. H., Heylens, M., & Arcelus, J. 2016; Nobili, A., et al. 2018;

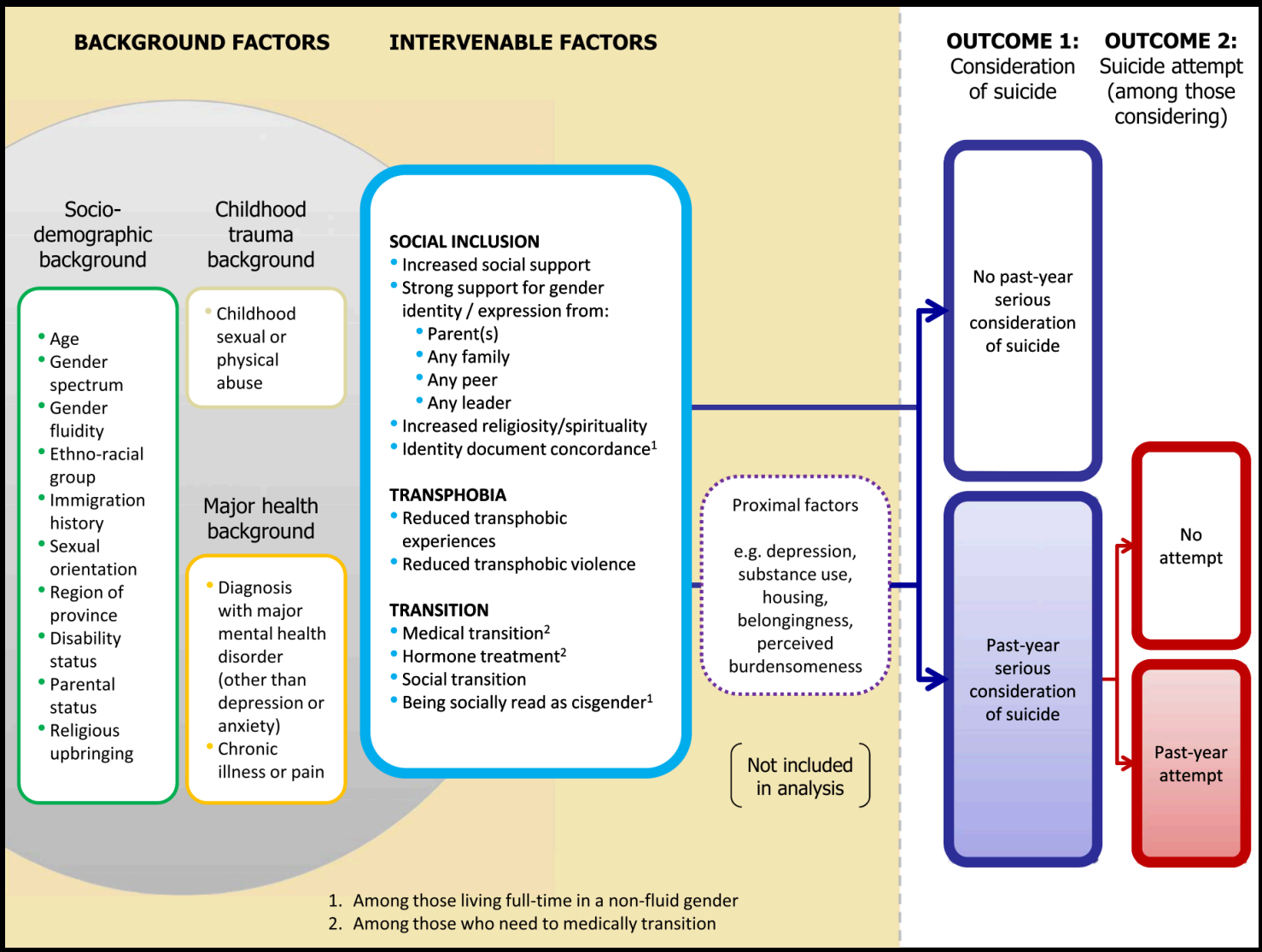
Majid, M., et al. 2019), so neuroplasticity cannot get rid of gender dysphoria as it cannot fundamentally alter deeply embedded structures related to sex differentiation, it's limited by the genetic makeup of the person and a couple dozen other factors, early development is irrevesible, brain structures and processes established during critical development periods (in utero) are deeply embedded (fixed). Neuroplasticity allows the brain to adapt and rewire in response to experiences, learning, or damage, it has its limitations. Not all areas of the brain exhibit the same degree of plasticity. In this instance, the structures and processes involved in sex differentiation are set during critical developmental periods, in utero rather post natally. These changes are not easily modified later by neuroplasticity. Certain aspects of brain development are relatively permanent once formed —such as differences in white matter pathways or gray matter volumes—. Just as neuroplasticity doesn't "cure" phantom pain, as it involves a deeper, more ingrained neurological basis that adaptation alone can't modify. This is also why socialization doesn't cause or fix it, socialization affects the brain through neuroplasticity, the above applies. Speaking of genes, genetic variations in trans people were associated with brain development and sex hormone signaling. (Hare, at al. 2008; Bentz, et al. 2008)

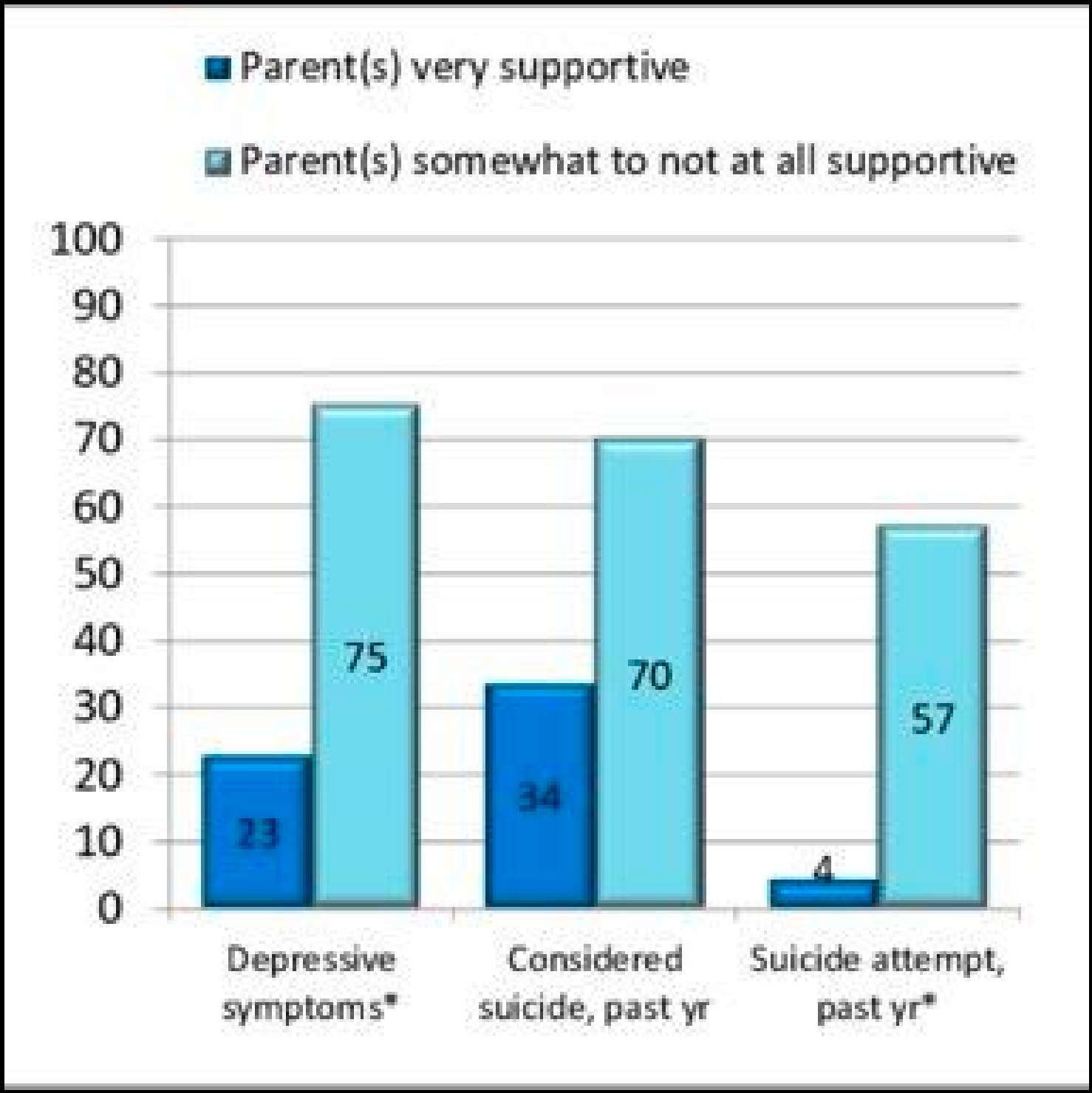
Recent research has identified a significant genetic component in the etiology of gender dysphoria. (Carruth, et al. 2002; Ramirez, et al. 2021; Fernández, et al. 2020; Bentz, et al. 2008 ; Fernández, et al. 2014; Ujike, et al. 2009; Henningsson, et al. 2005; Shen, et al. 2015; Murray, et al. 2009; McCarthy, et al. 2009; McCarthy, et al. 2015; Forger, et al. 2016; Abel, et al. 2011; Yang, et al. 2017; Boucher, et al. 2020; Ristori, et al. 2020; Ngun, et al. 2010)

There is clear evidence that hormone therapy is safe and effective in improving the physical and mental health of transgender adults (Colizzi et al., 2014). Hormone therapy reverses cerebral patterns associated with gender dysphoria to the baseline of cisgender

controls (Kilpatrick, et al. 2019). Transition is safe and has little long-term side effects, it increases general mental health, reduces psychopathology and psychiatric disorders and symptoms. In a systemic review of 28 studies involving 1100 people: 80% of trans people who undergo HRT and gender affirming surgery experienced benefits at the **"significant improvement"** level, not just "some improvement". There is a robust international consensus that transition improves well-being and reduces suicide rates (Cornell University et al. 2018; Pachankis, et al. 2019; Austin, et al. 2019; Toomey, et al. 2019). About <1%-2.2% of Trans people regret transition (Bustos, et al. 2021 (review of 28 studies); C Dhejne et al, 2014; Wiepjes, et al. 2018; Brik 2020; Davies, et al. 2019; McNeil, et al. 2012; USTS 2015; Yolanda L S Smith, et al. 2005; M Landén, et al. 1998; Pfäfflin 1991; Krege, et al. 2001; Cuypere, et al. 2006; Danker, et al. 2018; Herman, et al. 2019; Olson 2022; De vries 2014; Durwood et al., 2017). For context, the regret rate for Lasik eye surgery is about 5%. While regret after primary knee and hip replacement surgery was either 17.1% or 4.8% The vast majority (85%) of detransitions are driven by external pressures [such as from family] and not regret (Turban, et al. 2021; VandenBussche, 2021). The regret rate for gender-affirming procedures performed between January 2016 and July 2021 was 0.3%.. There is also Association Between Gender-Affirming Surgeries and Mental Health Outcomes, 2021. Sometimes, gender affirming Mastectomy has no regret at all.


Well-being of transgender youth 16-24 years old
100
75
50
25
0
Percent of youth
With parental support
Without parental support
Attempted Suicide
Suffered from depression
High self-esteem
Had adequate housing
Satified with life
WELL-BEING INDICATOR


BACKGROUND FACTORS
INTERVENABLE FACTORS
OUTCOME 1: Consideration of suicide
OUTCOME 2: Suicide attempt (among those considering)
Socio-demographic background
Age
Gender spectrum
Gender fluidity
Ethno-racial group
Immigration history
Sexual orientation
Region of province
Disability status
Parental status
Religious upbringing
Childhood trauma background
Childhood sexual or physical abuse
Major health background
Diagnosis with major mental health disorder (other than depression or anxiety)
Chronic illness or pain
SOCIAL INCLUSION
Increased social support
Strong support for gender identity / expression from:
Parent(s)
Any family
Any peer
Any leader
Increased religiosity/spirituality
Identity document concordance1
TRANSPHOBIA
Reduced transphobic experiences
Reduced transphobic violence
TRANSITION
Medical transition2
Hormone treatment2
Social transition
Being socially read as cisgender1
Proximal factors
e.g. depression, substance use, housing, belongingness, perceived burdensomeness
Not included in analysis
No past-year serious consideration of suicide
Past-year serious consideration of suicide
No attempt
Past-year attempt
1. Among those living full-time in a non-fluid gender
2. Among those who need to medically transition



There is no evidence that one's postnatal social environment plays a crucial role in the development of gender identity or sexual orientation. Rather, the environment affects the gender expression and not the identity. The findings suggest that lifetime and childhood exposure to gender identity conversion efforts are associated with adverse mental health outcomes (Turban et al., 2020), you cannot make trans people cis (Turban & Ehrensaft 2018; Heiden-Rootes K, et al. 2021; Turban, et al. 2019), it’s always been

unsuccessful and harmful. The environment affects gender expression and not identity. Being trans is not a phase, and it certainly has nothing to do with sexual orientation (Kaltiala-Heino, et al. 2018; Thompson, et al. 2022; NHS 2020; Crocq 2021). Prenatal and pubertal sex hormones seem to permanently affect human behaviour and, in addition, heritability studies have demonstrated a role of genetic components. (Ristori, et al. 2020).

Sexual orientation has nothing to do with the etiology of gender dysphoria (Stefanie Smith, et al. 2015; De Vries et al. 2015; Olson et al. 2016; Reisner et al. 2017; Durwood et al. 2020; Wallien & Cohen-Kettenis 2010; Steensma et al. 2008). They have different etiology, mechanism and dimensions. different neural pathways, distinct biological processes that operate independently. Different genetic components, different prenatal hormone mechanism affecting different regions at different timeframes. Different neurobiology and neurochemistry. Different developmental pathways. Both are innate and immutable. Not influenced by social environment or psychology in etiology. Neither does psychology or the environment, they only affect the experience of gender dysphoria, for better or for worse. This is the way their brain is wired. However, gender expression can be as it's influenced by society and culture. These 3 are distinct and independent dimensions of identity, they don't have to be in harmony and this is the beauty of natural biological variety. It's congenital, they're just born that way.

Neurobiological research suggests that both gender dysphoria and sexual orientation are influenced by brain structures and functions. But it doesn't mean that they have the same differences, studies have identified distinct patterns in regions such as the hypothalamus and amygdala. The two phenomena are, however, fundamentally & biologically unalike, homosexual orientation was found to be associated with less pronounced cerebral sex dimorphism. Gender dysphoria also involves cerebral networks mediating self–body perception. Structural and functional

differences of hypothalamic nuclei and other brain areas differ in relation to sexual identity and sexual orientation, indicating that these traits develop independently. This may be a result of differing hormone sensitivities and/or separate critical periods, although this remains to be explored. Subtle variations in these networks can have significant implications, highlighting the importance of considering the broader context of brain function rather than focusing solely on isolated regions. Sexual orientation is biologically conferred in the first trimester of pregnancy. Gender identity is biologically conferred during the middle trimester of pregnancy. They follow different developmental paths during gestation with their own unique neural correlates, these traits emerge through distinct biological processes & are biologically conferred at different stages. **However**, multiple layers of evidence confirm that sexual orientation and gender identity are as biological, innate and immutable as the other traits conferred during that critical time in gestation. (Frigerio, et al. 2021; Hernandez, et al.; Manzouri 2019; Bruke, et al. 2017; Molerio, et al. 2015; O'Hanlan, et al. 2018 ; Swaab, et al. 2021 ; Roselli 2019)

From neuroanatomist Simon Levay in the April 2011 issue of Frontiers of Neuroendocrinology, “The book on social influences [on sexual orientation and gender identity] is not closed, so much as it is blank”. From neuroscientist D. F. Swaab in Functional Neurology: **“There is no proof that social environment after birth has an effect on gender identity or sexual orientation”**. The American Psychiatric Association removed homosexuality from a psychopathological designation in 1973. In the 2013 DSM-5, the American Psychiatric Association affirmed that “gender nonconformity is not in itself a mental disorder, but a discontent with the assigned gender and the apparent gender of their bodies”. Since then, sexual orientation and gender identity have gradually become protected as statuses that should not endure discrimination or lack of accommodation by state and federal laws. Social environments interact with neurobiological foundations, but

they do not "determine" identity, the role of prenatal hormones and neurodevelopmental processes in determining gender identity is distinct from general personality traits and broader social behaviors which may be more influenced by social factors. The biological processes discussed in medical literature involve hormonal surges, genetics, and neurodevelopmental mechanisms that occur long before socialization can play a role.

It's impossible to get groomed into being transgender. As established the social enviornment has no affect, sexual orientation is a whole different dimension than gender dysphoria and it's a neurobiological condition that is innate and lifelong. Moreover, most of them have known they're trans from an extremely young age, just as cis people do. Check this out.

Gender dysphoria has a very high rate of persistence that has been consistently observed. See this also.

The absence of strictly "male" or "female" brains doesn't negate gender dysphoria as a neurobiological condition. And that is not what is being said here, brain sexual differentiation is mosiac. But not in a way it affects us cognitively or affecting how analytical/emotional we think nor does it determine decision-making functions, that is patriarchal and ascientific (has been debunked by contemporary neuroscience), it's important to differentiate what's being talked about in this piece; Instead, it highlights the complexity of gender and the brain, **where patterns, not absolutes**, shape our understanding of gender identity and its strong biological underpinnings. it emphasizes that gender identity is more complex than binary biological categories. As it is a spectrum, like biological sex is. This predetermined and stored sense of self is rooted in the brain's structure and function, shaped by a complex interplay of genetics, prenatal hormones, and neurodevelopmental factors. This DOES NOT confirm or verify that social norms as rigid natural sets of behaviors. In fact, brain sex

differences have nothing to do with that at all. Core identity is biological and emerges from brain development and is likely established before birth due to hormonal, genetic, and neurological factors.

It reveals the complexity of brain development, where the brain's structure and function are influenced by multiple factors, including genetics, hormones, and womb environment. Rather than being rigidly divided into "male" and "female," brains exist on a spectrum, with overlapping characteristics that do not fit neatly into binary categories. Despite the absence of rigidly male or female brains, gender dysphoria has strong neurobiological and chemical foundations. Sex differences in the brain are well-documented, a lot of them are present at birth.. (see references), particularly in regions that regulate emotion, cognition, and behavior. Additionally, neurochemical differences in serotonin, dopamine, and other neurotransmitter systems have been observed in individuals with gender dysphoria, which could contribute to the distress they experience when their gender identity does not align with their assigned sex.

Autism and gender dysphoria; It's complicated. There's this idea that autism is overrepresented among people with gender dysphoria and vice versa. The backstory of this is from studies where they gave people with gender dysphoria autism screening instruments, called the social responsiveness scale or the autism quotient, that do not establish a diagnosis. And there is other research that shows if you have other anxiety or depression, as many as 80% of kids who have anxiety or depression but don't have autism will score in the clinical range on these scales. Those scales are just not very specific, it didn't really establish that all of those kids had autism because medical professionals knew that they had a high rate of anxiety and depression so it wasn't surprising that a lot of them were scoring positive. There was also the dutch study where they looked at the rate of them screening positive for

prepubertal kids and it was pretty much the same as the general population, but when they looked at it in the teens that's when all of a sudden they were more kids with autism but you don't develop autism in your teens. But you develop anxiety and depression in your teens because that's usually when these kids for the first time are experiencing a lot of bullying and stigma etc. The issue with a lot of those studies was the instrument and methodology. The other side of studies looked at kids with autism and they used CBCL (Child Behavior Checklist) that stated "Do you feel like you're the other gender? Zero, never, one, sometimes, or two, often." and they combined the ones and twos and called that gender dysphoria, but people with autism have slightly more rigid thinking and so for instance there are adolescent patients with autism who had a stereotypical interest like an autistic boy who likes knitting, he'd be like "yeah, sometimes I feel like a girl". But that's not a kid with gender dysphoria. This is why the scientific community was not buying them. Then that devolved into popular press headlines being like "these trans people just have autism" and that autism gives you these repetitive, restrictive interests and then they're just obsessed with gender and that's what makes them trans. However, comprehensive reviews of the literature have found no solid evidence to support this theory. While both autism and gender dysphoria each affect around 1% of the population, and some people may have both, they aren’t causally linked, this does not imply causation. So there are gonna be kids who have both. And it is a unique thing because their experience of the world, and gender, and social norms, and their rigid thinkingdoes require a special approach for supporting them in their gender. And so the latest WPATH guidelines actually recommend that anyone working with trans youth does have training and experience with autism to be able to support those types of kids. [Dr. Jack Turban, MD. - The Checkup with Doctor Mike, DO.]

On nature versus nurture; David Reimer was a boy who suffered a botched circumcision when he was six months old which resulted in

the loss of his penis. In the early 1960s, John Money, a sexologist & psychologist, convinced his parents to raise him as a girl, believing that gender identity could be assigned and that environmental factors were more influential than biological ones. His parents were convinced and David underwent surgery to appear female and was named Brenda. Money and his team were convinced that with 'proper' socialization, 'Brenda' would accept her new identity. However, despite the intervention, David experienced significant distress as he grew up, feeling a misalignment between his gender identity and the gender he was forced to be —essentially the opposite of being trans. He ended up transitioning back to living as a male in his teenage years. Throughout his childhood, Reimer was not informed about his male biology. He experienced significant distress due to this. In his early twenties he attempted suicide twice and at the age of thirty-eight, Reimer committed suicide by firearm. David's situation underscores that gender dysphoria is not a product of social upbringing but rather an innate biological phenomenon. You cannot make trans people cis and vice versa. This teaches us that conversion therapy cannot work; You cannot force someone to be either cis or trans. Read more about this case here

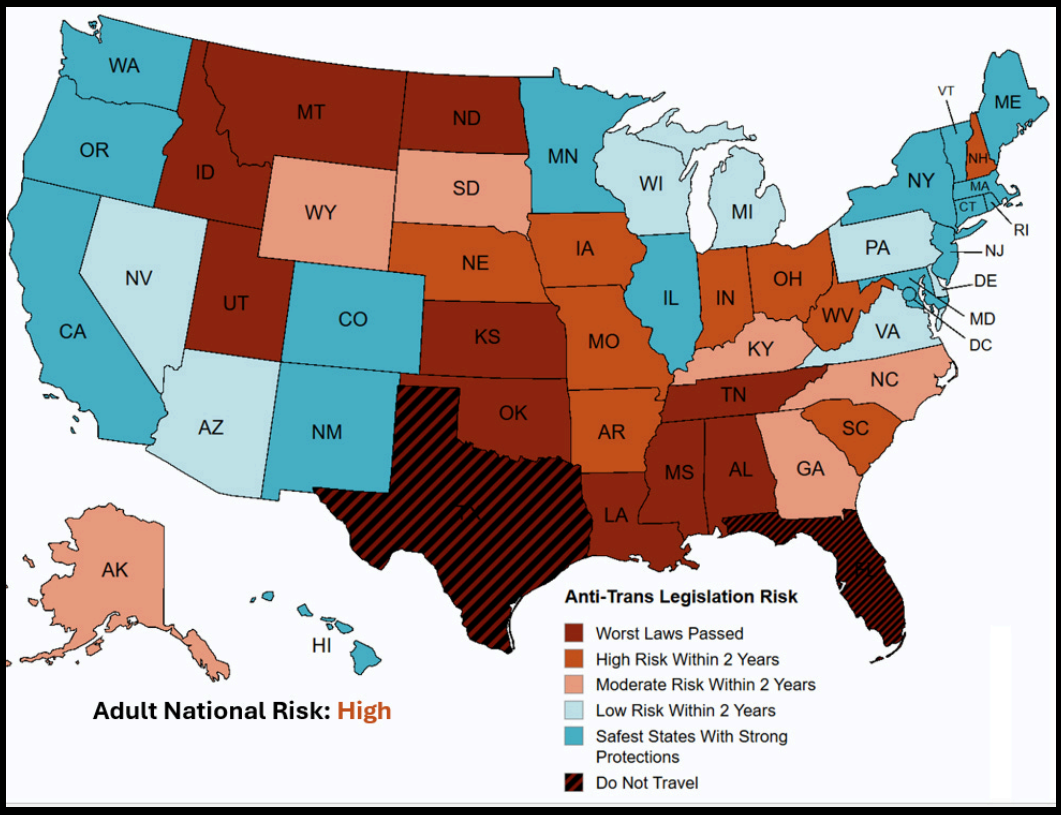
The story of David illustrates that informed consent (for adults) is a more humane and effective approach to addressing gender dysphoria than medical gatekeeping, If someone takes HRT and feels that it aligns their physical appearance with their gender identity (i.e. the incongruence between the brain and the body is lessened; As dysphoria/euphoria are two sides of the same coin), then this would be the strongest evidence of gender dysphoria. There's no universal experience of gender dysphoria, variability is undeniable and this is why informed consent is a better way to approach it. The fact that someone would immediately detransition if they were not truly transgender is illustrated by David Reimer's case. Medical gatekeeping often involves lengthy assessments, therapy requirements, and external validations of one's gender identity. This process can be stigmatizing and may delay access to

necessary care for those experiencing dysphoria. It also doesn't provide better proof of gender dysphoria.

Research indicates that, although the levels of psychopathology and psychiatric disorders in trans people attending services at the time of assessment are higher than in the cis population, they do improve following gender-confirming medical intervention, in many cases reaching normative values. The main Axis I psychiatric disorders were found to be depression and anxiety disorder. Other major psychiatric disorders, such as schizophrenia and bipolar disorder, were rare and were no more prevalent than in the general population. (Dhjene et al 2016)

The denial of gender-affirming care doesn't just delay treatment—it directly puts lives at risk. When trans people are denied the ability to transition, the resulting hopelessness, compounded by social rejection and discrimination, often leads to suicidal desperation. Access to care isn't just about improving quality of life; it's about survival.

State-level anti-transgender laws (48 anti-transgender laws between 2018-2022 across 19 different states) increase past-year suicide attempts among transgender and non-binary young people in the USA by 72% in a study involving 61,240 people. While another study found 73% lower odds of suicidality among youths who had initiated puberty blockers and gender-affirming hormones compared with youths who had not.



Numerous studies show no evidence of increased risk for sexual assault or harassment when allowing trans individuals access to restrooms based on their gender identity, in fact denying them access to the correct bathrooms increases their risk of sexual assault, much greater than the general population. (Hasenbush, 2018 (review of multiple studies*); Murchison, 2019; Jones, 2020; Weinhardt, et al. 2017). In 2020, the Human Rights Campaign found that transgender people were twice as likely as cisgender people to be the victim of a hate crime. In 2021, a UCLA study found that transgender people over four times more likely than cisgender people to be victims of violent crime. Murders of trans people nearly doubled over past 4 years. Trans women and cis women may not differ significantly in violent crime rates, as societal, environmental, and economic factors play a larger role in predicting violent behaviors than gender identity alone. (Swinehart 2022). The high rates of victimization emphasize that trans individuals generally experience more violence directed at them rather than perpetrating it.

A response to the data showing that 50% of 'trans inmates' are sex offenders:

First and foremost, it reflects trans inmates, a small, atypical subset of trans women, many of whom are likely misidentified or opportunistic cases. Most trans people lead law-abiding lives, and using prison data without distinguishing between genuine and post-arrest trans identities risks inflating perceived criminality unfairly.

That doesn't imply that at all or in fact anything about the the likelihood of the general population to commit those crimes, instead just implying that trans felons are more likely to be incarcerated for sexual offenses than other violent crimes.

Trans population estimates, especially the british census estimate, are too unreliable to match the figures with the number of its sex offenders and compare them with the general population and its sex offender estimates. Even if they were reliable, you still couldn't compare the data this way (applying the rate to population estimates) because the population size is too small to account for anomalies, 60 trans women being sex offenders is also a small enough number that it could mean an anomaly.

You cannot base broad conclusions on, it is is a small enough number that it doesn't provide enough data to make any reliable generalizations about trans women as a group. The broad comparison between the two rates leads to a number that simply means nothing (small samples are more likely to produce unreliable, skewed results), it has no correleation to anything in reality. It could simply be an outlier or random fluctuation that doesn't reflect the broader population. It could be due to random chance rather than a true pattern of behavior within the population. This data cannot be extrapolated to imply broader behavioral trends.

Using the same logic, you could look at violent crime statistics for black women when compared to white women and also conduct the same broad comparison between the two rates, this is also the same logic behind the 13/50 racist statement. In all 3 cases, it is statistical anomalies in small populations & sentencing bias in minority groups at play.

You can't cite a statistic as being significant when it falls well below the threshold of being such, 60 out of a population of 100s of thousands is not statistically significant. It's a dot in the ocean. In statistics, a result is considered statistically significant if it is unlikely to have occurred by chance, typically determined by a p-value (often 0.05 or lower) or other measures. This threshold indicates that the observed effect or correlation is likely real and not due to random variation. This number (60) is too small to draw definitive conclusions or establish a reliable rate of behavior and could easily be the result of random variation, anomalies, or specific circumstances that do not represent the whole. There is a much higher chance that the findings are due to random anomalies rather than a true underlying trend.

Also, trans women are way more judicially persecuted than cis women for the same crimes, we also know women have a lower rate of persecution for sexual offenses and tend to be let off for it or not tried at all, which is also a failing of the judicial system. There's an overpolicing of trans women and an underpolicing of cis women. Trans people are mischaracterised as sex offenders in general and are more likely to be tried as such. The fact that they are being overrepresented despite making up such a small amount of the population means that trans women are specifically targetted, especially as sex offense crimes are underpoliced with regards to the general population, not individual demographics.

"Women who engage in sexually abusive behaviors have largely

been overlooked. The societal gender bias and tendency to see women as nurturing, not violent, and less sexual compared with male counterparts have obscured the path to understanding female sexual offending." Source.

"Current scholarship (e.g., [1, 2, 6, 17, 18]) indicates that there is significant underreporting of child sexual abuse (i.e., sexual crimes perpetrated on children under 16 years of age) and, in particular, abuse perpetrated by females. Denov [6], for example, notes there is a “culture of denial” surrounding female sex offenders. Similarly, Eastwood [18] claims that female sex offending is the “silent crime.”" Source, additional reading.

To put it in perspective, there is a report by The Lucy Faithful Foundation that claims up to 64,000 women in UK 'are child-sex offenders' in 2009, bringing estimated female sex offense proportions to around 200 per 100,000 women (based on the assumption that 50% of the UK population in 2009 was female), similarly, the male sex offense rate would be much higher -not suggesting equivalence to male offending rates, the point is that sex offenses in general are underrepresented. These findings highlight the need for critical examination of assumptions around “male-pattern” offending in trans women-. Granted, these are estimations but they illustrate the potential scale of the issue and the need for critical examination of the data. Source

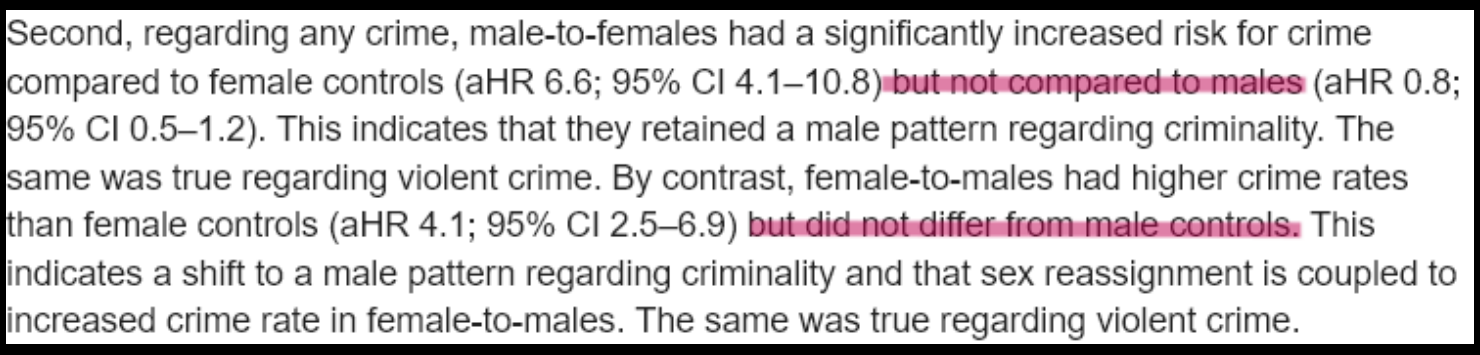
Whereas Transgender people are disproportionately in contact with law enforcement where they get discriminated against. (Jenness & Rowland, 2024; Coppola, 2023)

Further, biased policing and sentencing practices also contribute to the disproportionate incarceration among transgender people, with transgender people of color facing a double-burden of bias based on both race and gender identity. Additionally, transgender individuals often cycle in and out of the criminal justice system due

to low-level offenses (Grant et al., 2011; James et al., 2016; National Center for Transgender Equality, 2018a; Wolff & Cokely, 2007).

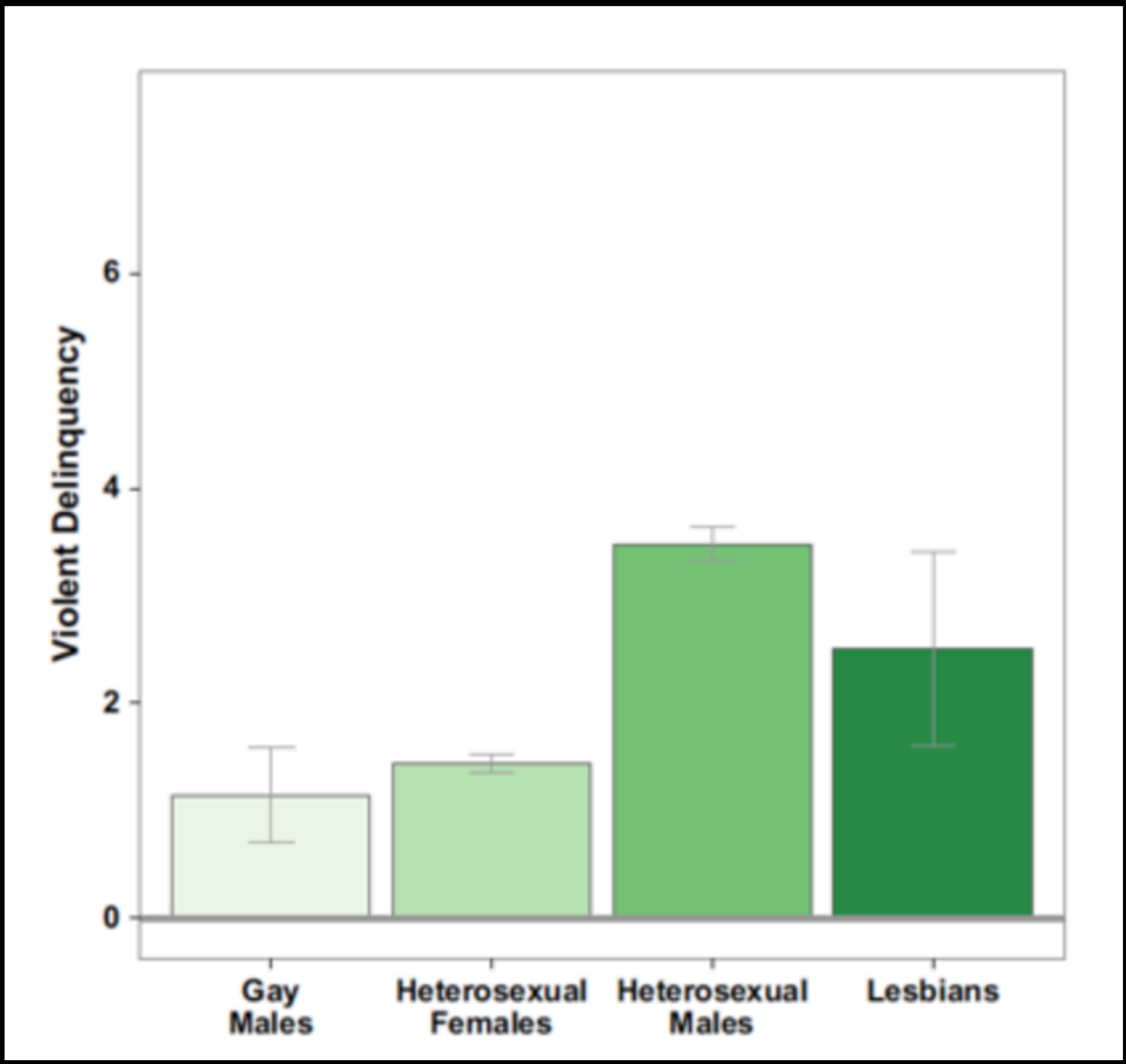
The data in question isn't even applicable to most inmates; the Ministry of Justice itself says these figures (125-129 trans women) are not yet a reliable reflection of the true numbers, for three main reasons: (1) they can't count inmates who haven't told prison staff they're transgender. (2) they don't count inmates with a gender recognition certificate (3) they only count prisoners who have already had a case conference, which is reserved for longer sentences, associated with serious crimes. Also, I believe it goes without saying that violent criminals serving no less than 15 years aren't representative of the trans population, prison population is not indicative of the general population. Source

Dhejne [Appendix B]: "The individual who is making claims about trans criminality, specifically rape likelihood, **is misrepresenting the study findings.** The study as a whole covers the period between 1973 and 2003. If one divides the cohort into two groups, 1973 to 1988 and 1989 to 2003, one observes that for the latter group (1989 – 2003), differences in mortality, suicide attempts, and crime disappear. This means that for the 1989 to 2003 group, **we did not find a male pattern of criminality.**"



Second, regarding any crime, male-to-females had a significantly increased risk for crime compared to female controls (aHR 6.6; 95% CI 4.1–10.8) but not compared to males (aHR 0.8; 95% CI 0.5–1.2). This indicates that they retained a male pattern regarding criminality. The same was true regarding violent crime. By contrast, female-to-males had higher crime rates than female controls (aHR 4.1; 95% CI 2.5–6.9) but did not differ from male controls. This indicates a shift to a male pattern regarding criminality and that sex reassignment is coupled to increased crime rate in female-to-males. The same was true regarding violent crime.

Criminal activity, particularly violent crime, is much more common among men than women in the general population. A previous study of all applications for sex reassignment in Sweden up to 1992 found that 9.7% of male-to-female and 6.1% of female-to-male applicants had been prosecuted for a crime.[33] Crime after sex reassignment, however, has not previously been studied. In this study, male-to-female individuals had a higher risk for criminal convictions compared to female controls but not compared to male controls. This suggests that the sex reassignment procedure neither increased nor decreased the risk for criminal offending in male-to-females. By contrast, female-to-males were at a higher risk for criminal convictions compared to female controls and did not differ from male controls, which suggests increased crime proneness in female-to-males after sex reassignment.



This study examined the association between sexual orientation and nonviolent and violent delinquency across the life course. We analyzed self-reported nonviolent and violent delinquency in a sample of heterosexual males (N=5220–7023) and females (N=5984–7875), bisexuals (N=34–73),gay males (N=145–189), and lesbians (N=115–150) from the National Longitudinal Study of Adolescent to Adult Health (Add Health). The analyses revealed, in general, that bisexuals were the most delinquent of the sexual orientation categories for both males and females. Additional analyses revealed that heterosexual males reported significantly higher levels of both violent and nonviolent delinquency than gay males, whereas lesbians reported more involvement in nonviolent delinquency and, to a lesser extent, violent delinquency relative to heterosexual females. Analyses also revealed that lesbians reported significantly more delinquent behavior, particularly for nonviolent delinquency, than gay males. Future research should explore the mechanisms that account for these observed patterns and how they can be used to more fully understand the etiology of delinquency.

This has its own flaws, that the authors literally admit it's too small of a sample size (less than 50) and further research is needed. Even then, the rate for trans women was inbetween. Cis lesbians were also found to be inbetween when it comes to crime rates.

Where the 'trans women have male pattern criminality' -referring to the nature of the crimes- claim falls apart is when you realize that the striking majority of female sex offenders in Missouri are contact offenders and mostly have pubescent male victims. Source

Most importantly, there is very good reason to believe that most of those inmates aren't genuinely trans because they only declared being trans after their crimes [Rhona Hotchkiss to The Telegraph, 2023]. It's essential to separate genuine cases from opportunistic ones. Perhaps this isn't about self ID itself but more-so the timing, which leads me to think it isn't genuine, timing and prior consistency are key indicators of authenticity.

Nonetheless, It's reasonable to require a prior diagnosis to prevent misuse since perceived criminality is significantly inflated by opportunistic male offenders, as it's literally any man saying he's a

woman with no safeguarding, there had been no medical, legal or even social report of them being trans prior to conviction. This is not to say that it's impossible for a trans person to transition post incarceration, but it's definitely a very tiny minority, a highly unlikely situation that should not be generalized. Especially given the high rate of post-conviction claim of only self identifying as trans, there is no reason to give opportunistic male inmates this much credibility. Not to mention that the population of trans people is underestimated which also skews the data.

These factors contribute to a skewed perception of criminality. There needs to be careful examination and contextualization of the data, especially with factors surrounding it mentioned above. Anecdotal claims should be approached critically, avoiding drawing definitive conclusions without solid data. It's basically the 13/50 argument all over again, an abuse of data to make a "point" about a group you don't like.

The high rate of sex offenses among trans inmates is skewed by a non-representative incarcerated population, widespread post-incarceration self-identification (no verification), small sample sizes prone to anomalies, judicial bias against trans women and a lack of reporting on cisgender counterparts, underestimated trans population, and media sensationalism.

A 2021 California study found that 69% of trans women prisoners reported being forced to perform sexual acts against their will, 58.5% reported being violently sexually assaulted, and 88% overall reported being made to take part in a "marriage-like relationship". A 2018 study found that it is common for correctional officers to publicly strip search trans women inmates, before putting their bodies on display for not only the other correctional officers, but for the other prisoners. Trans women in this situation are sometimes made to dance, present, or masturbate at the correctional officers' discretion. "V-coding" refers to the practice of

assigning trans women placed in men's prisons to cells with aggressive cisgender male cellmates as both a reward and a means of placation for said cellmates, so as to maintain social control and to, as one inmate described it, "keep the violence rate down." Trans women used in this manner are often raped daily. This process has been described as so common that it is effectively "a central part of a trans woman's sentence".

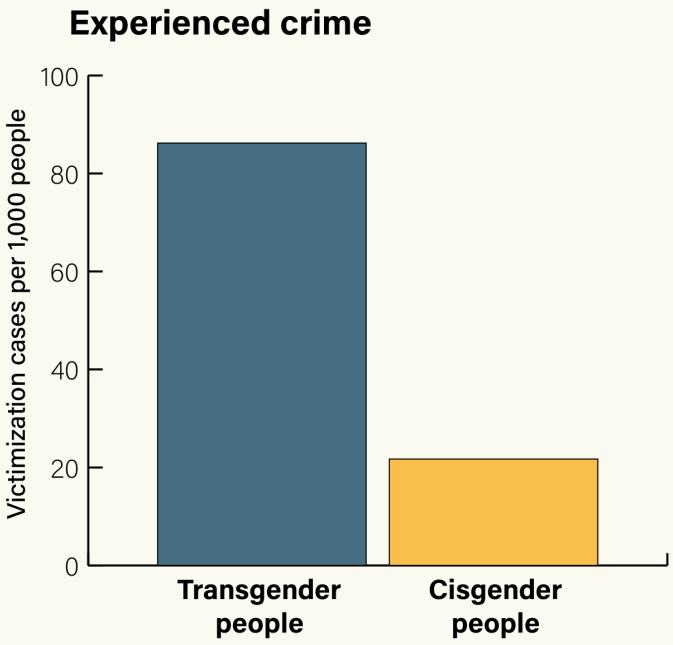
If they don't set you up to get raped and assaulted daily, they'll literally force you to detransition and have prison doctors inject you with testosterone.

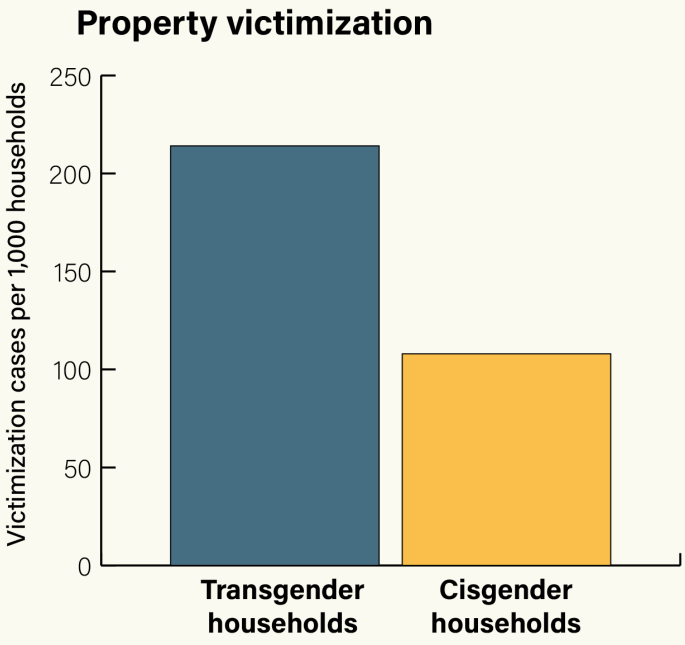
Transgender populations experience high levels of discrimination in various aspects such as employment (National Center for Transgender Equality [NCTE], 2009) as well as increased instances of physical violence (Stotzer et al., 2014). Access to legal recognition for one's gender identity has been shown to improve mental health outcomes among transgender people (Kattari et al., 2020). Social acceptance and family support play important roles in reducing psychological distress among transgender people (Ryan et al., 2010; Sutter & Perrin 2016). Transgender people experience high levels of unemployment and poverty compared to the general population (James et al., 2016). Transgender students may face unique challenges in educational settings such as bullying or lack of accommodations for their gender identity (Greytak et al., 2009).

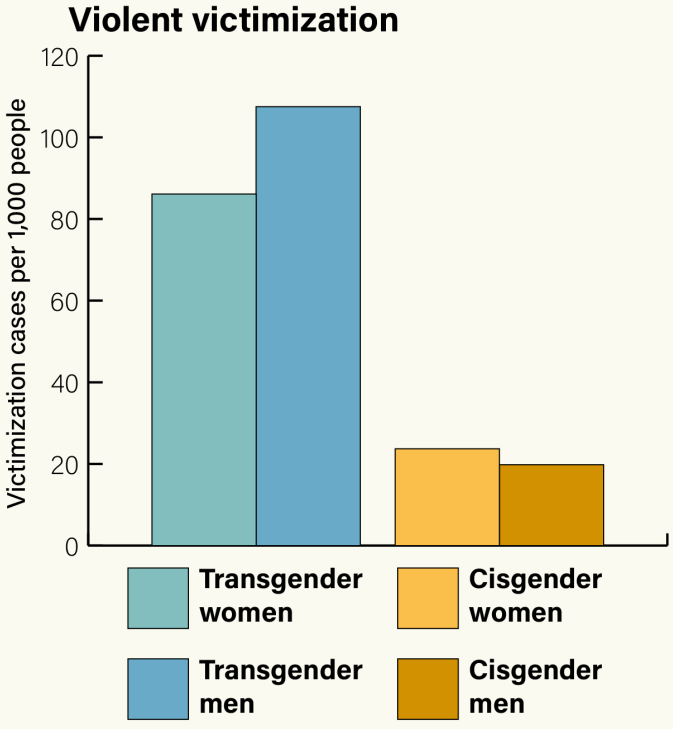
Research shows that trans women who receive hormone therapy do not necessarily hold advantages over cisgender female competitors (Hilton & Lundberg, 2021). trans women do not have an unfair athletic advantage over their cisgender peers (Jones, et al. 2017; Harper 2015; Knox, et al. 2018; Handelsman, et al. 2018).

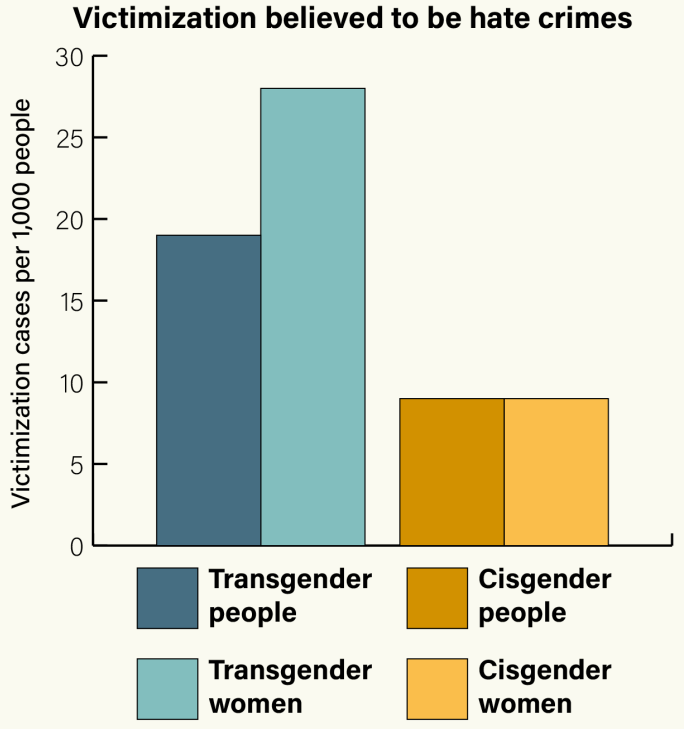
Criminal Victimization Among Transgender Populations

The UCLA School of Law's Williams Institute released an analysis of crime victimization surveys from 2017 and 2018 to assess victimizations among transgender populations in the United States. Take a look at the data from the report's analysis.





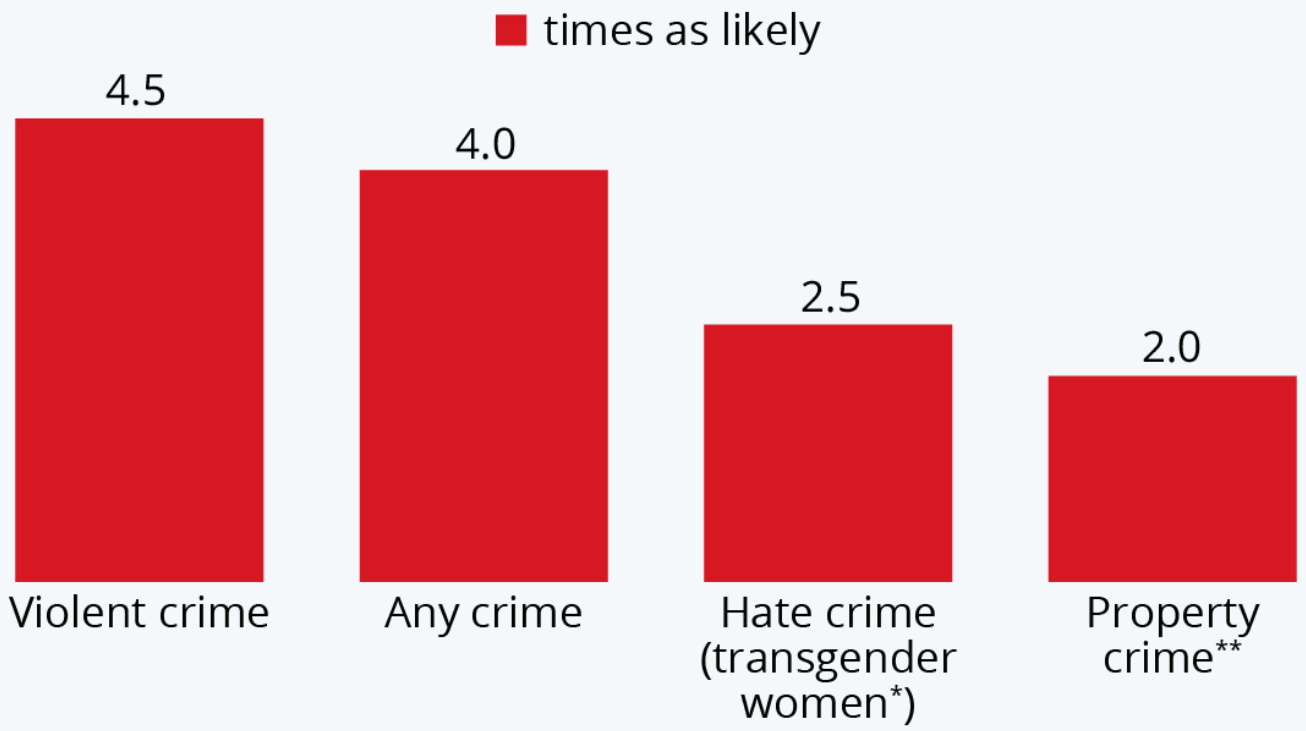




SOURCES: Gender Identity Disparities in Criminal Victimization: National Crime Victimization Survey, 2017-2018. Graphic reporting by Saumya Gupta, National news and higher education editor. Graphic by Ben Brill, Graphics editor.

Transgender People More Often Targeted in Crimes

Increased likelihood of U.S. transgender people becoming victims of a crime compared to cisgender people

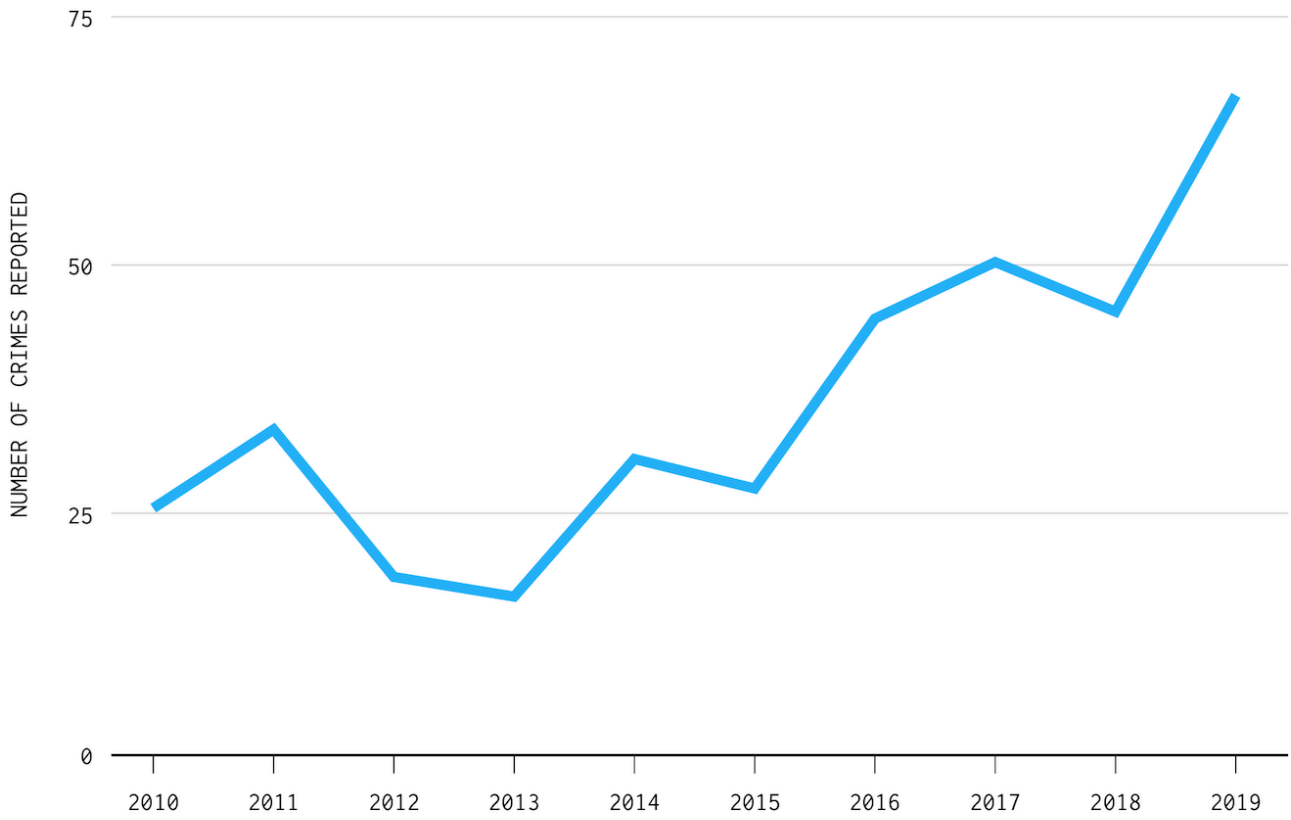


Based on a 2017-18 survey
* compared to cisgender women ** on a household level
Source: Williams Institute at UCLA School of Law

Crosstown

Reported crimes with a transgender victim

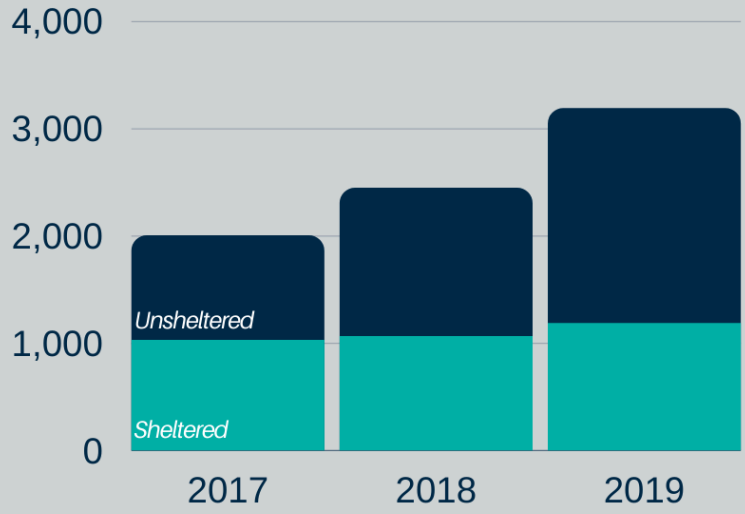
City of Los Angeles
Jan. 1, 2010 - Dec. 31, 2019



xtown.la
Source: LAPD crime dataset
Designed by Kiera Smith

Ending Equal Access Impacts Individuals Already Experiencing Great Challenges

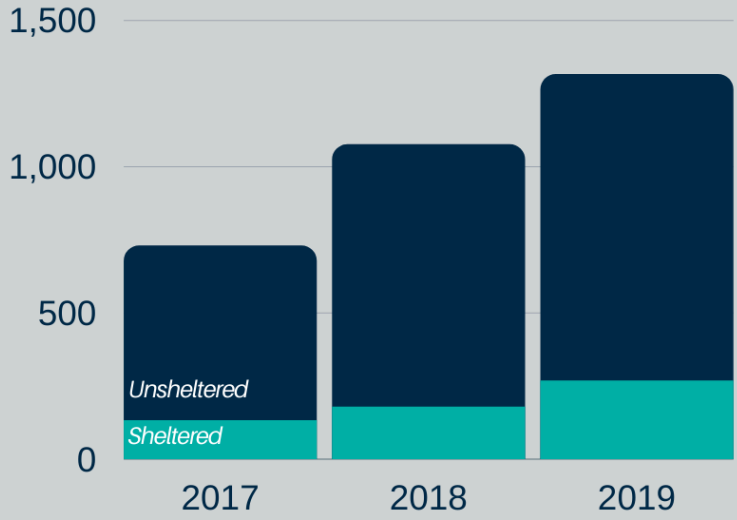
Transgender Individual Homelessness



57%
since 2017

Gender Non-Conforming Individual Homelessness

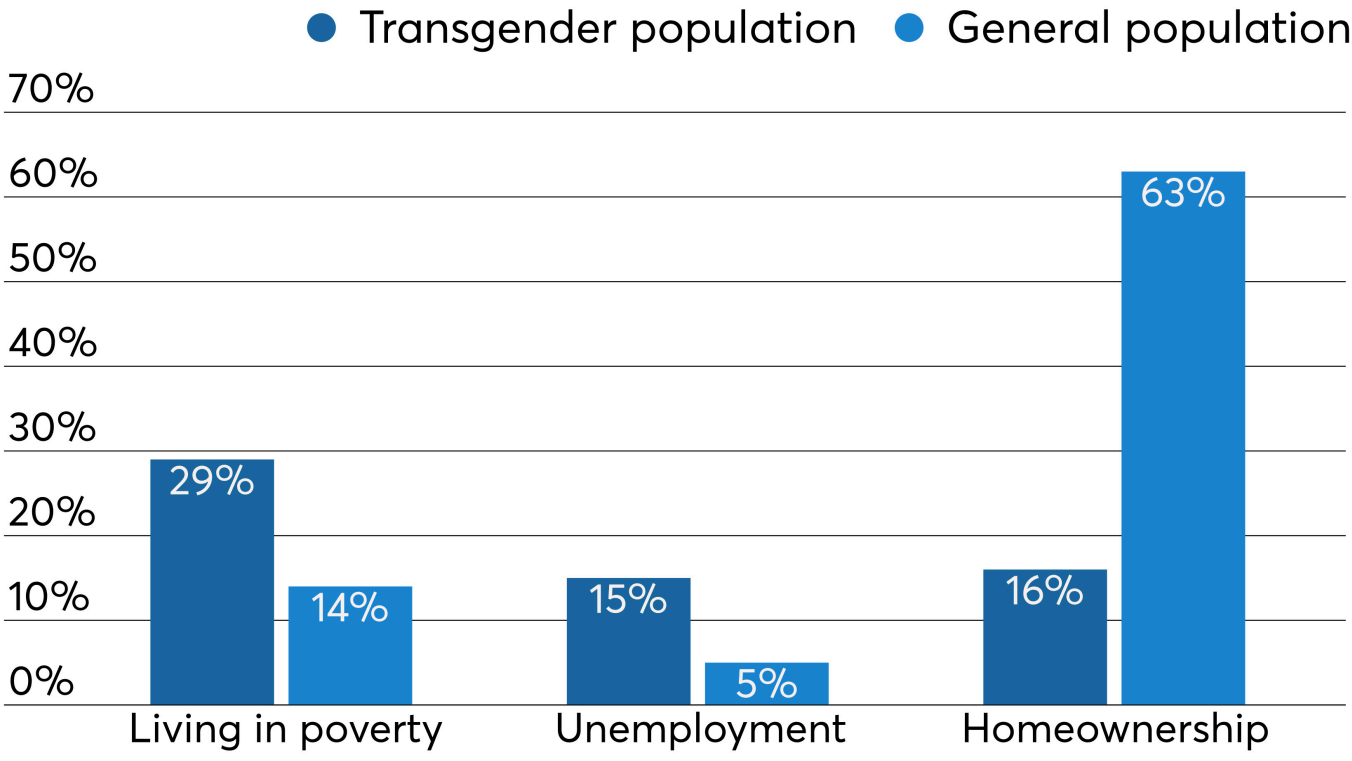
80%
since 2017



National Alliance to End Homelessness

endhomelessness.org/data

More than a social divide



Source: National Center for Transgender Equality (2015 survey)

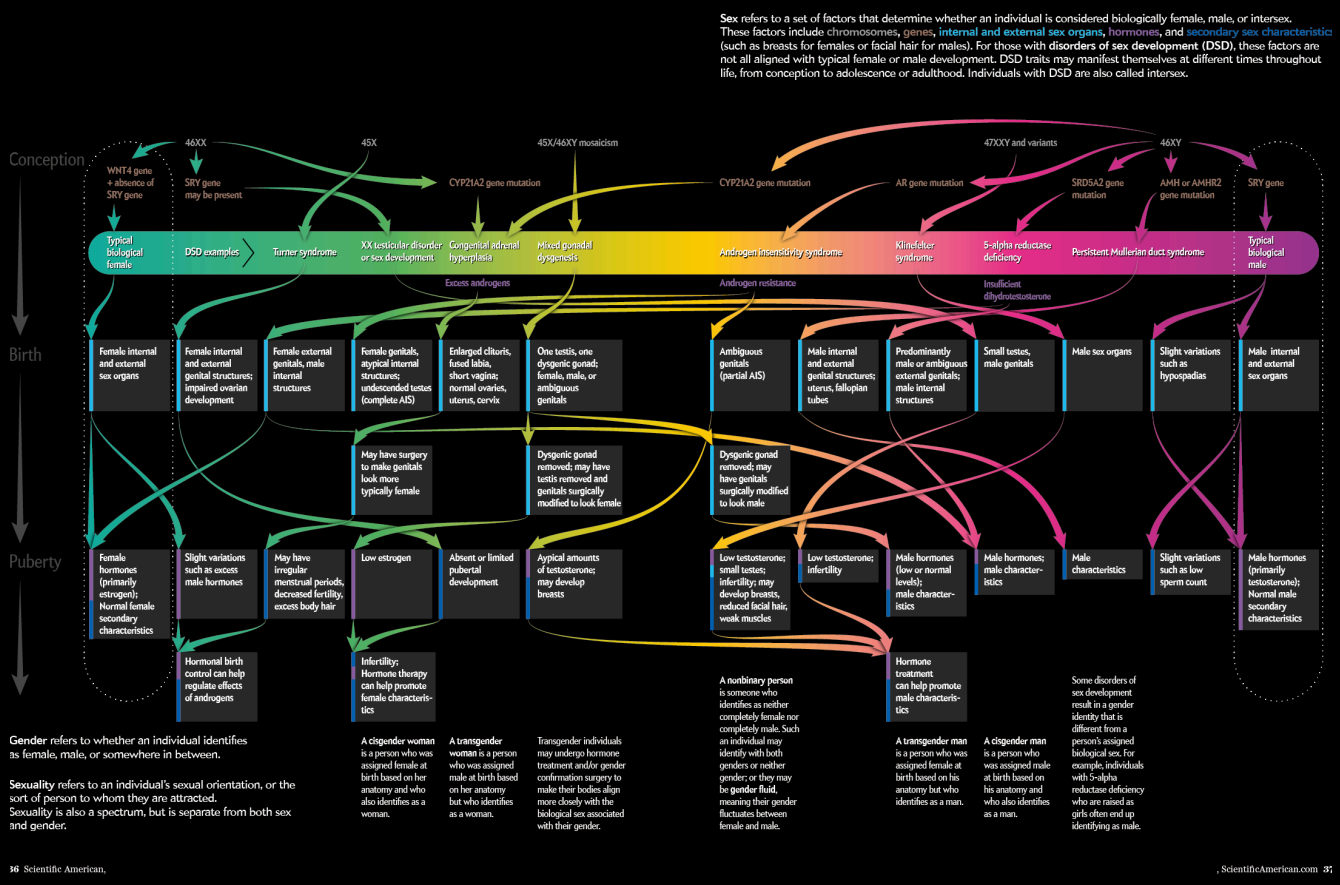
Athletic perfomance of transgender vs. cisgender women

Before and 2 years after hormone therapy

	Before	After
 Push-ups **1 Minute**	**31%** more	no advantage
 Sit-ups **1 Minute**	**15%** more	no advantage
 Run **1.5 Mile**	**21%** faster	**12%** faster

Source: Healio

Sex is not a binary (Ainsworth 2015), there are a number of factors that contribute to a person's sex, including their chromosomes, hormones, genitals, gene expression patterns, and secondary sex characteristics, almost all of them overlap, even secondary sex differences like in bones. ~1.7% of people's sex chromosome pattern doesn't fit the XX/XY categories. (read). There was even reported fertility in a natal female with a 46,XY phenotype Gamete production, chromosomes, genitals and hormones are all not binary: some people may have both testicles and ovaries or they might not have genitals (Müllerian aplasia (MRKH)/penile agenesis), some people have XXY chromosomes, etc. (Montañez, 2017). Biological essentialist views are fundamentally incompatible with scientific understandings of human biology (American Psychological Association, 2006; Blackless et al., 2000; Fausto-Sterling, 2000). Secondary sex characteristics are also not binary, there is a wide range of normal variation in these characteristics. Therefore, these cases cannot be brushed off as being mutations as they are the results of biological variation (biological sex has no set definition in addition to that).



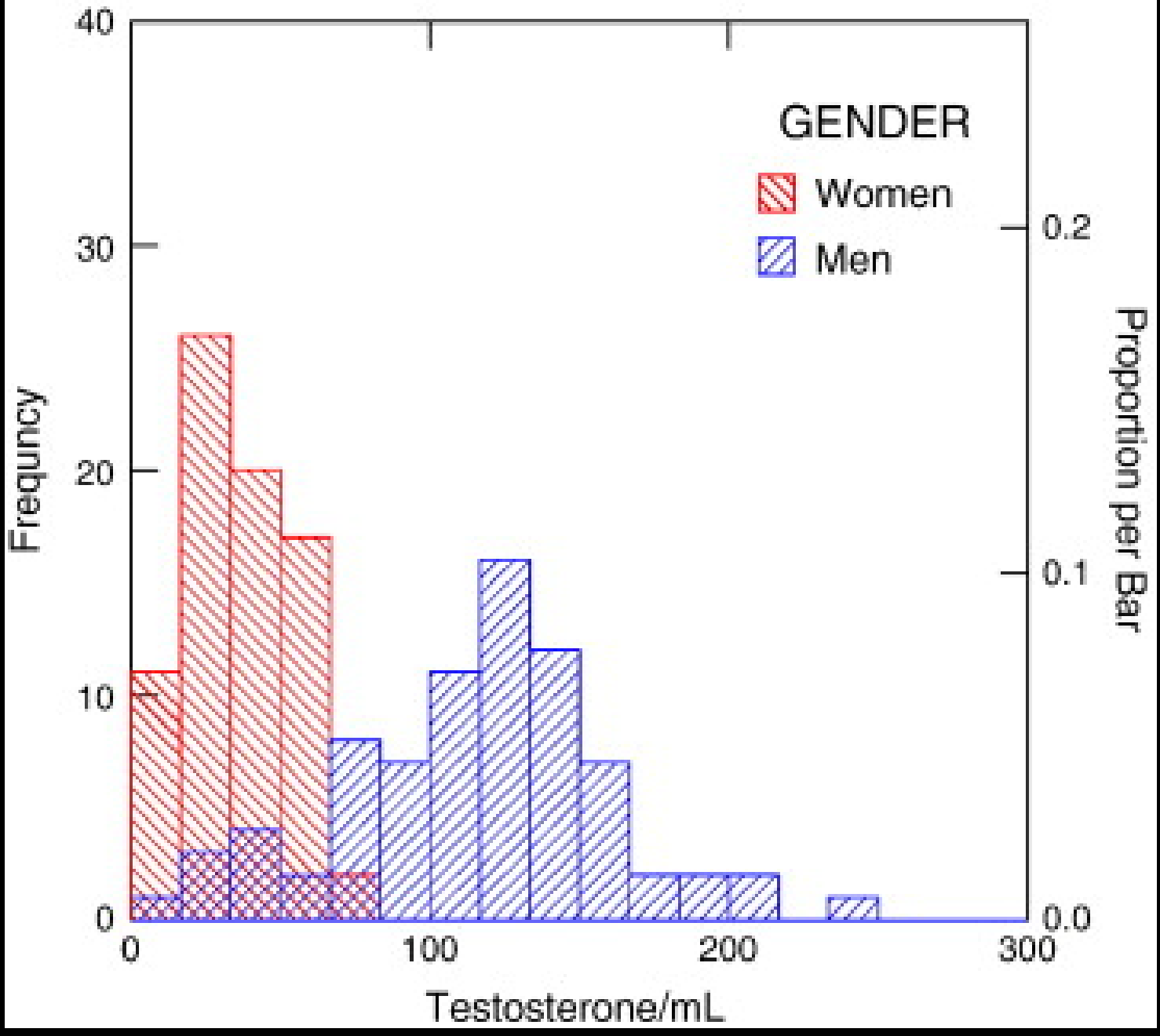
Click this to see the Quigley scale that describes the variation in the morphology of the genitalia.

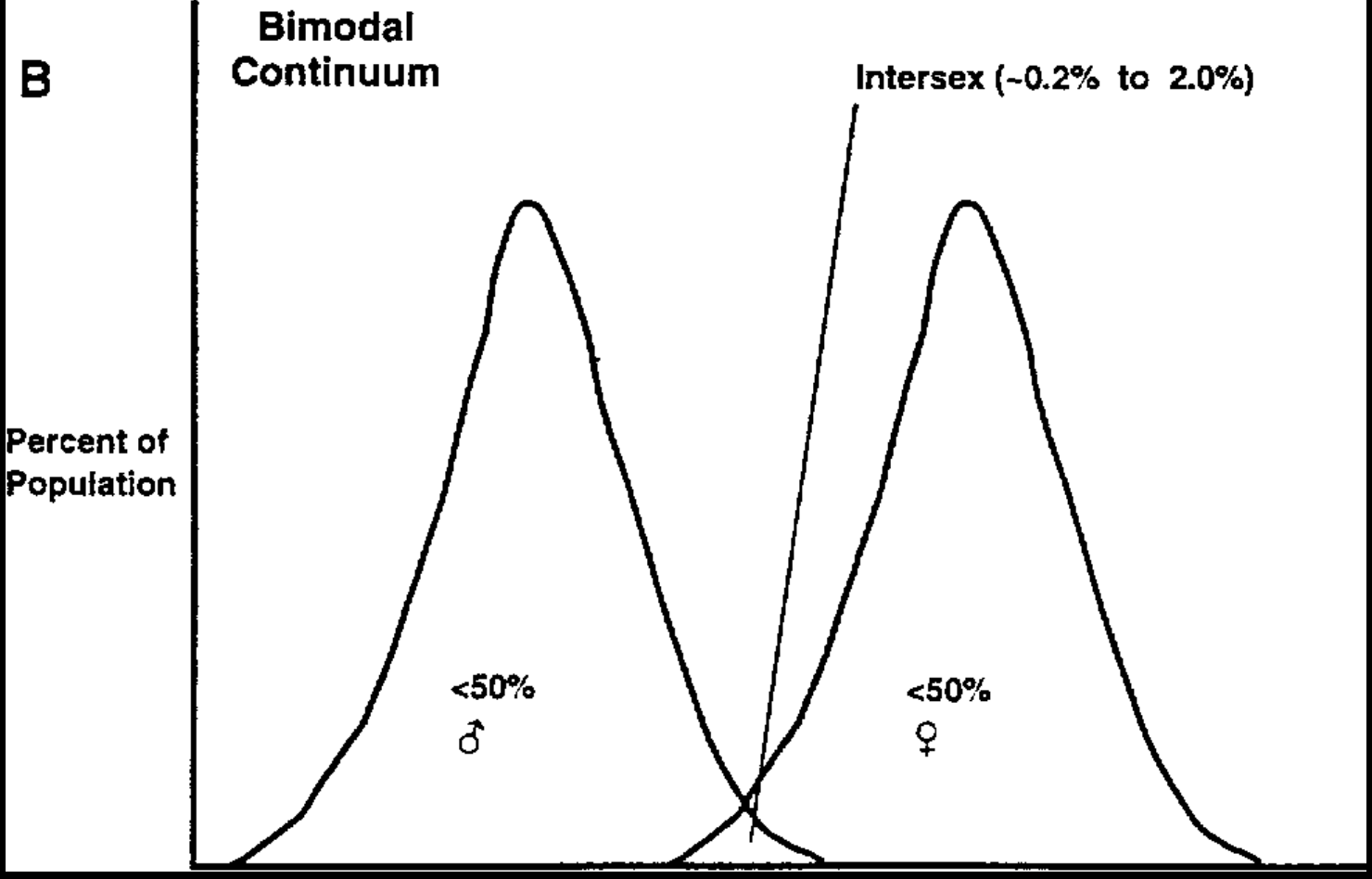
there are a lot of genetic and environmental factors that can change the phenotype (internal or extrenal morphology), check this out

The levels of various circulating hormones, i.e. endocrinology also falls under a bimodal distribution. With a peak around 10-30 ng/dL for women and 250-600 ng/dL for men (for testosterone). see, and this. This too.

Height, hormone levels, muscle mass, bone density, shoulder width, hip width, facial features, body hair, facial hair, fat distribution, breast tissue all fall under a bimodal distribution with overlapping between male and female.

There are two kinds of chromossomes: sex chromosomes and autosomal chromosomes (i.e., not sex chromosomes.). Sex chromosomes serve to define if you're going to develop a testosterone producing gonad (testicles), or a estrogen producing gonad (ovaries) (as well as having the genes for the gonads to work properly). However, 99% of the sexed characteristics are stored in the autosomal chromosomes. The female and male genes are in the autosomal chromosomes, males also have female genes, and females also have male genes, they are just expressed differently. Testosterone and estrogen is what defines what genes in the autosomal chromossomes will be expressed, hence making someone biologically become male or female. Male genes being expressed in the uterus will result in the formation of a male reproductive system, and female genes will result in the formation of a female reproductive system. Someone with a XY genotype with a defective SRY gene (that is the one trigger that makes you develop testicles), even if they have all the other normal genes, will develop as a woman, and will even be able to give birth using their womb (https://www.endocrine-abstracts.org/ea/0013/ea0013p253). This happens because, without testicles and therefore without testosterone, the female genes will be expressed and the person will be a female. Someone with a male reproductive system, for example, will develop female secondary sexual characteristics if they have their male puberty blocked and is supplemented female hormones. Though they will still have a male reproductive system, they will have a female gene expression and therefore will develop as a normal female would. Having XY sex chromosomes does not make you "genetically male" and having XX chromosomes does not make you "genetically female", it's your gene expression, and therefore hormonal profile, that does so, because most of the genes that make a man or a woman are located in the autosomal chromosomes.


GENDER
Women
Men
Frequncy
Proportion per Bar
Testosterone/mL
0
10
20
30
40
0.0
0.1
0.2
0
100
200
300



Speaking of bones.. Bones don‘t really fit in a binary of the two genders. Skeletal studies clearly show how society‘s assumptions about sex can lead to errors, acknowledging that things are not really as binary as they may seem can help to resolve those errors.

Scientists Fred P. Thieme and William J. Schull of the University of Michigan wrote about sexing a skeleton in 1957: “Sex, unlike most phenotypic features in which man varies, is not continuously variable but is expressed in a clear bimodal distribution.”

In 1972, Kenneth Weiss, a professor of anthropology & genetics, noticed that there were about %12 more male skeletons than females reported at archaeological sites* the reason for the bias, Weiss concluded, was an “irresistible temptation in many cases to call doubtful specimens male.” For example, a tall woman with a narrow hip might be mistakenly cataloged as a man.

After he published his paper, practices improved. 21 years later more recent datasets show that the bias declined: The ratio of male to female skeletons had balanced out.

*: (Kenneth M. Weiss 1972) In part that might be because of better, more accurate ways of sexing skeletons. But it is also noted that there were more individuals categorized as “indeterminate” after 1972 and basically none prior.

This is acceptance of the overlap between the sexes. It doesn't really mean that the skeletons classified this way are neither male nor female, but it means that there is no clear or easy way to tell the difference. This is a good read as well, and this. Also this. Basically, “male” and “female” are two distributions with significant overlap.
So what's a woman? An adult human female. What is female? A biological classification characterized by a combination of sex characteristics, including chromosomes (typically XX), gonads (ovaries), gametes (production of ova or sperm), hormones (higher levels of estrogen), and secondary sexual characteristics. Sex is composed of both genotypes and phenotypes. All of these factors overlap with no singular determining factor that can account for every individual's biological profile.

Children often develop an understanding of their gender identity around ages 3-5 years old [expression may not always reflect a stable identity] (Olson et al., 2015; Gülgöz, et al. 2019; Signorella et al. 1993; Ruble, at al. 2007; AAP 2015; Bussey & Bandura 1999). Puberty blockers are considered safe and reversible treatments for adolescents experiencing gender dysphoria (de Vries et al., 2011 and 2020; Krishna, et al. 2019; Bertelloni, et al. 2008; Young Kim, 2015; Endocrine Society & American Academy of Pediatrics). These medications have been used for decades in treating other conditions such as precocious puberty with minimal adverse effects when properly monitored by healthcare professionals, they do not mess with bone density, fertility or BMI and improve mental health. Trans kids who are treated for their gender dysphoria have depression/anxiety levels similar to those of cisgender kids (de Vries, et al. 2014; Durwood, et al. 2017). Puberty blockers are life-saving., reduce suicidality and improve the quality of life & Trans

kids develop similarly to cisgender kids.

Here is an excellent review of GnRH analogues (i.e, puberty blockers) in transgender youth

Kids aren't rushed into transitioning, most of the process consists of comprehensive psychiatric sessions, evaluations, consults and careful monitoring [ensuring that those who do transition are doing the right thing for them, giving them time to explore their identities without the added pressure of physical changes that could be in conflict with their innate identity, not all of them end up having dysphoria and thus not transitioning (80% desist rate, according to AAP), some children are simply experimenting with gender expression which is fine, its a normal path of development. Not everyone who thinks they're trans has to be actually trans], with no puberty blockers until tanner II and you may start estrogen/teststerone around 12.5 years old on a case by case basis to protect bone density. And you cannot start HRT before 16 years old, and you cannot have any form of surgery until you're 18 (WPATH; endocrine society; ICD). Being trans is not a trend, it is not a social contigation and is not affected by societal pressure (or else for example, the oppression of trans women in the middle east would 'un-trans' them) (Turban 2022 and 2023; Ashley 2020; Restar 2020; Bauer, et al. 2021). While HRT surely has potential risks (Chan swe, et al. 2022) (like any other medicine), most trans individuals who undergo hormone therapy do not experience severe complications. (Asscheman et al., 2014 and 2011). Because their bodies move to a female endocrine environment, so as long as the're on appropriate estrogen levels, the health risks are minimal like cis female risks. Let's not forget that cisgender women are the majority of its users, and that they are bioidentical compounds. It's even safer than birth control pills Check this and this. HRT doesn't harm your physical health and rather improves it along with mental health (Weinand JD 2015; Wierckx, et al. 2012; Gooren, et al. 2014).

Levels of Satisfaction and Regret With Gender-Affirming Medical Care in Adolescence found very high levels of satisfaction and low levels of regret among adolescents undergoing gender-affirming care; the overwhelming majority (97%) continued to access gender-affirming medical care.

Studies describing a higher risk for cardiometabolic and thromboembolic morbidity and/or mortality in transgender women (but not transgender men) mainly covered data on transgender women using the now obsolete ethinyl estradiol and, therefore, are no longer valid. Currently, most of the available literature on transgender people adhering to standard treatment regimens consists of retrospective cohort studies of insufficient follow-up duration. When assessing markers of cardiometabolic disease, the available literature is inconclusive, which may be ascribed to relatively short follow-up duration and small sample size. The importance of ongoing large-scale prospective studies/registries and of optimal management of conventional risk factors cannot be overemphasized (Defreyne, et al. 2019)

Despite studies reporting an increase in insulin resistance in feminizing hormone therapy and a decrease in insulin resistance in masculinizing hormone therapy, the incidence of diabetes in transgender individuals after initiation of hormone therapy was not different compared with the general population. (Velzen, et al. 2022)

As for the kidneys, a study looked at how HRT affects creatine levels (which is considered a marker of kidney function). After 3 months, trans women had creatine levels within cis female ranges and trans men had creatine levels within cis male ranges. (Maheshwari, et al. 2021)

As for liver function, gender affirming hormonal treatment is unlikely to induce appreciable changes in liver enzyme levels. Thus,

The influence of long-term GAHT on ALT and AST levels appears modest and not likely to reflect clinically meaningful changes in liver function. (Leila Hashemi, et al. 2021)

Transgender women who have undergone hormone therapy do carry a slightly higher risk of breast cancer than cis men, but their risk is lower than cis women. Check this dutch study.

Transgender people undergoing gender affirming hormone therapy are frequently tested and continuously monitored by medical professionals, the doses are prescribed, dispensed, and adjusted by professionals.

To those who ask how can trans women feel like women if they've lived as men: Neural Systems for Own-body Processing Align with Gender Identity Rather Than Birth-assigned Sex (Adnan Majid, et al. 2020). Trans people have hormone levels closer to their identity than their assigned gender (Kupers, E. et al. 2011) They also have brains that respond to estrogen in a similar way to the way that cisgender women's brains respond to estrogen. (Florijn BW, et al. 2021)

Genetic studies on twins further support that gender dysphoria has its genetic component as discussed above (Diamond 2013), although the other twin can still be cisgender, it doesn't disregard the fact since not all twins have the same congenital conditions, gender dysphoria aside (since children have their own distinct genetic makeup even when they're twins).

There is a common myth floating around, that the pharmaceutical industry is controlling research on gender dysphoria for profit. Let's begin with the numbers, it's essential to put the size of the pharmaceutical market in perspective. The US overall pharmaceutical market is estimated to be worth $603.40bn (Statista), the US transgender (majority of the users are cisgender women) HRT market is estimated to be worth $200-$341 million

(0.033%-0.056% of the market), while medications like aspirin ($1.3 billion) and insulin ($21.3 billion) generate much more income. So what might seem like a huge amount of money to you is actually relatively small, with a significantly smaller portion of the market. This demonstrates that HRT for gender dysphoria is not a major profit driver in the pharmaceutical industry. The pharmaceutical industry is highly regulated by government agencies such as the FDA in the United States. Much of the research on gender dysphoria is funded by government grants, nonprofit organizations (such as GIRES and WPATH), and academic institutions. Moreover, research into gender dysphoria is subject to rigorous peer review, and any potential conflicts of interest are carefully disclosed. International cooperation which involves a vast network of researchers and institutions worldwide contributes to a diverse and independent body of research. Finally, a strong consensus based on years of research and experience exists within the scientific and medical communities that gender dysphoria is a real medical condition that requires proper treatment.

Regarding the theory of Rapid Onset Gender Dysphoria (ROGD): There is no empirical evidence to substantiate the claims put forth by this theory. The theory is based on assumptions, anecdotal reports and parent surveys recruited from explicitly anti-trans or trans-skeptical websites and forums, which are not robust sources of scientific data (Littman, 2018). Littman's study, which popularized the ROGD concept, has been heavily criticized for its methodological flaws and bias, with concerns raised about its survey design, sampling methods and questionable measurement tools, including a recruitment process that targeted only parents who were already skeptical of their child's gender identity. The concept of ROGD has not been consistently supported by subsequent research, and it remains a highly contentious and contested theory within the field. Numerous studies and experts have questioned the reliability and validity of the ROGD theory (Turban, Beckwith, Reisner, & Keuroghlian, 2019; D'Angelo &

Kearney, 2019; Restar 2019; Ashley 2020). These critiques highlight that the concept is formed around stereotypes and misconceptions about transgender youth. Moreover, the ROGD theory lacks consistency and clear definitions, making it difficult to apply rigorous scientific standards (Turban, Beckwith, Reisner, & Keuroghlian, 2019). In fact, it was widely criticized for lacking scientific rigor and for failing to meet basic standards of ethical research. It is important to emphasize that the majority of transgender individuals do not fit the ROGD narrative, the majority of them (including adolescents), have experienced their gender dysphoria from an early age. Gender dysphoria is a congential, lifelong, neurobiological condition, it is not something that can be attributed to social influences or peer pressure, this theory incorrectly conflates these two distinct concepts. The ROGD theory has been criticized for its reliance on assumptions rather than empirical evidence. As a result, it is not taken seriously by many experts and researchers in the field. It is essential to rely on scientific research and evidence-based approaches when discussing and understanding gender dysphoria and transgender experiences. As demonstrated, the ROGD theory lacks scientific rigor and scientists and experts in the field generally do not consider ROGD as a valid or scientifically rigorous theory. And more than 60 psychology organizations, including the American Psychological Association, called for elimination of the term. Also, as of March 2024, the article behind that theory was retracted. Additional Reading.

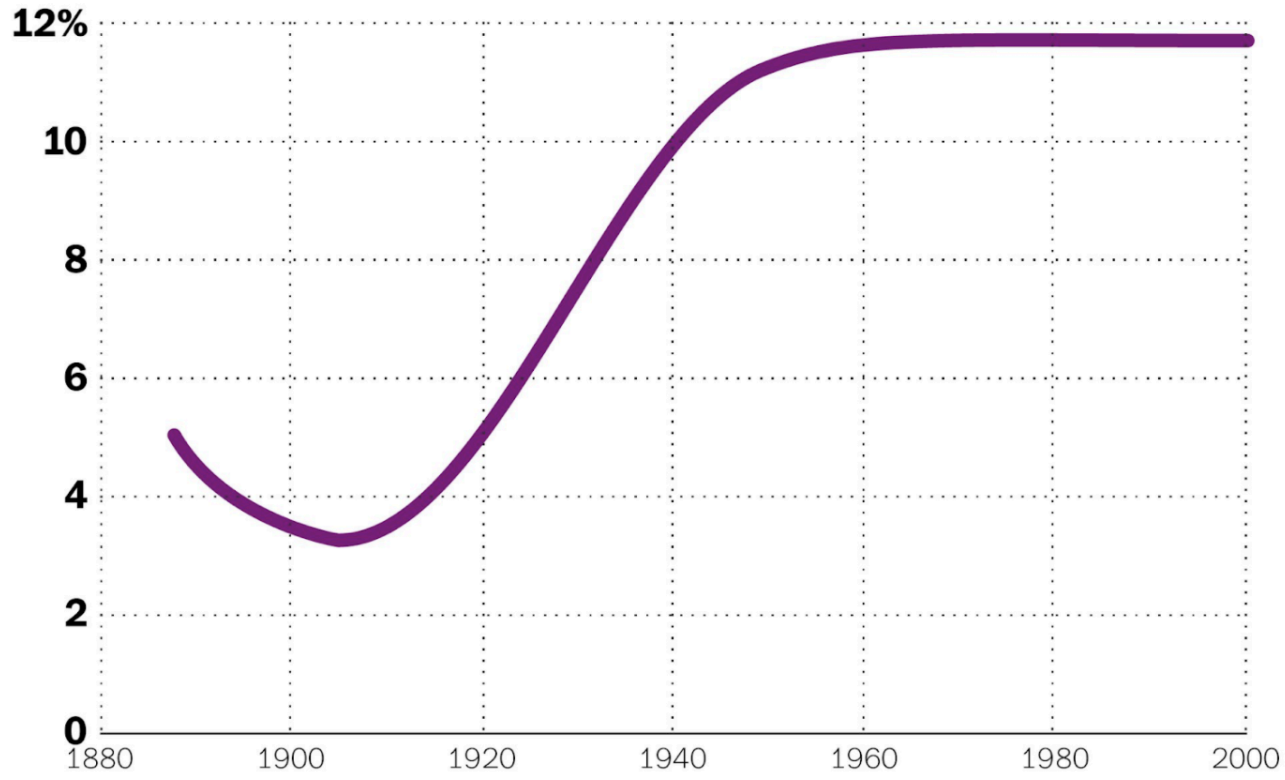
According to DSM-5-TR, the prevalence of gender dysphoria is 0.005% to 0.014% of people assigned male at birth (5-14 per 100k) and 0.002% to 0.003% of people assigned female at birth (2-3 per 100k). This rate is about the same globally. In Iran it's (1.46 per 100,000) [Talaei, et al. 2022], in Taiwan it's (7.4 per 100,000) [Kuo-Yu Chao, et al. 2023], in Sweden it's (8 per 100,000) [Åhs, et al. 2018]. in the US it's 390:100,000. The prevalence can be influenced by societal acceptance, evolving diagnostic criteria, and healthcare

access. Rates may vary based on the methodology and criteria used in studies, and their limitations. The occurrence of gender dysphoria is influenced by specific biological processes that are not widespread in the population, so it's impossible that being transgender is a trend. While social acceptance and awareness have increased, the percentage of transgender individuals in the population has remained relatively stable over time. This historical stability implies that it is unlikely to drastically increase in the future, however, just as the acceptance of left-handedness increased over the years, the growing social acceptance of diverse gender identities may lead to a higher reported prevalence (but not an actual increase in the number of transgender individuals, rather, a shift in the willingness of individuals to disclose their gender identity) and would then reach a stable level. It's essential to distinguish between visibility and societal acceptance on one hand and the actual prevalence of transgender individuals on the other.

Gender dysphoria isn't diagnosed with brain scans because brain differences are too complex, and scans aren't advanced enough for diagnosis. Scans are primarily research tools and not yet precise enough for clinical use. However, recent machine learning models used in research can tell apart trans and cis people at rates much higher than chance. Still, for the time being, the medical standard is to diagnose based on the psychological symptoms of gender dysphoria (it's a neurobiological [meaning biological underpinnings] condition but has a psychological manifestation which is different from its etiology, i.e origins).

The history of left-handedness

Rate of left-handedness among Americans, by year of birth



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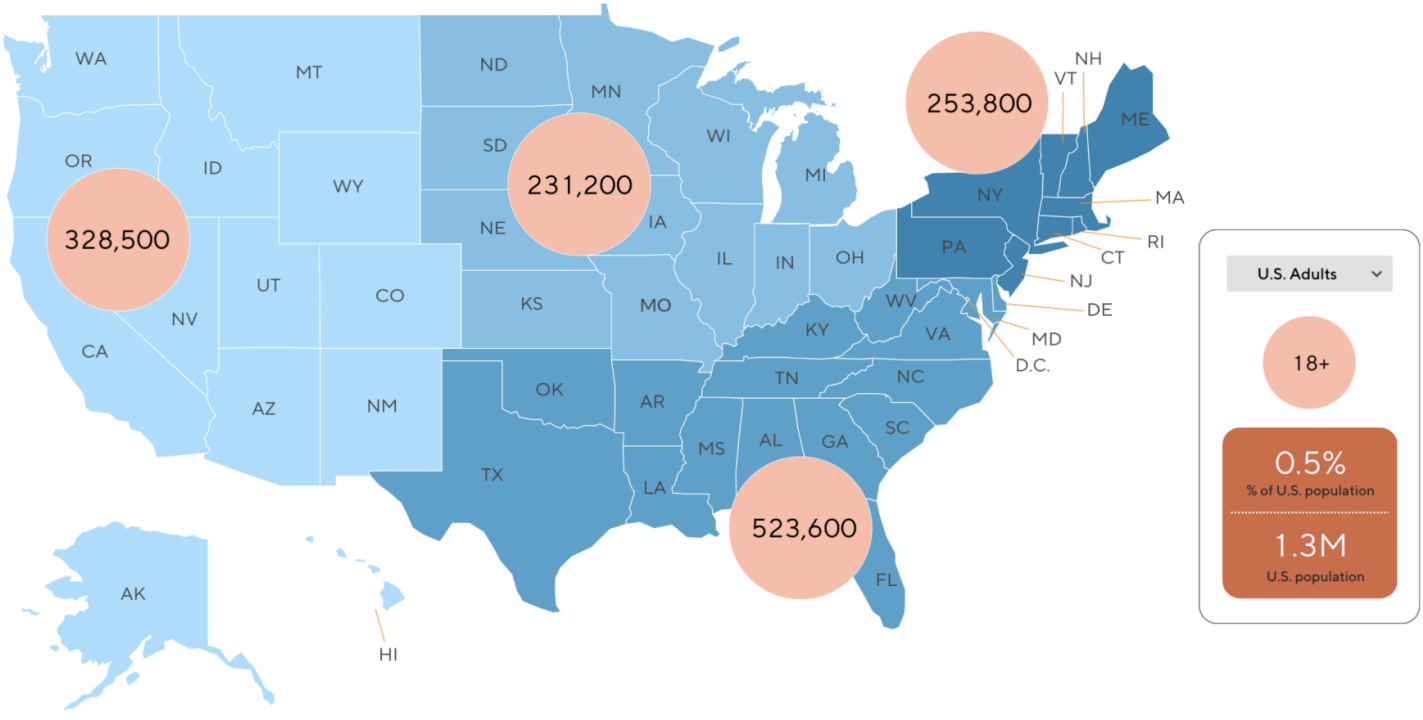
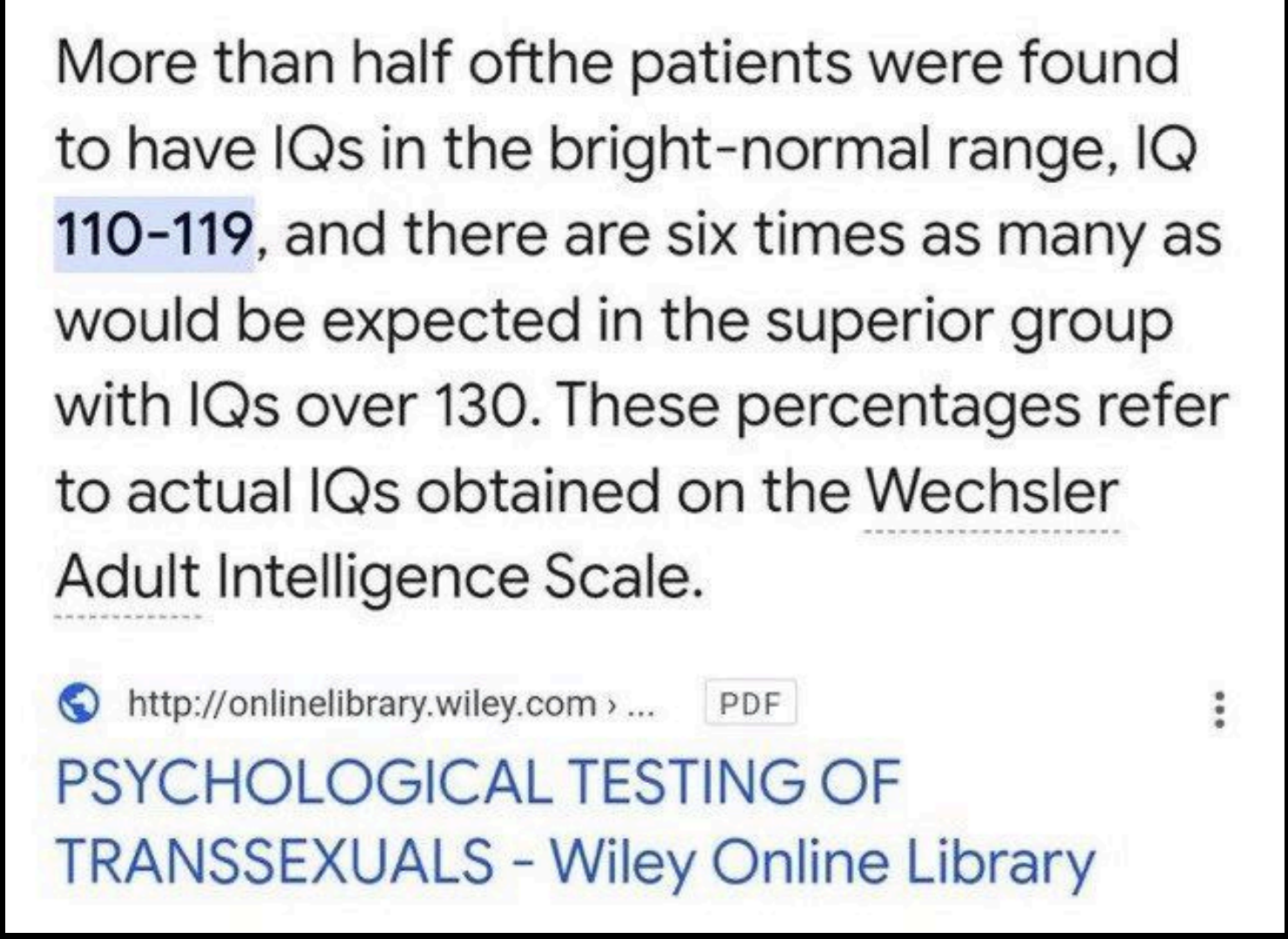
Source: Survey data reported in "The History and Geography of Human Handedness" (2009)



RESPONDING TO TRANSGENDER VICTIMS of Sexual Assault

The Numbers

Statistics documenting transgender people's experience of sexual violence indicate shockingly high levels of sexual abuse and assault. One in two transgender individuals are sexually abused or assaulted at some point in their lives.[1] Some reports estimate that transgender survivors may experience rates of sexual assault up to 66 percent, often coupled with physical assaults or abuse.[2] This indicates that the majority of transgender individuals are living with the aftermath of trauma and the fear of possible repeat victimization.



As for the proportion of transgender women to transgender men. There are no reliable numbers due to: (1) attrition rates among trans men (attrition is where one starts transitioning and stops due to a lack of access to gender-affirming healthcare, stigma and prejucide, internalized transphobia and lack of support), (2) the visibility of trans women, (3) reporting bias and misidentification of trans men as cis men, (4) the existence of non-binary and genderqueer identities that easily captured in traditional data collection methods, (5) access to healthcare where trans women have more access, (6) social stigma and discrimination which prevents trans people from being open about their identities, or causes them to be undercounted or misidentified. Despite the lack of data and its aforementioned causes, studies have shown that

although trans women were estimated to be higher in proportion than they actually are due to the factors mentioned above, we have seen a steady increase in the number of trans men such that the incidence now equals that of trans women due to the increased acceptance and destigmitization of the transgender community in many societies, and a decrease in barriers to care [Leinung, M. C., & Joseph, J. (2020)]. For example, in the UK 2021 census 48,000 (0.10%) identified as a trans man. 48,000 (0.10%) identified as a trans woman. [Census 2021, released at Jan. 2023]

On the theory of Autogynephilia -the idea that some trans women are motivated by an erotic target location error-; There is no credible evidence to support this theory or Blanchard‘s other claims. Many studies fail to replicate Blanchard's findings or support his rigid classification system. Research attempting to validate his theory has often been criticized for small sample sizes, biased methodologies, and a lack of replicability. Researchers have found that the empirical evidence for Blanchard’s theory is weak. The concept is formed about stereotypes and misconceptions of trans people. Blanchard‘s definitions were inconsistent (Moser 2010) making it difficult to test the theory in a scientifically robust manner. He's been criticized for using biased samples and his flawed measurement tools also failed basic standards for psychometric instruments (Nuttbrock et al., 2011). Veale, Clarke, and Lomax have critiqued this theory extensively, and Moser's ‘autogynephilia in women‘ (where 93% of cis women would be classed as 'autogynephilic'). It should be also noted that the majority of trans women do not fall into either category of this theory, and that Blanchard‘s reaction to this is calling the trans women liars, in his eyes, the theory is unfalsifiable. A valid scientific theory must be falsifiable, meaning it can be proven wrong when presented with contrary evidence. Blanchard’s refusal to adjust his theory in light of contradictory findings violates this core principle of scientific inquiry. I also remind you that gender identity is distinct from sexual orientation. Modern research clearly shows

that gender identity and sexual orientation are distinct phenomena.. The growing body of evidence on the neurobiology of gender dysphoria contradicts Blanchard's purely psychological or sexual explanation. As demonstrated, this theory is scientifically unfounded and has been largely rejected and discredited by the scientific community. Not to mention that paraphilia is excluded from gender incongruence in the ICD-11 Chapter 17, HA60.

Blanchard's work suffers the same critical flaw that required Sigmund Freud's work to be thrown out and completely reexamined over time. Refusal to admit his theory is not all inclusive and all explaining. Refusal to include any ways to prove his theory right or wrong.. it just is right in his mind. He culls his data the same way that all science does now. Which has made the recreation crisis we now suffer. Inherently, no matter how convincing or how much of a point it has, it must be utterly shunned till he agrees to fix it. It must be held to the standards of reproducibility, falsifiability, and integrity that define robust science.

Blanchard refuses to even acknowledge any data that disagrees with him.. even when it comes from his own studies. He's a man who saw two kinds of people and now insist that is all people. That's the level of professionalism he's operating on. There's a square hole and a round hole. Where does the oval piece go? That's right, we throw the oval piece away and pretend it was never there. What oval hole? No I didn't tape over that. You're lying to me. That's not tape over a hole. Stop lying. To him all trans women are either autogynephilic or homosexual men and he doesn't care about anything else but that preconcieved notion no matter how much data is against it. That there is some sand sized grain of truth in his typings makes them all the more dangerous as such. And frankly a lot of what he includes in it is also vague enough that you get the kind of.. internet personality quiz effect.

Logically those probably exist and it wouldn't be hard to drum up a couple, study them, and stamp a sheaf of papers and call it a hot new psychology. But it's telling Blanchard refuses to admit other data in if it happens to disagree. He.. 'curates' his data. Even if he collects it. He just says you are lying if it disagrees with his typings. then crosses you off. Notably this is how Sigmund Freud operated and he basically invented modern psychology so.. yeah par for the course. "What? No no everyone wants to fuck their mother. You're just lying to me."

Or his catch 22 of circular logic. He insisted everyone was repressing trauma deeply. Too deep to remember. If you disagree, you're just lying. And he knows cause you're just repressing it so hard you don't remember it. It's an unassailable argument cause it's self proving. And Freud in his day absolutely had the same cultists that follow modern psychology around.

Culled data? Circular arguments? Experiments that have literally no failure state or even refusal to experiment? A "I am just right" attitude? That's Freud.

The only reason Blanchard's work isn't ridculed to the ends of the earth is because no one genuinely thinks trans women are women mentally. The base assumption of the field is that it's mentally ill men and the form of the theories only reflect that. But frankly there has never been a single experiment that bares this fact out. There's always, always, a core group of dysphorics that they can't pry out of it. Once you cut away the abuse victims and people who are confused (or even certain bipolars) you are left with trans people. If it were just some kind of mental illness or mistake, they'd probably have found something to do about it by now under that notion. Nothing ever works. And ironically their best champion to proving gender is not real proved gender is inherent, and not spoofable.

John Money's experiments were inhumane but he succesfully proved the opposite of what he hoped despite trying to manipulate the situation. You cannot even raise cis people from newborns to accept a different sex as their own. It does not work. He literally just proved the existence of gender dysphoria and the concept that you can't socialize a brain to accept itself as the incorrect gender, but John Money was trying to prove you could train anyone to be any gender, but he proved the opposite. And this is even through doing things like abusing the kids outright. Sex is absolutely part of the brain inherently. From there it's trivial to ask.. what if someone's brain is wired the other way around? If this is true, you'd not be able to simply train them out of it or convince them. Not even when raised that way from birth.. which is the plight of trans people. Shock of shocks.

Money's cisgender victims kill themselves at the same age a lot of trans people do. For the same reason, because being raised at the opposite sex is incredibly traumatic, inherently.

This is nonsense. Blanchard is full of it from top to bottom. Hidden by the fact you literally can find male sexual deviants and he just culls the data of anyone who isn't. Calls them liars. X's out their data. He admits to it himself.

Regardless, what you should ask is why Blanchard culls his data and calls people liars when they won't agree to his preconcieved typology. And has no standard for proving his ideas right or wrong. He just inists they are right.

Also, trans women have unfortunately been pushed into the porn industry heavily. It’s a business which has completely consumed peoples understanding of trans women, because it is the media that most cis people more predominantly see trans women in, so their understanding of us is shaped around lust to begin with. blanchards argument presupposes that MtFs always have a sex

drive and their actions are determined by this, but a lot of other trans women i know have said HRT briefly killed their sex drive to the point where they thought they were asexual, wouldnt they be cease being trans if the source is cut off? But no these women continued to become women, even in a state where sexuality seemed impossible.

That aside, one of the hideously glaring flaws in his idea is the simple fact that this makes all women inherently autogynophilic under his standards. All women. All natural women. Women like to feel like they are sexy and find feeling sexy sexy. This is not a hard train of thought to follow. Sexism, the thought line women have no sex drive, can't understand sex, and do not get horny. Ever. It leads to things like this. It is absolutely not strange that the joy and empowerment of feeling sexy would turn someone on. This shouldn't be shocking to anyone. Cis people also have a certain attraction to their own bodies. Its similar to cis men who work out (and even take hormonal supplements) to attain a certain body type Would it be fair to call gym rats auto androphilics, even if having a masculine body is something important for their sex life?

The comical thing here is.. part of the issue with all this is probably how little science cares about women or examining them in any capacity. What is 'normal' for a woman biologically or mentally or emotionally has next to no data. Those later two effect us cause even if we were just mentally women top to bottom.. there's no comparison point. No one cares about women enough to study anything.

In conclusion, it contradicts the mainstream scientific/academic opinion that comes from empirical evidence and peer-reviewed research as opposed to blanchardianism that comes from selective anecdotal observations, untested assumptions, and outdated theories, observational/speculative psychology without the robust

data needed to support them scientifically, rather than rigorous science (not unlike a lot of early psychology, honestly).

Breif history of transgender people:

In the ancient times, the Mesopotamian Gala priestesses (assigned male at birth, lived as women) were in service of the goddess Inanna. “To turn a man into a woman and a woman into a man are yours, Inana. Desirability and arousal, goods and property are yours, Inana,” is perhaps Enheduanna's most famous line. The galli preists of the Phrygian goddess Cybele played a similar role. In ancient Egypt, in the Tale of Two Brothers (from 3,200 years ago), Bata removes his penis and tells his wife "I am a woman just like you". In Kurdistan, the Hassanlu civilization recognized a third gender more than 3000 years ago.

In early Islamic Arabia, both the prophet Muhammad and Omar Bin Al-Khattab had trans women in their homes (Al-Bukhari 5235/6445), what's notable is that the prophet did not harm them in any way whatsoever, he only exiled the trans woman (after many years) in the hadith because the prophet noticed she had been interested in women and he still allowed her back on Fridays or Saturdays to get food (16983 - Bayhaqi vol 8 pg 390 Kitab Al hudud - 4324 Bukhari - 2181 Muslim), and there were other trans women (1337 - Nisaburi & Ibn Hajar Asqalani 9040). They were known as "mukhannathun" (Arabic for 'feminine', originates from khuntha meaning hermaphrodite/intersex it was only associated with homosexuality in the medieval period) at the time, there was a clear distintion between them and homosexuals, narrated Ibn Abdul Bar: "A mukhannath is not a person in whom immorality (i.e. homosexuality) is particularly known, but rather the extreme innate feminization so that he resembles a woman in softness, speech, sight, tone, and reason (referring to general cognition)." (المغني 7/463 ، الشرح الكبير على متن المقنع 7/347-348).

I would even go as far as to call them companions of the prophet since the consensus of Islamic scholars is that any Muslim who was in the prophet's company even for an hour is one of the Sahaba. (Al-Nawawi 2533, Imam Ahmad in al buhuti vol 1 pg 16-17).

Read "The 'Deviant' African Genders That Colonialism Condemned"

Read "Gender-Bending Anthropological Studies of Education"

In the medieval times, a notable trans person was Rabbi Kalonymous. In the modern times, Lili Elbe had the first documented gender affirming surgery in the world in 1932.

It is unfair to stigmatize trans people. There are individuals who are born with penile/vaginal agenesis, there are people with hypogonadism. The former has to undergo reconstructive procedures such as the Davydov Procedure similar to GAS (Gender affirming surgery, where a surgical creation of a vagina in between

the bladder and the rectum and the successive lining with a dermal graft (the peritoneum (an abundant, moist inner lining of the abdominal wall) is pulled down into the potential space between the rectum and the urethra/prostate to serve as the future vaginal lining.) is performed which is actually the same as the peritoneal pull-through technique, used for both cis (vaginal agenesis or other congenital issues or even trauma) and trans women) and the latter undergoes hormone replacement therapy to supplement what the body doesn't produce adequately. There are conditions like androgen insensitivity (which is pretty analogous to gender dysphoria's aetiology for trans men, only in the brain due to insufficient feminization) or turner syndrome and PCOS. This is all part of natural human diversity, another facet of treating natural variations in how bodies and brains develop.

Pre-operative trans women and cis men are phenotypically (a phenotype is the observable characteristics of an organism that are determined by both its genes and its environment.) different by neural structure in various regions such as as BSTc (whose sex differentiation is independent of adult hormones) , Insula, ACC, Hypothalamus (INAH3), sexually dimorphic nucleus of the preoptic area, cortical thickness and white matter microstructure, superior parietal lobule, amygdala, thalamus, putamen, anterior cingulate gyrus, bilateral parahippocampal gyri, left caudate nucleus, right medial and inferior temporal gyrus (posterior part) and right subthalamic nucleus, corpus callosum & temporal lobes. The differences are a result of genetic, endocrine and fetal exposure factors. Those differences were observed by using multiple neuroimaging techniques including but limited to fMRI, DTI, VBM, PET, sMRI and EEG. They were always women and vice versa for trans men. It is a deeply ingrained part of who they are. It is NOT merely a psychological or social phenomenon, or gender expression or behavior but is rooted in a person's biological makeup from an early stage of development, and transitioning is simply a process of aligning their body and presentation with that inherent truth.

Note: all of these differences were observed in trans people BEFORE any hormonal treatment, the studies (found in references) mentioned control for hormonal treatments.

Trans women are not "biological males", first of all brain sex differences are present at birth, and gender dysphoria is an incongruence between the sex differentiation of the brain and the gonads (thus the body) during gestation. Second, HRT changes your biology and chemistry (an example out of many is reprogramming physiological processes including the cardiovascular system, nervous system and the immune system, bone density, blood chemistry, sensory & perceptual processing, insulin sensitivity, sweat & oil glands, metabolism, altered drug metabolism, thyroid and adrenal function, gut microbiome, sexual behavior, cognition, memory, brain function & mental health, fluid balance, lung function, melatonin regulation, DNA methylation, DNA repair, neuroprotection and protein synthesis, even melanin and so much more. And for progesterone the list goes: cardiovascular health, circadian rythm, thermoregulation, bone health, mood regulation, cognition & memory, neuroprotection & brain health (additionally plays a crucial element in the hypothalamic-pituitary-adrenocortical axis.), electrolyte balance, metabolism, spasm reduction, immune response, musculoskeletal system, pancreatic function, skin health and elasticity, serotonin receptors (which for example affects how you respond to nicotine), lobuloalveolar & ductal development, EGF-1 levels, respiration and more. it's down to the most fundamental molecular and cellular levels), your primary and secondary sexual characteristics and alters gene expression (how DNA ends up working as estrogen receptors literally bind to DNA and therefore regulate transcription), let alone surgeries and how they change physiological characteristics. As the body regenerates cells through continuous turnover, estrogen's effects on gene expression and protein synthesis result in the production of cells that increasingly reflect female biology. Hence why it's simply a

process of aligning the body with the brain, or in other words, transitioning is the process that aligns the body's biology and chemistry closer to the brain's differentiation. Calling a trans woman a man is like calling a butterfly a catterpillar.

Check out this article from cambridge university.

TLDR; Some people are trans because of prenatal hormones, genetics, epigenetics, endocrine disruptors, immune response, and self-organization and brain formation in the womb. No one chooses it, no one can change it. It has nothing to do with morals, sexuality, or upbringing in origin.

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This explainer seeks to grant you a better understanding of trans people and gender dysphoria.

The information presented in this article is based on a comprehensive review of scientific literature, including studies published in peer-reviewed journals, books, and reports from reputable organizations.

Research on this issue is still in its early stages and is constantly evolving, but this is what we know for now. As of October 2024, there are around 400 studies on this site. Considering that the average (SD) neuroscience publication has 11 citations (±14.2), there are no less than

4,400 relevant studies. Most studies have 80~ citations which would bring this number up to just under 32,000.

Anti-intellectualism is a plague on the world.

By Lara Jaff.

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