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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

REBECCA ROE, by and through her parents and next friends, Rachel and Ryan Roe; SEXULAITY AND GENDER ALLIANCE, an association

Plaintiffs,

v.

DEBBIE CRITCHFIELD, in her official capacity as Idaho State Superintendent of Public Instruction, et al.,

Defendants.

Case No. 1:23-cv-00315-DCN

DEFENDANTS' MOTION TO DISMISS

Defendants hereby move to dismiss this action under Federal Rule of Civil Procedure 12(b)(6). Defendants submit the accompanying memorandum of law, which sets forth the reasons supporting dismissal of this action.

Dated: August 22, 2023

STATE OF IDAHO
OFFICE OF THE ATTORNEY GENERAL

By: */s/ Lincoln D. Wilson*
LINCOLN DAVIS WILSON
Chief of Civil Litigation and
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 22, 2023, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which sent a Notice of Electronic Filing to the following persons:

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Case No. 1:23-cv-00315-DCN

CONSOLIDATED RESPONSE IN OPPOSITION TO MOTION FOR PRELIMINARY INJUNCTION AND STATEMENT OF INTEREST AND IN SUPPORT OF MOTION TO DISMISS

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INTRODUCTION

This case concerns a challenge to Idaho S.B. 1100, which institutes the traditional practice of separating bathrooms, locker rooms, and overnight stays by sex in Idaho public schools. Sex separation of bathrooms is both "nearly universal" and longstanding—it has existed not just from the founding of this country, but since time immemorial. *Adams by and through Kasper v. Sch. Bd. of St. Johns Cnty.*, 57 F.4th 791, 796 (11th Cir. 2022) (en banc). It is based on what S.B. 1100 recognizes as the "real and inherent physical differences between men and women" and the natural right of every person "to privacy and safety in restrooms and changing facilities where such person might be in a partial or full state of undress in the presence of others." Idaho Code § 33-6601 [33-6701] (1)-(2). S.B. 1100 codifies that practice for multi-occupancy bathrooms, but it also provides an accommodation through unisex, single-occupancy bathrooms. Idaho Code § 33-6605 [33-6705].

Plaintiffs say this is illegal under the Equal Protection Clause and Title IX. They are wrong. The Court should deny an injunction and dismiss their claims.

First, Plaintiffs' equal protection claims fail. S.B. 1100's sex classification for bathroom use easily satisfies intermediate scrutiny. As the Eleventh Circuit recognized in *Adams*, sex-separation of bathrooms has existed since before the Fourteenth Amendment was adopted. The practice directly serves sex-specific interests of safety and privacy, including in protecting one's unclothed figure from being seen by the opposite sex. *Byrd v. Maricopa Cnty. Sheriff's Dep't*, 629 F.3d 1135, 1141 (9th Cir. 2011). Nor is there any merit to the view that this sex classification

was meant to discriminate against people with gender dysphoria. Gender dysphoria is not a proxy for sex, and the law accommodates those who have it.

Second, Plaintiffs' Title IX claims fail too. Plaintiffs ignore that Title IX and its implementing regulations specifically state that sex-separated restrooms are permissible. The federal government, in contrast, acknowledges the regulations, but says they do not apply to transgender people. But it does so despite a preliminary injunction entered in favor of Idaho that prohibits the federal government from enforcing that position to enjoin state laws. *See Tennessee v. United States Dep't of Educ.*, 615 F. Supp. 3d 807 (E.D. Tenn. 2022). An interpretation enjoined by one preliminary injunction is not a basis to grant another.

Because Plaintiffs' claims fail as a matter of law, they cannot show they are likely to succeed on the merits. But even if they could show "serious questions" on the merits, that would not be enough for an injunction since they cannot show that the balance of harms tips decidedly in their favor. To the contrary, they have no irreparable harm, since S.B. 1100 provides them accommodation through gender-neutral single-occupancy bathrooms that their own expert's cited authorities say "can be viewed as part of gender-affirming support and care." Price-Feeney, *Impact of Bathroom Discrimination on Mental Health Among Transgender and Nonbinary Youth*, 68 J. ADOLESCENT HEALTH No. 6, at 1143 (June 2021) (Ex. 4); Budge Dep. at 95:12-19 (Ex. 1).[1] The law *supports* them; it does not injure them.

[1] All references to Exhibits are to those attached to the accompanying Declaration of Lincoln D. Wilson.

Society-wide cultural changes have led to "vexing line-drawing dilemmas for legislatures" over "access to bathrooms" and other issues, which ought to provoke "hesitancy" for the courts to step in. *L.W. by and through Williams v. Skrmetti*, 73 F.4th 408, 420 (6th Cir. 2023); *Eknes-Tucker v. Gov. of Alabama*, ___ F.4th ____, 2023 WL 5344981 (11th Cir. Aug. 21, 2023). Where "the States are currently engaged in serious, thoughtful debates about the issue," then "[t]he burden of … constitutionalizing new areas of American life is not—and should not be—a light one." *Id*. at 415–16 (citation omitted). Plaintiffs have not met that burden.

STANDARD OF DECISION

A motion to dismiss under Rule 12(b)(6) may seek dismissal based on "the lack of a cognizable legal theory or the absence of sufficient facts alleged under a cognizable legal theory.'" *Godecke v. Kinetic Concepts, Inc.*, 937 F.3d 1201, 1208 (9th Cir. 2019) (quoting *Balistreri v. Pacifica Police Dep't*, 901 F.2d 696, 699 (9th Cir. 1990)). A preliminary injunction requires four elements: (1) a likelihood of success on the merits; (2) likely irreparable harm without an injunction; (3) that the balance of equities weighs in favor of an injunction; and (4) that an injunction is in the public interest. *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008). Or if the plaintiff shows only "'serious questions' going to the merits" rather than a likelihood of success, then she must show irreparable injury, that the public interest is satisfied, and that "the balance of hardships tips sharply in the plaintiff's favor." *All. for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1134-35 (9th Cir. 2011).

ARGUMENT

I. Plaintiffs' claims fail on the merits.

As this Court has acknowledged, "there is already a circuit split on the issues raised in this case." Dkt. 44 at 8. Late last year, the en banc Eleventh Circuit upheld a law indistinguishable from S.B. 1100. *Adams*, 57 F.4th at 796. A Fourth Circuit panel has ruled the opposite, over a dissent by Judge Niemeyer. *Grimm v. Gloucester Cnty. Sch. Bd.*, 972 F.3d 586 (4th Cir. 2020). And the Seventh Circuit has done likewise, *Whitaker v. Kenosha Sch. Dist.*, 858 F.3d 1034 (7th Cir. 2017), with Judge Easterbrook expressing the opinion that the Eleventh Circuit's decision "better understands how Title IX applies" in this context. *A.C. by M.C. v. Metro. Sch. Dist. of Martinsville*, No. 22-1786, 2023 WL 4881915, at *11 (7th Cir. Aug. 1, 2023) (Easterbrook, J., concurring). The best-reasoned authorities show that Plaintiffs' claims fail as a matter of law and are due to be dismissed. But at minimum, with no controlling decision from the Ninth Circuit, "this divided backdrop" undermines Plaintiffs' attempt to show they are likely to prevail on the merits. Dkt. 44 at 8.

That becomes even more clear in considering the Supreme Court's reaffirmation that the Constitution's text and original public meaning is the lodestar for its interpretation. *Dobbs v. Jackson Women's Health Org.*, 142 S. Ct. 2228 (2022); *N.Y. State Rifle & Pistol Ass'n, Inc. v. Bruen*, 142 S. Ct. 2111 (2022). "Constitutional analysis must begin with 'the language of the instrument,' ... which offers a 'fixed standard' for ascertaining what our founding document means." *Dobbs*, 142 S. Ct. at 2244–45 (citation omitted). The analysis is "rooted in the … text, as informed by

history." *Bruen*, 142 S. Ct. at 2127. Thus, in evaluating constitutional claims, courts must consider "whether the Constitution, properly understood," confers the right in question. *Dobbs*, 142 S. Ct. at 2234. And a constitutional challenge to state law will not succeed where an "overwhelming consensus" has historically upheld the regulations in question. *Id.* at 2253-54. These standards doom Plaintiffs' claims.

A. Plaintiffs' Equal Protection claims fail as a matter of law.

Although the Equal Protection clause protects "sex" as a basic "immutable characteristic," *Frontiero v. Richardson*, 411 U.S. 677, 686 (1973), this Court has recognized that it "does not require courts to disregard the physiological differences between men and women." *Hecox v. Little*, 479 F. Supp. 3d 930, 976 (D. Idaho 2020) (citing *Michael M. v. Superior Ct. of Sonoma Cty.*, 450 U.S. 464, 481 (1981)). "To fail to acknowledge even our most basic biological differences … risks making the guarantee of equal protection superficial, and so disserving it." *Tuan Anh Nguyen v. I.N.S.*, 533 U.S. 53, 73 (2001). Those physiological differences between men and women are "enduring" and should be a "cause for celebration," not the denigration, of the "two sexes." *U.S. v. Virginia*, 518 U.S. 515, 533 (1996). "The truth is that the two sexes are not fungible; a community made up exclusively of one is different from a community composed of both; the subtle interplay of influence one on the other is among the imponderables." *Ballard v. U.S.*, 329 U.S. 187, 193 (1946). Even in addressing questions related to gender dysphoria, the Supreme Court has continued to recognize sex as referring "to biological distinctions between male and female."

Bostock v. Clayton County, Georgia, 140 S. Ct. 1739 (2020). That is because gender dysphoria is a "distinct concept[] from sex." *Id.* at 1746–47.

Because the two sexes are in some respects "similarly situated" and in other respects "meaningfully dissimilar," *see City of Cleburne, Tex. v. Cleburne Living Ctr.*, 473 U.S. 432, 439 (1985), the Supreme Court has directed that classifications based on sex are subject to intermediate scrutiny. *Clark v. Jeter*, 486 U.S. 456, 461 (1988). That is, those classifications must serve "'important governmental objectives" and be "'substantially related to the achievement of those objectives.'" *Adams*, 57 F.4th at 801 (quoting *Miss. Univ. for Women v. Hogan*, 458 U.S. 718, 724 (1982)). S.B. 1100 is subject to intermediate scrutiny because it classifies based on sex: "the immutable biological and physiological characteristics, specifically the chromosomes and internal and external reproductive anatomy, genetically determined at conception and generally recognizable at birth, that define an individual as male or female." Idaho Code § 33-6602 [33-6702](3). And based on that definition, S.B. 1100 codifies the longstanding historical practice of requiring sex-separated use of bathrooms, locker rooms, and overnight lodging at public schools as a matter of state law. Idaho Code § 33-6603 [33-6703] (2)-(4). In upholding these well-settled practices, S.B. 1100 easily survives intermediate scrutiny under historical-textual analysis. *Dobbs*, 142 S. Ct. at 2244–45; *Bruen*, 142 S. Ct. at 2131.

1. Sex-separated bathrooms protect safety and privacy.

As Judge William Pryor observed in dissenting from the original panel opinion in *Adams*, "[n]ot long ago, a suit challenging the lawfulness of separating bathrooms

on the basis of sex would have been unthinkable." *Adams v. Sch. Bd. of St. Johns Cnty., Fla.*, 3 F.4th 1299, 1321 (11th Cir. 2022) (panel opinion) (W. Pryor, J., dissenting). That "common-sense" practice has been deemed acceptable because "it protects well-established privacy interests in using the bathroom away from the opposite sex." *Id.* And as the en banc Eleventh Circuit ultimately held in *Adams*, the history of this practice is ultimately fatal to Plaintiffs' challenge. *Adams* 57 F.4th at 796; *accord Dobbs*, 142 S. Ct. at 2244–45; *Bruen*, 142 S. Ct. at 2131.

"[S]ex-separation in bathrooms dates back to ancient times, and, in the United States, preceded the nation's founding." W. Burlette Carter, *Sexism in the "Bathroom Debates": How Bathrooms Really Became Separated by Sex*, 37 Yale L. & Pol'y Rev. 227, at 229 (2018). These practices have occurred "[a]cross societies and throughout history … in order to address privacy and safety concerns arising from the biological differences between males and females." *G.G. ex rel. Grimm v. Gloucester Cnty. Sch. Bd.*, 822 F.3d 709, 734 (4th Cir. 2016) (Niemeyer, J., concurring in part and dissenting in part), *vacated and remanded by Gloucester Cnty. Sch. Bd. v. G. G. ex rel. Grimm*, 137 S. Ct. 1239 (2017); Carter, *supra*, at 228. The practice was certainly common at the time the Fourteenth Amendment was ratified. Peter C. Baldwin, *Public Privacy: Restrooms in American Cities*, *1869–1932*, 48 J. of Soc. Hist. 264 (2014). And so even before Idaho's statehood, "[s]chools educating both sexes followed sex-separation in multi-entry intimate spaces." Carter, *supra*, at 277 n.212.

Separating bathrooms by sex has provided significant protection for women. It was "among the earliest state-wide attempts to protect women from workplace sexual

harassment," *id.* at 279–283, and it was a victory in the women's rights movement. Kevin Stuart & DeAnn Barta Stuart, *Behind Closed Doors: Public Restrooms and the Fight for Women's Equality*, 24 Tex. Rev. L. & Pol. 1, 28–29 (2019). Thus, Title IX, which Plaintiffs invoke as the basis for their claims, "provides a statutory carve-out for 'maintaining separate living facilities for the different sexes.'" *Adams*, 57 F.4th at 813 (quoting 20 U.S.C. § 1686). As Justice Ginsburg wrote before taking the bench, "[s]eparate places to disrobe, sleep, [and] perform personal bodily functions are permitted, in some situations required, by regard for individual privacy." Ruth Bader Ginsburg, *The Fear of the Equal Rights Amendment*, Wash. Post, Apr. 7, 1975, at A21.[2]

Federal caselaw illustrates how these well-worn justifications for sex separation of restrooms have endured in the twentieth and twenty-first centuries. Justice Thurgood Marshall famously quipped that "[a] sign that says 'men only' looks very different on a bathroom door than a courthouse door." *City of Cleburne,* 473 U.S. at 468–69 (Marshall, J., concurring). The Supreme Court acknowledged that admitting women to the Virginia Military Institute for the first time "would undoubtedly require alterations necessary to afford members of each sex privacy from

[2] Self-described feminist commentators have argued for the same thing. "[L]eaving aside the risk of assault, sex-segregated bathrooms give women the peace of mind of knowing they can use the bathroom, attend to their menstrual needs and to small children, with a degree of privacy and dignity that would otherwise not exist." Cambridge Radical Feminist Network, *There Is Nothing Progressive About Removing Women-Only Bathrooms*, Medium (Jan. 13, 2019). And the loss of that private space will fall most heavily on "those individuals who—due to having a history of sexual assault, or for religious reasons—do not feel comfortable using a shared intimate space with male strangers." *Id.*

the other sex in living arrangements." *U.S. v. Virginia*, 518 U.S. 515, 550 n.19. Courts of appeals have likewise noted society's "undisputed approval of separate public rest rooms for men and women," *Faulkner v. Jones*, 10 F.3d 226, 232 (4th Cir. 1993), in order "to accommodate privacy needs." *Chaney v. Plainfield Healthcare Ctr.*, 612 F.3d 908, 913 (7th Cir. 2010). And not long ago, the Ninth Circuit in particular emphasized that "[t]he desire to shield one's unclothed figure from [the] view of strangers, and particularly strangers of the opposite sex, is impelled by elementary self-respect and personal dignity." *Byrd*, 629 F.3d at 1141.

Plaintiffs do not acknowledge this long tradition recognizing the importance of sex separation in areas of personal bodily privacy. Much less do they grapple with the reasons for it. That is fatal to their claims.[3]

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[3] Plaintiffs assert, without elaboration, that the record is "Bereft of Any Evidence" supporting the legislature's findings regarding safety and privacy. Dkt. 15-1 at 5. This is mistaken as a matter of law because it criticizes what is inherent to such legislative facts—that is, those facts "which have relevance to legal reasoning and the lawmaking process," rather than adjudicative facts, which are "the facts of the particular case." Fed. R. Evid. 201, Advisory Comm. Note. Legislative facts are "facts relevant to shaping a general rule," *Ind. Harbor Belt R.R. Co. v. Am. Cyanamid Co.*, 916 F.2d 1174, 1182 (7th Cir. 1990) (Posner, J.), that "have salience beyond the specific parties to [a] suit," *Carhart v. Gonzales*, 413 F.3d 791, 799 (8th Cir. 2005) (citation omitted), *rev'd*, 550 U.S. 124 (2007), and "help the tribunal decide questions of law and policy and discretion." *Langevin v. Chenango Ct., Inc.*, 447 F.2d 296, 300 (2d Cir. 1971) (Friendly, C.J.) (quotation marks and citation omitted); *United States v. $124,570 U.S. Currency*, 873 F.2d 1240, 1244 (9th Cir. 1989). They are not subject to ordinary rules of judicial notice, *see* Fed. R. Evid. 201, and they may be established by material in the briefs at any stage of the proceeding, even on appeal. *See Daggett v. Comm'n on Governmental Ethics & Election Pracs.*, 172 F.3d 104, 112 (1st Cir. 1999); *Free v. Peters*, 12 F.3d 700, 706 (7th Cir. 1993) (Posner, J.); *Dunagin v. Oxford*, 718 F.2d 738, 748 n.8 (5th Cir. 1983). And the critical legislative facts here—the safety and privacy interests that support sex-separated bathrooms—are amply supported by the authorities set forth in this brief.

2. The best-reasoned caselaw upholds sex-separated bathrooms.

Plaintiffs are not likely to succeed on the merits because the courts of appeals are split on whether sex-separated bathrooms comply with equal protection. And not only are the courts of appeals split, but the key decisions on these questions have generated multiple opinions, including concurrences and dissents. Among those opinions, the best-reasoned decisions uphold laws like S.B. 1100 and show that Plaintiffs' claims fail as a matter of law.

Most significant, in *Adams*, the en banc Eleventh Circuit upheld what it termed "the unremarkable—and nearly universal—practice of separating school bathrooms based on biological sex." 57 F.4th at 796. As Judge Lagoa's opinion for the court explained, "public bathrooms" are "likely the most frequently encountered example" of the "long tradition in this country of separating sexes" in certain circumstances. *Id.* at 801. Where that happens in public schools, additional deference is warranted, given "'the schools' custodial and tutelary responsibility for children.'" *Id.* at 801-02 (quoting *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 656 (1995)). In light of that tradition and deference, sex-separation of bathrooms both "advances the important governmental objective of protecting students' privacy in school bathrooms and does so in a manner substantially related to that objective." *Id.* at 803. As the court explained, "protection of individual privacy will occasionally require some segregation between the sexes," *id.* at 804, and so it is "no surprise, then, that the privacy afforded by sex-separated bathrooms has been widely recognized throughout American history and jurisprudence." *Id.* at 805. And those

privacy interests are sex-specific, because they "hinge on using the bathroom away from the opposite sex and shielding one's body from the opposite sex." *Id.* at 806. Given the direct fit between those sex-specific privacy interests and sex separation of bathrooms, the Eleventh Circuit upheld the law. *See id.*; *accord D.H. by A.H. v. Williamson Cnty. Bd. of Educ.*, No. 3:22-CV-00570, 2022 WL 16639994, at *10 (M.D. Tenn. Nov. 2, 2022).

Likewise, while Plaintiffs rely on the Fourth Circuit's overturning of a similar school board policy in *Grimm*, *see* Dkt. 15-1, far more persuasive is the vigorous dissent by Judge Niemeyer, who would have held that sex-separation of bathrooms in "accord with longstanding and widespread practice" was "appropriately justified by the needs of individual privacy, as has been recognized by law." 972 F.3d at 628 (Niemeyer, J., dissenting). It "is constitutional for a school to provide separate restrooms for its male and female students … because there are biological differences between the two sexes that are relevant with respect to restroom use." *Id.* at 636. The "privacy interest" that people have when "they remove clothes and engage in personal hygiene, … is heightened when persons of the opposite sex are present," and especially so for children, who "are still developing, both emotionally and physically." *Id.* (quotation omitted). Whatever the majority may have believed about the wisdom of certain policies for students with gender dysphoria, "our role as a court is limited"—to "apply the law and … leave it to Congress to determine policy." *Id.* at 637.

Nor is anything in *Parents for Privacy v. Barr*, 949 F.3d 1210 (9th Cir. 2020), to the contrary. That case was the converse of this one: it did not overturn sex-

separated bathrooms, but rather rejected a challenge to a policy that allowed students with gender dysphoria to use bathrooms of the opposite sex. *Id.* at 1217–18. And of course, holding that the Constitution does not *require* sex-separated bathrooms is not the same as holding that the Constitution *forbids* sex-separated bathrooms. In fact, the variety of legislative approaches on the question suggests the opposite: that the constitution permits latitude on the question. *L.W.*, 73 F.4th at 412, 415–416.

The Ninth Circuit's recent decision in *Hecox v. Little*, ___ F.4th ___, 2023 WL 5283127 (9th Cir. Aug. 17, 2023), is even less applicable. Although the State disagrees with that decision, the Ninth Circuit's opinion distinguished *Adams* by being quite clear that "bathrooms by their very nature implicate important privacy interests and are not the equivalent of athletic teams." *Id.* at *10 & n.10. The State's interest in personal sexual safety and privacy that supports S.B. 1100 is wholly distinct from the interests of fairness and protecting athletic scholarships for women that were cited to this Court in support of the Fairness in Women's Sports Act. *Hecox v. Little*, 479 F. Supp. 3d 930, 980-83 (D. Idaho 2020). Likewise, while the Ninth Circuit concluded that the Fairness in Women's Sports Act discriminated directly against persons with gender dysphoria, *Hecox*, 2023 WL 5283127 at *7-8, S.B. 1100 classifies based only on sex. *See infra* at Section I.A.3. *Hecox* "address[ed] only the Act before [the court], and opine[d] on no other regulation or policy." *Hecox*, 2023 WL 5283127 at *22. There is no basis to extend *Hecox* to this context.

3. S.B. 1100 classifies based on sex, not gender dysphoria.

Plaintiffs work in vain to characterize S.B. 1100 as discriminating based on their status as individuals with gender dysphoria. S.B. 1100 separates bathrooms, locker rooms, and overnight stays based on sex—it does not account for or distinguish students based on gender dysphoria or any other characteristic. To respect the safety and privacy of all students in areas where they may be partially undressed, S.B. 1100 simply requires all students to use the restroom or changing facilities that correspond with their sex. So while S.B. 1100 does separate restroom facilities by sex, it treats every *similarly situated* individual the same. All males must use the boys' restroom (or a single-occupancy restroom), and all females must use the girls' restroom (or a single-occupancy restroom).

This separation based on biological sex requires no knowledge or awareness of gender dysphoria, and as a result, necessarily does not discriminate based on transgender status or gender identity. As the Eleventh Circuit explained in *Adams*, such a law "does not depend in any way on how students act or identify," but rather "separates bathrooms based on biological sex, which is not a stereotype." *Adams*, 57 F.4th at 809. There is no classification based on gender dysphoria since there is a "lack of identity" between that classification and the sex-based line drawn by the law, which includes people with gender dysphoria on both sides. *Id.* (discussing *Geduldig*, 417 U.S. at 486, 496–97). Even a disparate impact on persons with gender dysphoria, to have any basis to be actionable, would require a showing it was "motivated by purposeful discrimination." *Id.* at 810 (quotation omitted). Plaintiffs lack any such

evidence—to the contrary, the law specifically provides an accommodation for people with gender dysphoria that Dr. Budge's studies acknowledge "can be viewed as part of gender-affirming support and care." Price-Feeney at 1143 (2021); Budge Dep. at 95:12-19.[4] And even then, as a matter of original meaning, the Equal Protection Clause and Title IX have nothing at all to say about gender dysphoria or transgender status since those concepts were essentially unknown when both the Fourteenth Amendment and Title IX were enacted. *Dobbs*, 142 S. Ct. at 2244–45; *Bruen*, 142 S. Ct. at 2131; Carl R. Trueman, The Rise and Triumph of the Modern Self 19, 350–57 (2020).

Nor does it make a difference that the Ninth Circuit applies intermediate scrutiny to classifications concerning gender dysphoria. The Ninth Circuit adopted

[4] Plaintiffs seek to minimize the common-sense findings of the legislature in support of S.B. 1100 and instead strain to find evidence of discriminatory intent in legislative testimony. But "[s]tray remarks of individual legislators are among the weakest evidence of legislative intent," *Tingley v. Ferguson*, 47 F.4th 1055, 1087 (9th Cir. 2022), and "it is quite a leap to attribute these motives to all the legislators whose votes were responsible for the enactment of those laws." *Dobbs,* 142 S. Ct. at 2256; *Barhart v. Sigmon Coal*, 534 U.S. 438, 457 (2002). None of the speakers in support of the bill expressed any animus towards transgender individuals or "professed a belief that transgender people do not or should not exist." Dkt 15-1 at 6. Rather, Plaintiffs find discrimination only through mischaracterization—for example, by pointing to Senator Trakel's comments regarding "some small child" being "molested or raped in the bathroom." *Id.* But Senator Trakel was simply addressing whether documented cases of harm were required to enact a preventative law—whether "we have to wait for someone to be hurt, or injured or raped before we implement a law" (Feb. 23, 2023, Senate Educ. Comm. Hearings at 52:28; https://tinyurl.com/4w8mkpvh)—and made clear that he did "not think that the risk of harm or anything comes from the trans community, but … from predators and people that would abuse this policy to get into opposite sex bathrooms, locker rooms, and overnight trips." Mar. 15, 2023, House Educ. Comm. Hearings at 25:13 (https://tinyurl.com/yvpnrn38).

that standard in *Karnoski v. Trump*, 926 F.3d 1180, 1192 (9th Cir. 2019), which concerned a policy that directly forbade military service by persons with gender dysphoria. *Id.* at 1186. But S.B. 1100 does not make any such classification here: it "facially classifies based on biological sex," not gender dysphoria. *See Adams*, 57 F.4th at 808. Just like in *Adams*, S.B. 1100 "does not classify students" according to gender dysphoria "because a 'lack of identity' exists" between that diagnosis "and a policy that divides students into biological male and biological female groups … for purposes of separating the male and female bathrooms by biological sex." *Id.* at 809; *L. W.*, 73 F.4th at 412. And even if intermediate scrutiny applied under *Karnoski*, it makes no difference: that standard already applies based on the law's sex classification, and S.B. 1100 passes it with flying colors.

Finally, Plaintiffs cannot save their case by invoking the Supreme Court's statutory interpretation of Title VII's sex discrimination provisions in *Bostock*, 140 S. Ct. For one, *Bostock* was painstakingly clear that it did "not purport to address bathrooms, locker rooms, or anything else of the kind." *Id.* at 1753. And more important, the heart of its analysis that Plaintiffs rely on—that "it is impossible to discriminate against a person for being transgender without discriminating against that individual based on sex"—does not apply here. Dkt. 15-1 at 12 (quoting *Bostock*, 140 S. Ct. at 1741). This is not a case like *Bostock* where Plaintiffs attempt to leverage a classification based on gender dysphoria into a classification based on sex. In fact, it's the opposite: Plaintiffs argue that a classification based on sex should be treated as a classification based on gender dysphoria. Nothing in *Bostock* permits that logical

inversion. And it is also plainly wrong. As *Adams* observed, a classification based on sex is not necessarily a classification based on gender dysphoria, since individuals with gender dysphoria fall into both of the two sexes. *Adams*, 57 F.4th at 808-09.

B. Title IX expressly allows for sex-separated bathrooms.

Plaintiffs say that S.B. 1100 violates Title IX because its requirement of sex-separated bathrooms necessarily discriminates "on the basis of sex." 20 U.S.C. § 1681. They omit, however, that the Title IX and its implementing regulations "explicitly permit" schools to classify based on sex in this area. *Adams*, 57 F.4th at 811. Title IX states that no provision in that chapter "shall be construed to prohibit any educational institution receiving funds under this Act, from maintaining separate living facilities for the different sexes." 20 U.S.C. § 1686. And the regulations allow schools receiving federal funds to provide "separate toilet, locker room, and shower facilities on the basis of sex," so long as the facilities "provided for students of one sex [are] comparable to such facilities provided for students of the other sex." 34 C.F.R. § 106.33. They also allow schools to "provide separate housing on the basis of sex," so long as the housing is "[p]roportionate in quantity to the number of students of that sex applying for such housing" and "[c]omparable in quality and cost to the student." 34 C.F.R. § 106.32(b). Since Title IX allows the practice in question, the fact that the Ninth Circuit has held that Title IX protects gender identity is simply immaterial. *See Grabowski v. Ariz. Bd. of Regents*, 69 F.4th 1110, 1116 (9th Cir. 2023). Plaintiffs' construction of Title IX "is untenable and appears to contradict the very purpose of allowing separate facilities." *D.H. v.*

Williamson Cnty. Board of Educ., No. 3:22-cv-00570, 2022 WL 16639994, at *10. (M.D. Tenn. 2022). As the Eleventh Circuit logically observed, what the law specifically permits it necessarily does not forbid. *Adams*, 57 F.4th at 811.

Plaintiffs ignore *Adams*, but urge the Court to follow the decisions of the Fourth, Sixth, and Seventh Circuits that have held that Title IX prohibits sex-separated bathrooms. Dkt. 15-1 at 17 n.8. But the reasoning of those decisions rejecting the express language of Title IX's regulations is not persuasive, as the separate opinions in each of those courts illustrates. Judge Niemeyer dissented in the Fourth Circuit, explaining that "[c]ontrary to Grimm's claim, Title IX and its regulations explicitly authorize the policy followed by the High School." *Grimm*, 972 F.3d at 628 (Niemeyer, J., dissenting). Judge Sutton dissented in the Sixth Circuit, noting that the U.S. Supreme Court's grant of a stay from the Fourth Circuit's initial ruling in *Grimm* "necessarily found that the school board was reasonably likely to succeed on the merits." *Dodds v. United States Dep't of Educ.*, 845 F.3d 217, 223 (6th Cir. 2016) (Sutton, J., dissenting). And Judge Easterbrook in the Seventh Circuit expressed that *Adams* "better understands how Title IX applies" in this context. *A.C.*, 2023 WL 4881915, at *11 (Easterbrook, J., concurring).

Unlike Plaintiffs, the federal government at least acknowledges that its own Title IX regulations permit separation of bathrooms by sex, but says, without citation, that those rules do "not hold when the student is transgender." Dkt. 41 at 10. But what the federal government omits is even more disturbing: that it has been enjoined from enforcing this interpretation against the State of Idaho, which successfully sued

it to block this very theory. *See Tennessee*, 615 F. Supp. 3d 807. In that injunction, the district court ruled that the federal government's interpretation was likely legislative, since it was "a new position inconsistent with ... [the Department's] existing regulations." *Id.* at 839. The district court specifically enjoined Defendant Kristen Clarke, the principal signatory to the government's statement of interest in this matter. *Id.* at 816. And it did so to prevent, among other things, Ms. Clarke's interference with Idaho's "sovereign authority to enforce state laws." *Id.* at 822. Ms. Clarke's failure to cite this injunction while filing a brief seeking to overturn Idaho law is troubling indeed, and Defendants reserve all their rights.

Further, if Title IX were not clear enough on its face, its role as spending clause legislation is even more compelling. "A safeguard of our federalist system is the demand that Congress provide the States with a clear statement when imposing a condition on federal funding because legislation enacted pursuant to the spending power is much in the nature of a contract." *Adams*, 57 F.4th at 815 (quotation and citation omitted). Thus, the "legitimacy of Congress' power" under the spending power "rests on whether the State voluntarily and knowingly accepts the terms of the 'contract.'" *Pennhurst State Sch. & Hosp. v. Halderman*, 451 U.S. 1, 17 (1981) (citations omitted). And "if Congress intends to impose a condition on the grant of federal moneys, it must do so unambiguously." *Id.* So if Congress meant to forbid sex-separated bathrooms through regulations that specifically approve them, it ought to have said so clearly. It manifestly did not.

C. Plaintiffs' scientific case is biased and deeply flawed.

Plaintiffs base their scientific case on the testimony of Dr. Stephanie Budge, "a psychologist and professor with expertise in transgender health." Dkt. 15-1 at 2. Dr. Budge has acknowledged in print media that she is an "advocate" and "activist" regarding transgender issues and is not concerned that her research might be "tainted" and viewed as biased as a result. Budge Dep. at 112:13-120:5; Peter Coutu, *Changing the Culture*, Isthmus (Sept. 21, 2017) (Ex. 2). She says that reliability "can" be important to scientific research, but would not agree that it is a necessary ingredient. Budge Dep. at 29:20-33:19. Federal law is to the contrary. *See Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 113 S. Ct. 2786 (1993). And while the Rules of Evidence do not apply at the preliminary injunction stage, Dr. Budge's "activist" opinion would not meet the criteria for admissibility under Rule 702.[5]

Dr. Budge says that while most people have a "sex assigned at birth," for those who have gender dysphoria, their subjective "gender identity" is "determinative" of their sex. Dkt. 15-1 at 2-3 (citing Budge Decl. ¶ 25). She says that under "internationally accepted Standards of Care" promulgated by World Professional Association for Transgender Health ("WPATH"),[6] people with gender dysphoria should receive "social transition," which requires them to "live fully in accordance with their gender identity in all aspects of life." *See id.* (citing Budge Decl. ¶¶ 15, 34).

[5] These arguments relate only to Plaintiffs' motion for preliminary injunction.

[6] Defendants served a subpoena on WPATH for records related to its Standards of Care, which WPATH has agreed to produce, subject to entry of a protective order.

She says this requires use of multi-occupancy bathrooms of the sex with which they identify, claiming that using gender-neutral single-occupancy restrooms "is stigmatizing and damaging." *See id.* at 7 (citing Budge Decl. ¶ 52). She is wrong on every one of these points.

1. Gender identity does not determine sex.

Dr. Budge cites nothing in support of her bold assertions about "sex … assigned at birth" and the allegedly "determinative" status of subjective professions of gender identity. Dkt. 15-5 ¶¶ 21-22. But as explained by Defendants' expert Dr. James Cantor, that notion is contrary to science, through which "the sex of a fetus is typically known by sonogram or amniocentesis many months before birth," as seen in "increasingly popular 'gender reveal' events." Cantor Decl. ¶ 49.[7] It is also contrary to the law—among other things, *Bostock*'s recognition of discrimination based on gender dysphoria is based on the premise that the individual's sex is different than their subjective identity. *See Bostock*, 140 S. Ct. at 1741. So while Dr. Budge purported to apply "a scientific process" in reaching her opinions, Budge Dep. at 18:22-19:4, her attempt to conflate gender identity and sex is just an "*ipse dixit* of the expert." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Cantor Decl. ¶¶ 47-48.

2. WPATH's standards are not "internationally accepted."

Dr. Budge said she reviewed "the full extent of the literature" in forming her opinion, Budge Dep. at 16:23-17:10, and she agreed "scientists should take into

[7] Dr. Budge refused to admit that prenatal genetic tests are capable of determining the sex of a child. Budge Dep. at 45:21-46:5.

account all of the information when making conclusions." *Id.* at 21:13-21. Courts concur: "sound scientific methodology requires that a scientist consider all of the scientific evidence when making causation determinations." *In re Zoloft*, 26 F. Supp. 3d 449, 463 (E.D. Penn. 2014). And "expert testimony that 'cherry-picks' relevant data" should be excluded. *EEOC v. Freeman*, 778 F.3d 463, 469 (4th Cir. 2015) (collecting cases); *In re Lipitor*, 892 F.3d 624, 634 (4th Cir. 2018); *Rink v. Cheminova, Inc.*, 400 F.3d 1286, 1293 n.7 (11th Cir. 2005).

Dr. Budge did not apply the standard she endorses. Instead, she emphasizes WPATH's statements that "puberty-delaying medication and gender-affirming hormones are appropriate and medically necessary treatments for adolescents." Dkt. 15-5 ¶ 31. And she ignored two systematic reviews—one by the UK's National Health Service and one by Sweden—that determined that the benefits of those treatments, if any, did not outweigh their known risks for children. Budge Dep. at 106:6-111:11; Cantor Decl. ¶ 126. Dr. Budge admitted she was aware of those reviews at the time they happened, *see id.,* 108:4-10, yet her declaration filed in July 2023 did not cite them, much less discuss or distinguish them. Dkt. 15-5. It is frankly "alarming" that Dr. Budge engaged in this "biased reliance on favorable sources" while ignoring two systematic reviews by European medical authorities that "could not be more relevant" to her opinions. *Daniels-Feasel v. Forest Pharms., Inc.*, 2021 WL 4037820, slip op., at *12 (S.D.N.Y. Sept. 3, 2021), *aff'd*, 2023 WL 4837521 (2d Cir. July 28, 2023). Her result-oriented opinion warrants little weight.

3. In most cases, gender dysphoria desists without intervention.

Dr. Budge also fails to mention the eleven cohort studies that have followed minors with gender dysphoria, all of which reported that a majority of cases desisted without any intervention. Cantor Decl. ¶¶ 54-57. That is all the more troubling because she was previously confronted with those studies in a case challenging a similar Oklahoma law. *See* Cantor *Bridge* Decl. App. 3 (Ex. 5); Budge Dep. at 87:3-88:17. At her deposition in this case, Dr. Budge tried to dismiss those studies as "very old," Budge Dep. at 58:12-59:5, even though the largest and most recent study dates to 2021. *See* Singh (2021) (Ex. 3); Budge Dep. at 85:14-86:2. Then, when reviewing that study for the first time at deposition, Dr. Budge offered the ad hoc explanation that the study should never have been published and that the subjects likely did not have gender dysphoria. Budge Dep. at 59:6-22; 80:11-84:17.[8] But again, the very first sentence of the study says it "reports follow-up data on the largest sample to date of boys clinic-referred *for gender dysphoria*." Singh (2021) at 1 (emphasis added).

Dr. Budge thus "selectively discuss[es] studies most supportive of her conclusions," *Zoloft*, 26 F. Supp. 3d at 460 (E.D. Penn. 2014), and "fails to explain information that otherwise would tend to cast doubt on that theory." *In re Rezulin Prod. Liab. Litig.*, 369 F. Supp. 2d 398, 425 (S.D.N.Y. 2005). Such cherry-picking of

[8] Dr. Budge also surmised that the patients in the Singh study may not have gender dysphoria because diagnostic criteria for that condition have changed over time. Budge Dep. at 82:9-83:5. But that rationalization carries little weight when she also acknowledged that the diagnostic criteria have become broader over time, and that if they were applied to the period at issue in the Singh study, she would expect to see "the same level of diagnoses, same number" as today. *Id.* at 79:1-80:10.

favorable evidence "does not reflect scientific knowledge, is not derived by the scientific method, and is not 'good science.'" *In re Bextra & Celebrex Mktg. Sales Pracs. & Prods. Liab. Litig.*, 524 F. Supp. 2d 1166, 1176 (N.D. Cal. 2007); Cantor Decl. ¶ 107. The court should disregard or give little weight to Dr. Budge's declaration.

4. Single-user bathrooms are an adequate accommodation.

Dr. Budge's own authorities undermine her attempt to dismiss single-user bathrooms as an adequate accommodation. While S.B. 1100 grants such accommodation to anyone uncomfortable using sex-separated multi-occupancy restrooms, Dr. Budge says that "[n]umerous research studies" confirm the "negative psychological impact of being invalidated and 'othered' in these ways." Budge Decl. ¶ 52. Not so—none of the studies she cites did any research on whether single-user bathrooms caused the impact she claims. To the contrary, the first study she cited in support specifically states that "providing gender-neutral bathrooms … can be viewed as part of gender-affirming support and care." Price-Feeney at 1143 (2021); Budge Dep. at 95:12-19. By citing this study to reach "conclusions the authors of the study do not make," Dr. Budge "exceed[s] the limits of the conservative scientific methodology." *McClain v. Metabolife Int'l, Inc.*, 401 F.3d 1233, 1248 (11th Cir. 2005); *accord Huss v. Gayden*, 571 F.3d 442, 459 (5th Cir. 2009); *Happel v. Wal-Mart Stores, Inc.*, 602 F.3d 820, 826 (7th Cir. 2010); Cantor Decl. ¶ 26. Her authorities do not support her opinions.

II. Plaintiffs are not entitled to a preliminary injunction.

The legal authorities above show that Plaintiffs' claims fail as a matter of law, and at a minimum, the fractured rulings in the courts of appeals undermine their attempt to show they are likely to succeed on the merits. Plaintiffs note that "'serious questions going to the merits'" are enough for an injunction under Ninth Circuit law, as long as they meet the other elements and show "'the balance of hardships tips sharply in the plaintiff's favor.'" Dkt. 15-1 at 9-10 (quoting *All. for the Wild Rockies*, 632 F.3d at 1134-35). But they fare no better under this standard—this Court has already observed that the other "three factors are roughly even." Dkt. 44 at 7. In fact, the balance of harms tilts against Plaintiffs, and they cannot show irreparable harm or support of the public interest. They are not entitled to an injunction.

First, the balance of harms does not favor Plaintiffs. S.B. 1100 protects the privacy and safety interests of all who use the bathrooms, locker rooms, and overnight lodging by ensuring they do not have to expose their undressed bodies to members of the opposite sex. As set forth above, those interests in shielding one's "unclothed figure" from "strangers of the opposite sex" is well settled in the law, particularly in the Ninth Circuit. *Byrd*, 629 F.3d at 1141; *see also Faulkner*, 10 F.3d at 232; *Chaney*, 612 F.3d at 913. An injunction against S.B. 1100 will leave those safety and privacy interests wholly unprotected for the majority of students who do not have gender dysphoria. *Adams*, 57 F.4th at 806. Under Plaintiffs' view, the only constitutionally adequate way to protect *all* students' privacy would be "single-stall, sex-neutral bathrooms." *Id.* And that is not the law.

Second, Plaintiffs themselves cannot show irreparable harm. Plaintiffs emphasize purported stigma, *see* Dkt. 15-1 at 1, 4, 7, 19, and Plaintiff Roe says using the multiple-occupancy facility the law allows will cause "outing" to peers. *Id.* at 8. Yet S.B. 1100 specifically provides an accommodation—that is the right to use a unisex, single-occupancy bathroom. Idaho Code § 33-6605 [33-6705]. Plaintiffs say that single-occupancy bathrooms "impose practical burdens where located in less accessible areas away from classes." Dkt. 34-1 at 8. But surely walking to a different restroom is not irreparable harm of constitutional dimension. Dr. Budge says that these "gender-neutral" bathrooms, *see* Budge Dep. at 93:24-94:4, have a "negative psychological impact" according to "[n]umerous research studies." Budge Decl. ¶ 52. And even if such a psychological impact could be irreparable harm, it is not supported by Dr. Budge's studies, which did not do any research on whether single-user bathrooms caused such an impact. Quite the opposite, the first study she cites states that "providing gender-neutral bathrooms … can be viewed as part of gender-affirming support and care." Price-Feeney at 1143 (2021); Budge Dep. at 95:12-19.

Third, the public interest does not favor an injunction. As Plaintiffs note, this element "'merge[s]'" with the balance of harms "'[w]hen the government is a party.'" Dkt. 15-1 at 9 (quoting *Drakes Bay Oyster Co. v. Jewell*, 747 F.3d 1073, 1092 (9th Cir. 2014)). And as set forth above, the harm to the public in losing the safety and privacy protections of S.B. 1100 weighs decidedly against enjoining the law.

CONCLUSION

The Court should deny a preliminary injunction and dismiss the Complaint.

DATED: August 22, 2023.

STATE OF IDAHO
OFFICE OF THE ATTORNEY GENERAL

By: /s/ *Lincoln D. Wilson*
LINCOLN DAVIS WILSON
Chief of Civil Litigation and
Constitutional Defense

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 22, 2023, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which sent a Notice of Electronic Filing to the following persons:

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Attorneys for Defendants

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

REBECCA ROE, by and through her parents and next friends, Rachel and Ryan Roe; SEXULAITY AND GENDER ALLIANCE, an association

Plaintiffs,

v.

DEBBIE CRITCHFIELD, in her official capacity as Idaho State Superintendent of Public Instruction, et al.,

Defendants.

Case No. 1:23-cv-00315-DCN

DECLARATION OF LINCOLN DAVIS WILSON

I, LINCOLN DAVIS WILSON, hereby declare and state as follows:

1. I am over 18 years old and competent to make this declaration.

2. I am a Deputy Attorney General and the Division Chief of Civil Litigation and Constitutional Defense for the Office of the Attorney General for the State of Idaho.

3. I make this declaration to introduce certain documents and information that are referred to in the accompanying Consolidated Response in Opposition to Motion for Preliminary Injunction and Statement of Interest and in Support of Motion to Dismiss ("Consolidated Response").

4. Attached hereto as Exhibit 1 is a true and correct copy the deposition of Dr. Stephanie Budge taken on August 16, 2023.

5. Attached hereto as Exhibit 2 is a true and correct copy of a news article titled "Changing the Culture" published in Isthmus, an independent local news source based in Madison, Wisconsin, dated September 21, 2017, by Peter Coutu, https://isthmus.com/news/news/uw-madison-lab-pioneering-research-transgender/.

6. Attached hereto as Exhibit 3 is a true and correct copy of the article Devita Singh, et al., A Follow-Up Study of Boys with Gender Identity Disorder, Frontiers in Psychiatry, Vol. 12, 1-18 (March 2021).

7. Attached hereto as Exhibit 4 is a true and correct copy of Price-Feeney, et al., Impact of Bathroom Discrimination on Mental Health Among Transgender and Nonbinary Youth, 68 Journal of Adolescent Health 1142-47 (2021).

8. Attached hereto as Exhibit 5 is a true and correct copy of Appendix 3 to the Declaration of Dr. James M. Cantor, dated and filed November 16, 2022, in *Bridge*

v. Oklahoma State Bd. Educ., Case 5:22-cv-00787-JD (W.D. Okla. 2022) in response to Dr. Budge's declaration in similar litigation.

I declare under penalty of perjury that the foregoing is true and correct.

DATED: August 22, 2023.

/s/ *Lincoln Davis Wilson*
LINCOLN DAVIS WILSON
Chief, Civil Litigation and
Constitutional Defense

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 22, 2023, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which sent a Notice of Electronic Filing to the following persons:

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO

REBECCA ROE, et al.,
Plaintiffs,
vs.
DEBBIE CRITCHFIELD, in her official capacity as Idaho State Superintendent of Public Instruction, et al.,
Defendants.

Case No. 1:23-cv-00315-DCN

REMOTE VIDEOTAPED DEPOSITION OF STEPHANIE BUDGE, PH.D.
August 16, 2023

Reported by:
Rebecca Martin, CSR #1108, RPR, CRR

EXHIBIT 1

REMOTE VIDEOTAPED DEPOSITION OF STEPHANIE BUDGE, PH.D.

BE IT REMEMBERED that the remote videotaped deposition of STEPHANIE BUDGE, PH.D. was taken via videoconference by the Defendants before Associated Reporting & Video, a Veritext Company, Rebecca Martin, Court Reporter and Notary Public in and for the County of Ada, State of Idaho, on Wednesday, the 16th day of August, 2023, commencing at the hour of 8:00 a.m. Mountain Time in the above-entitled matter.

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Also Present: Chris Ennis, videographer

I N D E X

E X A M I N A T I O N

E X H I B I T S

P R O C E E D I N G S

(Deposition Exhibit No. 1 was marked.)

THE VIDEOGRAPHER: So we are recording and we are on the record. Today's date is August 16th, 2023. The time is 8:05 a.m. Mountain Time.

For the record, this is the remote videotaped deposition of Dr. Stephanie Budge. It's taken by the defendants in the matter of Roe, et al., versus Debbie Critchfield, et al. It is Case Number 1:23-cv-00315-DCN. It is in the United States District Court for the District of Idaho.

The videotaped deposition is being held remotely via Zoom videoconference. The videotaped deposition is being recorded by Chris Ennis and reported by Becky Martin of Associated Reporting and Video, a Veritext company.

And if Counsel will please state their appearances and any stipulations for the record.

MR. WILSON: Lincoln Wilson for the Idaho Attorney General's Office, representing the defendant.

MS. BORELLI: Tara Borelli for the plaintiffs.

MR. DROZ: Rafael Droz, Attorney General's

Office -- Idaho Attorney General's Office for defendants.

MR. RENN: Peter Renn for the plaintiffs.

MR. ROSEN: Max Rosen for the plaintiffs.

MR. LINNET: Sam Linnet for the plaintiffs.

MR. MARTIN: Paul Martin for the plaintiffs.

MS. PAEK: Christina Paek for the plaintiffs.

THE VIDEOGRAPHER: And if the court reporter will please swear the witness.

STEPHANIE BUDGE, PH.D.,

a witness having been first duly sworn to tell the truth, the whole truth and nothing but the truth, was examined and testified as follows:

EXAMINATION

BY MR. WILSON:

Q. Good morning.

Would you please state your name for the record?

A. Yes. My name is Stephanie Budge.

Q. Thank you, Dr. Budge.

We've been introduced off the record. My name is Lincoln Wilson. I'm with the Idaho Attorney General's Office and will be taking your

deposition in this case today.

I know this isn't your first rodeo as far as depositions are concerned, so I will skip over some of the standard preliminaries and I'll just say maybe a couple of them.

First of all, have you done a video deposition before?

A. I have.

Q. Okay. So you're even used to this format on some level.

And I think the only thing we have to be mindful of in particular here is to take extra special care not to speak over one another and wait 'til I finish a question before giving an answer, just so that we make things nice and easy for the court reporter and the record that we have here.

And make sure that you're giving verbal answers and not sort of, you know, nodding your head or uh-huh, mm-hmm, because that's the sort of thing that won't come across very clearly on the transcript.

Does that make sense?

A. That does make sense.

Q. All right. Thank you.

So I have circulated before what we'd

like to mark as Exhibit 1 to your deposition.

Have you received the e-mail that I sent?

A. Yes.

Q. And can you tell me what this is that's attached to that e-mail?

A. It is my expert declaration for this case.

Q. Are you able to tell me whether this declaration is a complete and accurate statement of the opinions that you intend to give in this case in relation to Plaintiff's motion for a preliminary injunction?

A. It is.

Q. And so any opinions that you have that are relevant to that motion would be stated in this declaration; is that correct?

A. That's correct.

MS. BORELLI: Counsel, let me just interpose an objection, which is: Briefing obviously isn't complete and this wouldn't encompass any rebuttal opinions that Dr. Budge would be offering, so I want to make sure the record is clear on that point.

MR. WILSON: Appreciate that clarification.

Q. (BY MR. WILSON) And if there are any authorities that you relied on in forming the opinions that are stated in your declaration, they would be included within that declaration; is that correct?

A. That's correct. And I still might be able to add some additional components at some point in time related to this case.

Q. But to the extent that it's already relating to an opinion that you've already formed, those authorities would be listed in this declaration; is that correct?

A. That's correct.

Q. Thank you.

If you'd take a look --

MS. BORELLI: If I can just -- I don't mean to be too interruptive here, but I just want to clarify that of course Dr. Budge is a clinician, has a great deal of clinical experience, and so would be relying on clinical experience and other related authorities that she would use in her day-to-day clinical practice.

MR. WILSON: So I don't think that's a proper objection because it seems to be supplying an answer. Your point taken, not an issue here,

but I'd just like to make sure that we're not adding to the record through objections.

But I think we can move forward.

Q. (BY MR. WILSON) If you'd take a look at paragraph 3 of your declaration and let me know when you're there.

A. I'm there.

Q. The paragraph begins, it says: I have been retained by counsel for the plaintiffs in the above-captioned matter to provide expert opinions about.

And then it lists five topics under separate headings; is that correct?

A. That's correct.

Q. And are those the opinions that you're offering in this case at this time in relation to the preliminary injunction motion?

A. That's correct.

Q. And you don't have at this time any other opinions than those that are stated here; is that correct?

A. I'll be opining on the things that were listed in this statement. If there are components that are related to it, I will be offering some evidence that's related to that within the context

of what I was hired to do.

Q. I certainly understand. Thanks for that clarification.

To be clear, you did not examine the plaintiffs -- or the plaintiff in this case; is that correct?

A. That's correct.

Q. And would it be fair to say that you are not giving an opinion about the particular minor plaintiff or the particular plaintiff organization in this case? Is that also correct?

A. My opinions are related to them, but I have not met with them personally.

Q. Yeah. I'm just trying to clarify. Let me see if I can maybe phrase that in a better way.

You're giving opinions that are sort of general opinions about psychological and medical phenomena, not about these specific people. Now, they may -- is that correct?

MS. BORELLI: Lincoln, I just want to interpose an objection to the extent that the testimony submitted relates to the PI. So if we're talking more broadly about the case, obviously we haven't disclosed opinions related more broadly to the case. I want to make sure we're talking about

the same thing, which is just the scope of the preliminary injunction motion.

Are we on the same page?

MR. WILSON: We're on the same page.

MS. BORELLI: Thanks.

Q. (BY MR. WILSON) Let me see if I can -- I'm really just trying to clarify here that your opinions are general opinions that are about your understanding of the science and medicine and psychology of these issues, they're not directed to these specific plaintiffs; is that correct?

MS. BORELLI: Objection; compound and vague.

Q. (BY MR. WILSON) You can answer.

A. My answers relate to the plaintiffs.

Q. I'm just trying to clarify here, though. Maybe I'll just leave the second part out of it.

These opinions are general opinions that are -- you would maintain that they are true as a general matter and also with reference to these specific plaintiffs, but you were giving these opinions as a general matter; is that correct?

MS. BORELLI: Compound and vague.

Q. (BY MR. WILSON) You can answer.

A. That's correct.

Q. Okay. Just to clarify that when -- your

counsel may object, but you can continue to answer if you have an answer to the question.

Now, at least one of those opinions, if you look at that paragraph 3, subsection D says you're giving an opinion about "the harms caused by excluding transgender students from using sex-separated facilities that are aligned with their gender identity."

Did I read that correctly?

A. That's correct.

Q. And would it be fair to say, then, that you were giving a causation opinion --

MS. BORELLI: Objection --

Q. (BY MR. WILSON) -- in that regard?

MS. BORELLI: -- vague.

THE WITNESS: I will be, and I'm opining around the harms that are related to the exclusion of transgender students from the sex-segregated facilities.

Q. (BY MR. WILSON) When you say you're opining about the harms caused by excluding transgender students, you aren't necessarily giving an opinion about causation; is that correct?

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) You can answer.

A. Yes. I'm talking about the harm that's directly related to the discrimination and exclusion of transgender students.

Q. And would it be fair to say that for subsection C -- let me just read that first. I'll ask my question differently.

Subsection C says you're opining about: The importance of access to sex-separated facilities as part of social transition.

Did I read that correctly?

A. Yes.

Q. Would it be fair to say that that is also a causation opinion, that you're saying that the access to sex-separated facilities as part of social transition causes certain benefits to transgender persons?

MS. BORELLI: Objection; compound and vague.

Q. (BY MR. WILSON) You can answer.

A. Will you repeat the question, please?

Q. Is your opinion in subsection C, is that an opinion that access to sex-separated facilities causes certain benefits to transgender persons or persons with gender dysphoria?

MS. BORELLI: Objection; vague.

THE WITNESS: The component that I'm opining

about here is that social transition is an essential component of transgender adolescence experience, and that having access to sex segregated spaces is an important component of that.

Q. (BY MR. WILSON) And is it an important component because it causes -- or you maintain that it causes benefits to those persons?

MS. BORELLI: Objection; misstates testimony.

THE WITNESS: My opinion is that it's -- that being able to access sex-segregated facilities for transgender adolescents is something that is just, like, a natural component for them that maintains, you know, a baseline level of mental health that would be the same for any adolescent.

Q. (BY MR. WILSON) So you are not opining that doing that causes any particular benefits for transgender persons; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: My opinion is that -- I mean, it's the same kind of benefit that would exist for cisgender youth as well. I don't actually understand what the definition of "benefit" is in this case.

Q. (BY MR. WILSON) That they're better off having that access than not having that access; is that correct, that you are opining that that causes benefits for them?

MS. BORELLI: Compound, vague.

THE WITNESS: I am opining that transgender adolescents are better off for them -- you know, in the sense that they will be harmed if they are not allowed access to those spaces.

Q. (BY MR. WILSON) Okay. I think that's the clarification that I needed. Thank you.

You describe the method that you used to reach the opinions that you state in this declaration?

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) You can answer.

A. I describe my qualifications as a component of the declaration, and that component of my qualifications indicates my level of expertise and my areas of expertise, and I use that area -- those levels and areas of expertise to assist with the process of writing the report.

Q. Other than that, is there any other aspect of the method that you used to reach these opinions in this case?

MS. BORELLI: Objection; vague.

THE WITNESS: I used the same method that I use for all psychological and scientific processes in terms of reviewing the full extent of the literature, ensuring that I'm including all of the evidence-based information.

So I have an extensive level of training regarding how to consider scientific evidence, and I use all of that expertise in my process of identifying the information for the report.

Q. (BY MR. WILSON) Thank you.

So you said that you use -- you reviewed the full extent of the literature in forming your opinions in this case; is that correct?

MS. BORELLI: Objection; misstates testimony.

Q. (BY MR. WILSON) You can answer.

A. Yes. I used the same process of searching for scientific literature and understanding the scope of the scientific literature.

Q. What was your method for searching for relevant studies on this issue to use in your report?

MS. BORELLI: Objection; vague.

THE WITNESS: For the process of researching for this particular case, I used scientific databases and academic databases to be able to search for the scientific literature.

Q. (BY MR. WILSON) And the literature that you reviewed in forming your opinions is noted and cited in your report or included as references at the end of it; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Can you restate the question, please?

Q. (BY MR. WILSON) So the scientific literature that you reviewed in forming your opinion would either be cited in your declaration or included as one of your references at the end; is that correct?

A. When relevant. So, you know, I reviewed a lot of different components that wouldn't have been relevant to the questions at hand, but when relevant, I did include those articles in this particular declaration.

Q. So you were applying a scientific process to form the opinions that you stated in this case; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Yes. I used a scientific process to inform my methodology for finding the articles and scientific literature for this declaration.

Q. (BY MR. WILSON) Are you familiar with the Federal Judicial Center's reference manual on scientific evidence?

MS. BORELLI: Objection; vague.

THE WITNESS: I am not.

Q. (BY MR. WILSON) So in terms of thinking about science, would you agree that it's the testing of hypotheses to see if they can be falsified that distinguishes science from other fields of human inquiry?

MS. BORELLI: Objection; lacks foundation, calls for a legal conclusion.

Q. (BY MR. WILSON) You can answer.

A. That's a general statement around science, yes.

Q. Sorry, just to be clear, was your answer "yes" there? I didn't quite hear it.

MS. BORELLI: Objection; misstates prior testimony.

Q. (BY MR. WILSON) I missed it over the objection.

Was your answer yes?

A. I said generally. Generally, yes.

Q. Would you also agree that an association is not equivalent to causation?

MS. BORELLI: Objection; calls for legal conclusion, vague.

THE WITNESS: Associations in scientific literature indicate direct relationships; and therefore, you can make conclusions regarding those types of relationships. So they're variations of similar processes.

Q. (BY MR. WILSON) But you would agree that an association is not equivalent to causation; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: They're not exactly the same thing.

Q. (BY MR. WILSON) What's your understanding of the term "cherry-picking" when it's used in scientific research?

MS. BORELLI: Objection; vague.

THE WITNESS: My understanding of that terminology is that that is when people choose evidence or different kinds of information that fits a very particular component.

Q. (BY MR. WILSON) What do you mean by "component"?

A. Well, I think it may depend on what people are talking about with cherry-picking, but in this instance, perhaps it could be something where someone is choosing evidence or information that fits an idea.

Q. Like, a particular conclusion?

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) Fair to say?

MS. BORELLI: Same objection.

THE WITNESS: That could be.

Q. (BY MR. WILSON) Would you agree that sound scientific methodology requires a scientist to consider all of the scientific evidence when making causation determinations?

MS. BORELLI: Objection; vague, calls for a legal conclusion.

THE WITNESS: I do think that scientists should take into account all of the information when making conclusions.

Q. (BY MR. WILSON) Would you agree that coming to a firm conclusion first and then doing the research to support it is the antithesis of a scientific method?

MS. BORELLI: Objection; vague, compound, calls for legal conclusion.

THE WITNESS: Well, typically scientists have hypotheses or research questions that they come up with, and when they do that, they look at relevant theory, they understand the relevant theory, and then they look through the relevant scientific evidence, and after they've done those pieces, then they engage in the science.

Q. (BY MR. WILSON) But is the objective with the hypothesis to test it to prove it false or to test it to prove it true?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: Well, there are multiple ways to test hypotheses. So you can look at null hypotheses, which is a component of -- you know, it's making a statement and then trying -- and then determining exactly if that -- what you're testing does not actually fit.

And so, you know, it depends on the type of hypothesis that someone might be describing in terms of hypothesis testing in science.

Q. (BY MR. WILSON) Regardless of how the hypothesis is defined, isn't the procedure always designed to see whether it can be falsified?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: The process is trying to test a research question to determine the extent of the research question or what -- or what the conclusions are related to that.

Q. (BY MR. WILSON) Is a research question different than a hypothesis?

MS. BORELLI: Objection; vague.

THE WITNESS: They can be the same thing, but they can be different as well.

Q. (BY MR. WILSON) Can you describe the difference between a research question and a hypothesis?

MS. BORELLI: Objection; vague.

THE WITNESS: There are multiple different types of hypotheses and research questions, and so, you know, I guess part of this is that it's not just a simple "this is what a hypothesis is and this is what a research question is."

But like I said, sometimes they can overlap. Research questions are often more kind of broader, "What is the landscape of this particular phenomenon," and then a hypothesis often does test directionality, but that doesn't have to be true

necessarily for either one of those. Sometimes they can be the same thing.

Q. (BY MR. WILSON) Can you describe what you mean by "directionality"?

A. Uh-huh.

So in hypotheses, we often indicate if something may be more or less or how something may be related to one thing or another.

Q. I think I understand what you mean.

Would you agree that it's wrong for a scientist to selectively discuss studies most supportive of her conclusions and fail to account adequately for contrary evidence?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: I do think that scientists should understand the scope of their evidence and that they should understand the literature and that they should use the literature that is the most scientifically sound in understanding and explaining scientific concepts.

Q. (BY MR. WILSON) Would you agree that a theory that fails to explain information that would otherwise tend to cast doubt on that theory is inherently suspect?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: Can you repeat the question, please?

Q. (BY MR. WILSON) Would you agree that any theory that fails to explain information that otherwise would tend to cast doubt on that theory is inherently suspect?

MS. BORELLI: Same objections.

THE WITNESS: I don't think I understand your question.

Q. (BY MR. WILSON) That's fine. We can move along.

So if you take a look at paragraph 9 of your declaration, you refer to an open clinical trial that you're working on.

Could you just tell me about that clinical trial, how it's designed and what it's studying?

MS. BORELLI: Objection; compound, vague.

THE WITNESS: In this particular clinical trial, we are looking at the feasibility and acceptability of the process of understanding access to mental health care for transgender people.

We are also testing a particular type of psychotherapy and we're testing longitudinally the

effects of that psychotherapy.

Q. (BY MR. WILSON) So can you describe the clinical trial, how the control group is set up and the test group?

MS. BORELLI: Objection; compound.

THE WITNESS: In an open clinical trial -- the definition of an open clinical trial is that there is not a control group. So there is only one group that's included in an open clinical trial, and that's to test feasibility and acceptability.

Q. (BY MR. WILSON) Thanks for clarifying that.

Can you explain to me why clinical trials that have a control group, why that is preferred, if you agree that it is preferred?

MS. BORELLI: Objection; assumes facts not in evidence, speculation.

THE WITNESS: In this particular instance, we conducted a randomized controlled trial prior to this particular open clinical trial, and there were components and research questions that we had based on the randomized controlled trial that led to research questions that were only focused on one particular group.

In terms of, for example, testing a

specific type of psychotherapy training module and testing the feasibility and acceptability of the research process, you don't need comparison groups for those types of research questions.

For the randomized controlled trial that we conducted previous to that, we did have questions regarding the effectiveness and efficacy of one treatment compared to another. So a lot of these designs just depend on the types of questions that you're testing.

Q. (BY MR. WILSON) Thank you.

I'm thinking just a little bit more generally.

Apart from that particular study that you were doing, why is it that researchers like to use controlled trials as opposed to open trials?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: My experience isn't that researchers like to use one over the other. It really just depends on what the research questions are and what you're trying to test.

Q. (BY MR. WILSON) What would be the advantage of a controlled clinical trial?

MS. BORELLI: Objection; assumes facts not

in evidence, vague.

THE WITNESS: Honestly, it depends on what the research question is. Like I said, in questions where you're trying to determine is one treatment better than another treatment -- for example, in the randomized controlled trial that we did, we were trying to determine: Is one type of psychotherapy more effective than another type of psychotherapy?

You need to be able to randomize for that particular design, but for the open clinical trial, we weren't testing the efficacy of a specific type of treatment. We were testing the feasibility and acceptability of the process.

So there isn't one design that's necessarily going to be better than the other in general. Really what you need to do is say: What is the research question at hand, and what's going to be the best design for those research questions?

Q. (BY MR. WILSON) So supposing all else being equal, if we had a given research question that could be studied through a randomized controlled trial or an open trial, would you agree that the controlled trial is preferred?

MS. BORELLI: Objection; vague, compound,

assumes facts not in evidence, misstates testimony, calls for a hypothetical, speculative.

MR. WILSON: You gave me the whole laundry list there.

MS. BORELLI: I did.

Q. (BY MR. WILSON) You can answer, though, Dr. Budge.

A. Yeah. My previous testimony was such that the research design depends on what the research question is at hand.

Q. I'm saying: Suppose if you have a situation where the research question can be studied through either form, is the randomized controlled trial preferred?

MS. BORELLI: Objection; calls for speculation, assumes facts not in evidence.

THE WITNESS: My answer remains the same. Really -- the design really depends on what the research question is and what's being tested.

Q. (BY MR. WILSON) So I guess the question maybe would be: You do agree that study design is important for the reliability of a study; is that correct?

MS. BORELLI: Objection; vague, asked and answered.

THE WITNESS: In general, my statement would be that reliability is an important component of research and, I would say, again, it depends on the exact research design and what the questions are at hand.

Q. (BY MR. WILSON) And you agree that researchers should design their studies to be as reliable as possible to study the given question they're confronting; is that correct?

MS. BORELLI: Objection; misstates testimony, calls for speculation, vague.

THE WITNESS: I agree that quantitative studies should ensure that there is reliability at hand. Like I said, there are different kinds of research questions, qualitative research, for example, and some other components that use different methods for rigor in their methodology. So a lot of it does depend on what the research questions are and what the design is.

Q. (BY MR. WILSON) And the conclusions that we can draw from research should be in proportion to the reliability of the processes that led to it; is that correct?

MS. BORELLI: Objection; vague, calls for speculation, lacks foundation.

THE WITNESS: Yeah. I think we might be using different definitions of reliability.

So, you know, in my expertise and the way that I was trained -- you know, I have a master's degree in educational psychology, I have a Ph.D. in counseling psychology, I have years of experience learning the process of conducting qualitative and quantitative research, and there are really specific ways of ensuring methodological rigor in all aspects of research.

Reliability is one particular component that can be included in certain components of quantitative research. But I think -- you know, and what I would say is that scientists do need to have methodological rigor in their process of how they're conducting research.

Q. (BY MR. WILSON) So is it fair to say that you don't believe that reliability is essential to your research? Is that correct?

MS. BORELLI: Objection; misstates testimony.

THE WITNESS: That's not correct. That's not what I'm saying.

Q. (BY MR. WILSON) So you do believe that reliability is essential to your research?

MS. BORELLI: Objection; misstates testimony --

Q. (BY MR. WILSON) Is that correct?

MS. BORELLI: -- asked and answered, vague.

THE WITNESS: I already answered the question. Reliability can be an essential component and a lot of it depends on what the research design and the questions are.

Q. (BY MR. WILSON) Well, if it can be essential, then it is not necessarily essential; is that correct?

MS. BORELLI: Objection; calls for speculation, vague, asked and answered.

THE WITNESS: I answered the question already.

Q. (BY MR. WILSON) Is reliability always essential to your research?

MS. BORELLI: Objection; calls for speculation, vague.

THE WITNESS: It depends on the type of research and the research questions.

Q. (BY MR. WILSON) So your answer would be no, it is not always essential to your research; is that correct?

MS. BORELLI: Objection; misstates

testimony, argumentative, asked and answered.

THE WITNESS: In the quantitative studies that I have conducted, all of them have included reliability.

Q. (BY MR. WILSON) But it is not essential to all of your research; is that correct?

MS. BORELLI: Objection; vague, asked and answered, argumentative.

Q. (BY MR. WILSON) Is that correct?

MS. BORELLI: Same objections.

THE WITNESS: I would say, for the qualitative research that I conduct, even though "reliability" isn't a term that we use for qualitative research, and the qualitative research is conducted in the most methodologically rigorous way that is possible and that it follows all of the journal article reporting standards and all of the scientific methodologies that are included within that.

MR. WILSON: Tara, just to interject, I've been giving you a bit of latitude on sort of the speaking objections. I don't think they're proper. I think objection is going to be sufficient to preserve your record, and I just want to make sure that we're staying away from coaching the witness

from how to answer.

I certainly understand why you're saying those things, but I'd like to ask that we just keep that to "objection" going forward.

MS. BORELLI: Look, let me object to that characterization. Improper speaking objections, coach the witness, I'm not doing anything of the sort. I have a duty to preserve the objections. I'm stating them simply and clearly to make sure that they're preserved.

MR. WILSON: I think only objections to the form would be the issue here, and all that's required to preserve the objection to the form is to say "objection" or "object to the form," and that's the only thing that you need to preserve here.

So I would ask that you limit your objections to just saying "objection."

MS. BORELLI: Lincoln, identifying the nature of the objection is proper. We're allowed to articulate the problem, and there are Courts that often require that you articulate the basis of the objection, and so I want to make sure that I've done so. I'm doing so simply and clearly. It's not an improper speaking objection.

MR. WILSON: We'll agree to disagree on that, but I think that we can progress through this deposition in a friendly and collegial manner.

MS. BORELLI: I agree.

MR. WILSON: Good.

Q. (BY MR. WILSON) So would you agree that for preserving the reliability of research, it's important to be able to account for the role of chance?

MS. BORELLI: Objection; vague.

THE WITNESS: In quantitative research, we do understand that they're -- and look at the level of chance that can be included via statistical processes.

Q. (BY MR. WILSON) And would you also agree that for scientific research it's important to account for the role of bias?

MS. BORELLI: Objection; vague.

THE WITNESS: I do think it's important to account for specific types of bias and to understand how bias can impact the research process.

Q. (BY MR. WILSON) And do you agree that it's also important to account for the role of confounding in scientific research?

MS. BORELLI: Objection; vague.

THE WITNESS: In most of the quantitative research that I have conducted, confounding variables are included as a part of the process that we look into. It is important to understand variables that can impact different components of variability statistically.

Q. (BY MR. WILSON) Would you agree that observational studies are lower-quality evidence than clinical trials?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: I think depending on what the research questions are at hand and what kind of ethical processes can take place. It depends on what kinds of research design that you can conduct. There are some questions and some processes that can't be conducted via randomized controlled trial, either ethically or just based on research design.

So my answer is that it depends on what the research question is based on the type of research design that needs to be used.

Q. (BY MR. WILSON) Would you agree that clinical trials of all the available tools are the best at eliminating the role of chance, bias, and

confounding?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: Depending on the type of research question that is at hand, randomized controlled trials can provide very important information regarding the effectiveness and efficacy of certain types of treatments, but it also -- like I said, it depends. There are lots of research questions that can't be discussed by randomized controlled trials.

For example, like, do transgender kids experience harm in bathrooms? That's not something that can actually be studied via randomized controlled trial. So my answer is that it kind of depends on what the research question is.

Q. (BY MR. WILSON) Would you agree that surveys are lower-quality evidence than observational studies as a scientific matter?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: My answer is such that the research questions that are being asked need to follow -- you know, need to be followed by the most appropriate methodology. So if a research question

is specific to some -- to an observational study or longitudinal study, then those are the designs that need to be used.

If there is a question regarding effectiveness or efficacy of treatments, then designs related to that will be used.

So my answer is that it kind of -- it just depends on what the research questions are.

Q. (BY MR. WILSON) Can surveys be used to effectively test a hypothesis?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: In general, surveys can be used to test hypotheses.

Q. (BY MR. WILSON) Surveys are less effective than observational studies at controlling for the risks of chance, bias, and confounding; is that correct?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence, calls for speculation.

THE WITNESS: I would say it depends on what the study -- what the research question is and what's being studied.

Q. (BY MR. WILSON) And when you referred to

"qualitative evidence" before, would you include surveys as a form of qualitative evidence?

MS. BORELLI: Objection; vague, misstates testimony.

THE WITNESS: No. Typically surveys are not qualitative research.

Q. (BY MR. WILSON) They have a qualitative component; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Unless we have a different understanding of what this is.

So in my experience, qualitative research is research where open-ended questions are being asked.

And in general, surveys are closed-ended questions that usually include numbers.

Q. (BY MR. WILSON) Thanks for that clarification.

Let's move on to paragraph 19 of your declaration, and just let me know when you're there.

A. I'm there.

Q. Great.

So paragraph 19 says: The term "gender identity" is a well-established concept in

psychology and medicine referring to a person's internal or psychological sense of having a particular gender. All human beings have a gender identity. People usually begin to explore and understand their gender identity at around the age of 3, with some variation, although some transgender individuals may not begin to recognize or express their gender identity until later in life.

Apart from a small hiccup, did I read that correctly?

A. Yes, what I heard was correct.

MR. WILSON: Okay. Great.

MS. BORELLI: Lincoln.

MR. WILSON: Yes.

MS. BORELLI: Since we're moving on to a new paragraph and new topic, does it make sense to take a short break? We'd appreciate it.

MR. WILSON: Yeah, that's fine.

MS. BORELLI: Great.

THE VIDEOGRAPHER: Okay. So the time is 8:51 a.m. Mountain Time, and we are off the record.

(A recess was taken from 8:51 a.m. to 9:03 a.m.)

THE VIDEOGRAPHER: All right. So we are recording. The time is 9:03 a.m. Mountain Time,

and we are back on the record.

Q. (BY MR. WILSON) Dr. Budge, I'd actually like to jump ahead to paragraph 22 of your declaration.

It says: Every individual sex is multifaceted and composed of many distinct biologically-influenced characteristics, including but not limited to: Chromosomal make-up, hormones, internal and external reproductive organs, secondary sex characteristics, and gender identity.

Where there is a divergence between these characteristics, gender identity is the most important and determinative factor.

Did I read that correctly?

A. That's correct.

Q. If someone wanted to design an experiment to test whether that statement was true, how would they design that experiment?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: So there are multiple components that are included in that paragraph, so I am -- would you like me to share different types of research questions that are answering different components of that paragraph?

Q. (BY MR. WILSON) No. I'm wanting to know -- let's just take the first sentence.

That first sentence is a statement, correct?

MS. BORELLI: Objection; vague, compound.

Q. (BY MR. WILSON) It ends in a period and it's a statement; is that correct?

MS. BORELLI: Same objections.

THE WITNESS: Yes, it's a sentence.

Q. (BY MR. WILSON) And if we wanted to test whether that statement was false with a scientific procedure, how would we design that scientific procedure?

MS. BORELLI: Objection; vague, calls for speculation, compound.

THE WITNESS: So there are a lot of different ways to test this. Would you like for me to share multiple components?

Q. (BY MR. WILSON) Why don't you go ahead and share one and we can talk about it.

A. For the whole statement or for components of it?

MS. BORELLI: Just restating objections that this is vague and compound, calls for speculation.

Q. (BY MR. WILSON) Go ahead.

A. Oh, I'm sorry, I was clarifying a question. So I guess I'll just choose a component of this.

So there are pieces related to hormones, for example, that you can test what somebody's hormone levels are. So you can have questions related to what are the levels of hormones in someone's body, and then you can go about testing that question, for example.

Regarding gender identity, you can also go about different components related to the gender dysphoria diagnosis and use measures that are specific to gender dysphoria to be able to determine levels of gender dysphoria that are included within gender identity for people who are transgender.

You know, there are lots of different pieces that are included in this particular paragraph.

Q. I think that's a separate question. That seems to be about how do we measure those things, not how do we know that those things determine sex.

If you're asserting that these things determine sex, how do we test whether that's true?

MS. BORELLI: Objection; misstates testimony, vague.

THE WITNESS: I've included the definition that is used in every medical -- major medical and psychological organization. These statements are based on scientific and psychological scientific inquiry.

This is a broad component, so there are a lot of different studies that go into the factors of making up this particular definition.

So I'm using the large authoritative bodies that describe these pieces in indicating what I shared here.

Q. (BY MR. WILSON) Hold on for just a second here.

So is it your testimony that this is a widespread accepted definition of sex?

MS. BORELLI: Objection; misstates testimony, vague.

THE WITNESS: My testimony is such that this definition is based on the major medical and psychological organizations and how they describe these components.

Q. (BY MR. WILSON) And you don't cite any support for this statement in this paragraph, do

you?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: In this particular paragraph, I don't provide a citation.

Q. (BY MR. WILSON) Now, you referred to -- in your declaration, to the concept of sex assigned at birth; is that correct?

A. That's correct.

Q. What would you say to someone who said that, "Well, we took a NIP test of a fetus in utero and we determined the fetus's sex in utero," is that something that you believe to be a correct scientific process?

MS. BORELLI: Objection; vague, compound, calls for speculation.

THE WITNESS: My understanding of the NIP test is that you can get different types of chromosomes from that test, so that -- chromosomes are considered a component of sex.

Q. (BY MR. WILSON) So if someone said, based on a NIP test, that they conclusively determined the gender of the fetus -- I'm sorry, conclusively determined the sex of the fetus based on the test, would you say that was not correct?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: I would say that there are a lot of different components that go into sex, and so chromosomes are considered one component.

Q. (BY MR. WILSON) And you don't cite anything for that in your report, do you?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: I provide a lot of citations in this particular declaration that are supportive of my conclusions and what I opine on.

Q. (BY MR. WILSON) But you don't cite anything in support of this concept of sex assigned at birth, do you?

MS. BORELLI: Objection; asked and answered.

THE WITNESS: The citations that I include talk about sex assigned at birth, and it's a concept that's discussed by all of these major medical and psychological organizations. It's a concept that is well-known and well-understood within these organizations and within our broader field and how we understand how this works.

Q. (BY MR. WILSON) I'd like you to take a look at paragraph 34 of your declaration.

It says: For transgender people, social transition can be an important aspect of treatment to reduce the symptoms of gender dysphoria. As part of a social transition, the individual will typically, among other things, use a name and pronouns congruent with their gender identity, dress and groom in a manner typically associated with their gender identity and use sex-designated facilities, such as restrooms, that align with their gender identity.

To be clinically effective at alleviating the distress associated with gender dysphoria, the social transition must be respected consistently across all aspects of a transgender individual's life, for example, at home, in school, and at work.

Did I read that correctly?

A. That's correct.

Q. And you don't cite any studies in support of the statements in this paragraph, do you?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: I provide citations in the paragraph below. So this paragraph, 35, was kind

of an overarching component that's related to the science and understanding of social transition, and then I include more context and information throughout the document, but even specifically in the paragraph below it.

Q. (BY MR. WILSON) Would you agree that sometimes gender dysphoria desists?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: In my clinical experience, I have not -- I have not worked with an adolescent who has identified as transgender and who has detransitioned.

Q. (BY MR. WILSON) Have you had in your clinical experience anyone who identified as transgender and their gender dysphoria desisted?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: In my clinical experience, when somebody -- so there is the experience of someone who is trans who then starts -- let's say, for example, starts to go through a social transition and maybe goes through some type of medical transition, like hormone therapy, their gender dysphoria would decrease because that's being treated.

So when the gender dysphoria is being treated, it does decrease, and that's what we know from the data. So I have had that experience happen.

Q. (BY MR. WILSON) Let me rephrase or clarify terms by what I mean by "desist" and maybe you can tell me it's a different term.

A. Okay.

Q. Not that someone feels that -- not that their gender dysphoria abates because they feel that they are now congruent with what they believe to be their gender identity, but rather, that they feel -- that they no longer have those feelings because they feel they're living consistent with what you call their sex assigned at birth.

That's what I'm referring to by "desist?" Are we clear on the definition that I'm using there?

MS. BORELLI: Objection; vague.

THE WITNESS: Yes.

Q. (BY MR. WILSON) Okay. And is that something that you have seen in your clinical experience?

A. I have not --

MS. BORELLI: Objection; vague, compound.

Q. (BY MR. WILSON) I'm sorry?
A. I have not had any patients who have desisted or detransitioned.
Q. And you are aware that desistance does occur; is that correct?
MS. BORELLI: Objection; vague, assumes facts not in evidence.
THE WITNESS: So in my experience of understanding desistance within the scientific literature, is that when it was first brought up in the scientific literature, it was talked about regarding children who did not actually identify as transgender. For many of them, they were children who were gender-nonconforming but were classified in some way, shape, or form as transgender in the literature, even though a lot of these kids didn't actually identify as transgender or that, you know, the previous DSM diagnoses were used, and those were a lot different from the ones that we use right now.
And so some of the data that talk about this desistance actually does not capture, for the most part, transgender children and adolescents. And so when I'm answering your question, I'm thinking about that scientific literature in mind.

Q. (BY MR. WILSON) So in your clinical practice, in what percentage of the cases where someone comes to you with gender dysphoria who is a minor, in what percentage of the cases do you recommend social transition?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: In my experience, social transition isn't something that's recommended necessarily. It's something that where when a transgender adolescent comes in to the office and starts indicating, you know, "Hey, this isn't what my identity is, this is where my distress is, this is how all of my pieces can fit within this gender dysphoria diagnosis," then based on -- you know, in conversations with caregivers and with other supportive people, we go through the process of discussing with that transgender youth and the family what the process will look like in terms of ensuring that this young person's distress can be decreased.

So I would say, you know, in my experience, social transition is something that has been very effective for all of the clients who have come in and indicated that they're -- and who are transgender, and so -- but that social transition

will be specific to the family and to the specific processes that are needed.

Q. (BY MR. WILSON) Have you ever had a case where someone came to you and they had gender dysphoria and you said, "Social transition is not appropriate here"?

MS. BORELLI: Objection; vague.

THE WITNESS: In my clinical experience, all of the clients who I've worked with who are transgender have gone through a social transition process, or at least were needing to go through that process, and sometimes they might have been barred from that process if, for example, you know, they didn't have supportive families or things like that.

But maybe just to say that in the instances where transgender adolescents or adults who I've worked with have needed to social transition but perhaps maybe couldn't have because of social components that were barring them from moving forward.

Q. (BY MR. WILSON) Now, if we wanted to study how a transgender identity adheres to an adolescent, could we conduct a cohort study where we followed a group of people over time to see if

their gender identity remained constant over time?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: In my experience with the scientific literature -- so there are a lot of researchers who are researching transgender adolescents longitudinally, and in fact, you know, a lot of these kind of larger-scale clinicians that work with transgender children and adolescents are following a lot of these patients through the process of transitioning.

And so we do have data regarding the longitudinal nature and aspect of transgender adolescents' identity processes and their mental health and other outcomes that follow.

Q. (BY MR. WILSON) Would it be possible to study whether that transgender -- oh, sorry, let me rephrase that.

Would it be possible to study whether that gender dysphoria would desist over time in the absence of any clinical intervention?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: There are some studies that have followed transgender adolescents regarding if

they have been able to receive any kind of treatment or not, and in those studies, you know, studies follow youth who have both received treatment and some youth who did not or were not able to. And so there are some study designs that would be able to determine what the process of a transgender adolescent's trajectory would be, like, mental health processes.

Q. (BY MR. WILSON) In fact, there have been 11 of those studies, haven't there?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: I can't tell you exactly how many there are. In fact, I think that there are probably more than that. So I'm not sure where you're getting that number from.

Q. (BY MR. WILSON) And in the cohort studies that have followed youth with gender dysphoria without intervention, in each one of those studies, the majority of the patients have seen their gender dysphoria desist; is that correct?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence, lacks foundation.

THE WITNESS: That is not my understanding

of the data.

Q. (BY MR. WILSON) There are studies that follow those people with gender dysphoria and that have reported that their gender dysphoria desists over time without intervention; is that correct?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: My understanding of those studies is that the majority of transgender youth who are followed who do not receive any kind of social transition or medical intervention, that their distress remains or increases over time. That is -- that's what the data typically say.

Q. (BY MR. WILSON) Are you aware of studies like those that I've described where the gender dysphoria desists over time for the majority of the adolescent patients?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

Lincoln, if we're going to continue going down this line of questioning, we would ask that you present the study or studies that you're referring to so that Dr. Budge can review them. Lacks foundation.

MR. WILSON: I might present them. At this

point it's just a question of whether Dr. Budge is aware of those studies.

MS. BORELLI: Again, object to the vagueness of that question without any study having been identified.

THE WITNESS: I am not aware of any study that has followed transgender adolescents who never received any kind of social transition or medical transition treatment whose gender identity was -- you know, the majority of whom were no longer transgender anymore. I'm not aware of any study that says that.

Q. (BY MR. WILSON) Are you aware of the Lebovitz 1972 study on: Feminine Behavior in Boys: Aspects of its outcome?

MS. BORELLI: Objection. We'd restate the request to present the study if you're going to ask her questions about it. Lacks foundation.

MR. WILSON: I'm just asking if she's aware of it.

THE WITNESS: I am not aware of a 50-year-old study on what you described.

Q. (BY MR. WILSON) Are you aware of the study by Zuger in 1978, Effeminate behavior present in boys from childhood: Ten additional years of

follow-up?

MS. BORELLI: Same objections.

THE WITNESS: Is this Zucker, Z-u-c-k-e-r?

Q. (BY MR. WILSON) Z-u-g-e-r.

A. Okay.

No.

Q. Are you aware of the Money study from 1979, Homosexual Outcome of Discordant Gender Identity/Role in Childhood: Longitudinal Follow-Up?

MS. BORELLI: Same objections.

THE WITNESS: I'm aware of that study.

Q. (BY MR. WILSON) It's not cited in your report, though, is it?

A. There's no way for any expert witness to indicate hundreds of thousands of studies, especially ones that are old and that actually don't fit the questions that are at hand.

Q. Are you aware that in the Money study, out of nine patients with gender dysphoria, all nine identified as gay at the conclusion of the study, and not as trans?

MS. BORELLI: Objection; assumes facts not in evidence, lacks foundation.

Again, if you continue asking questions

about these articles, we would request you give her an opportunity to review the articles.

MR. WILSON: She said she was familiar with this study, so I'm asking questions about it. We'll see where it goes.

THE WITNESS: I would need to see -- that's exactly what I was about to say. Sorry. I would need to see this one.

Q. (BY MR. WILSON) Is it correct that the Money study is not cited in your declaration?

A. That's correct.

Q. Would a study that showed that patients who previously identified as trans ultimately all identified as gay be relevant to the question of desistance?

MS. BORELLI: Objection; vague, assumes facts not in evidence, lacks foundation.

We would request that you present a copy of the study.

THE WITNESS: These studies are very old, and they don't actually talk about the concepts in the way that we understand them right now. And even -- so these studies that I've mentioned that talk about desistance, again, like I said, the way that they categorized people in terms of identity

is very different than how we understand it now.

And so the studies that you're citing tend to have a very different way of talking about gender and talking about these processes, just by way of them being outdated.

Q. (BY MR. WILSON) Are you aware of the 2021 study by Singh titled: A Follow-Up Study of Boys with Gender Identity Disorder, Frontiers in Psychiatry?

MS. BORELLI: Objection; vague.

We request that you present the study.

MR. WILSON: I'm just asking if she's aware of it first.

MS. BORELLI: Same objections.

THE WITNESS: I would need to see it to see if it's one that I've read.

Q. (BY MR. WILSON) You would not classify a 2021 study as an old study, would you?

MS. BORELLI: Objection; assumes facts not in evidence, lacks foundation.

THE WITNESS: In general, no, I would not call a 2021 study old.

Q. (BY MR. WILSON) And would a study that in following 139 patients in 2021 in which 122 patients identified as cis at the conclusion of the

study, would that be relevant to the question of desistance of gender dysphoria?

MS. BORELLI: Objection.

Lincoln, we're getting into substantive questions about the article. We have asked that you mark the article and present the witness with it. If she's going to answer further questions about this article, it needs to be marked an exhibit. She needs to be given an opportunity to review it.

MR. WILSON: I'm just asking if that would be relevant to the outcome here.

MS. BORELLI: Lincoln, that question builds so many assumptions into it. I just don't know how she can accurately answer that. She said she would like to see the article. We would ask that you mark it and present it to the witness.

MR. WILSON: Let me ask the question, and we'll see if we want to discuss it further.

MS. BORELLI: So just to be clear, you're refusing to --

MR. WILSON: I'm not refusing to present it. Please don't interrupt me while I'm in the middle of a sentence.

Q. (BY MR. WILSON) I'm going to ask the

question: Would a 2021 study showing that the majority of patients no longer identified as trans at the conclusion be relevant to the question of desistance?

MS. BORELLI: Objection.

Lincoln, we've allowed a lot of leeway. You've asked questions about awareness of articles. You're now asking about the substance of the article. I've requested several times that you present -- mark the study and present it to the witness so that she can look at it and answer that question with the information in front of her.

We would ask that you mark -- is there a reason that you don't seem to want to mark it and present it to the witness?

MR. WILSON: I'm getting there --

MS. BORELLI: It's a reasonable request.

MR. WILSON: I'm getting there. I'd like an answer to the question of whether this would be relevant.

MS. BORELLI: Objection. I just don't know how she can answer that without seeing the study.

MR. WILSON: I'm not appreciating these speaking objections to the question I'm asking.

Q. (BY MR. WILSON) So the question is:

Would this be relevant?

MS. BORELLI: Objection; calls for speculation, hypothetical, lacks foundation, assumes facts not in evidence.

THE WITNESS: I would need to see the article to be able to answer your question.

Q. (BY MR. WILSON) Dr. Budge, you were designated as -- you were designated as an expert in the Bridge case in Oklahoma; is that correct?

A. That's correct.

Q. And Dr. Cantor served a rebuttal to your report in that case, didn't he?

A. That's correct.

Q. Do you recall that he identified all these studies in that report?

MS. BORELLI: Objection; vague.

THE WITNESS: I would need to see his report.

Q. (BY MR. WILSON) So I'm going to put a pin in this for the moment and we might come back to it.

Can we take a look at paragraph 39 of your report -- or your declaration, and let me know when you're there.

A. Okay.

Q. Paragraph 39 says: Before gender identity and gender dysphoria were well understood by the medical and psychological communities, there were attempts to use psychotherapy to try to change the individual's gender identity to match their sex assigned at birth. This has been referred to as "conversion" or "reparative therapy" in much of the academic or clinical literature. Such efforts were found to be ineffective and harmful and are therefore now considered unethical, and their use on minors is now illegal in numerous states.

Did I read that correctly?

A. That's correct.

Q. This paragraph doesn't cite any support for these assertions, does it?

MS. BORELLI: Objection; vague.

THE WITNESS: I do not include any citations in this particular paragraph.

However, the -- a lot of the information that I include throughout the declaration is supportive of this, especially specific types of citations, like the James, et al., study.

So there are a lot of studies that I cite in this particular document that support this, and this is also part of my clinical experience as

well.

Q. (BY MR. WILSON) And when it says that "such efforts were found to be ineffective and harmful," it doesn't say who found them to be ineffective and harmful, does it?

MS. BORELLI: Objection; argumentative.

THE WITNESS: I didn't provide that information here. The American Psychological Association, for example, has published a full statement with guidelines and information about the unethical nature of conversion or reparative therapy, and many other organizations have followed in suit.

But the American Psychological Association is one of the primary sources I use in terms of rigor to the data and in how that process is assessed.

Q. (BY MR. WILSON) And you mentioned that these therapies are illegal in numerous states, correct?

MS. BORELLI: Objection; misstates the document.

Q. (BY MR. WILSON) The document says: These therapies are illegal in numerous states.

Is that correct?

A. It says: Their use on minors is now illegal in numerous states.

Q. I'm sorry, that is correct. I didn't mean to miss the "on minors" clause.

So, Dr. Budge, you believe that in -- there are certain circumstances where surgical therapies are appropriate for minors with gender dysphoria; is that correct?

MS. BORELLI: Objection; misstates testimony, calls for speculation.

THE WITNESS: In my clinical experience, surgeries on minors are pretty rare and not usually the typical course of treatment, and that if there is a surgery that is performed on a minor that's related to gender-affirming care, that that is a very, very specific process that that particular youth and the family must go through in terms of providing consent and assent and being assessed regarding the psychological process underlying the medical necessity for that.

Q. (BY MR. WILSON) You have had patients where you believe that that was an appropriate therapy; is that correct?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: I have had a small number of patients in which surgery was appropriate when they were older minors.

Q. (BY MR. WILSON) And that is now illegal in numerous states as well; is that correct?

MS. BORELLI: Objection; calls for speculation and a legal conclusion.

THE WITNESS: When you say "that," I -- so it seems my understanding is that there are some states that have put forward some bans for gender-affirming care for transgender youth, that some of those bans are in place and some of them have been paused. It depends on the state.

Q. (BY MR. WILSON) So I'd like to take a look at paragraphs 22 and 25 of your declaration.

First, 22. We already talked about this one. Just take a quick look at it. Can you confirm that you're familiar with this paragraph that we've discussed before?

A. Yes.

Q. Then paragraph 25 says that: Gender dysphoria, codified in the American Psychiatric Association's 2022 Diagnostic and Statistical Manual of Mental Disorders Fifth Edition Text Revision (DSM-5-TR), is the psychiatric diagnosis

for the distress associated with gender incongruence. Individuals who are diagnosed with gender dysphoria can experience a number of different symptoms. When individuals with distress related to gender incongruence do not obtain competent and necessary treatment, serious and debilitating psychological distress (for example, suicidal ideation, substance abuse, depression, anxiety, and self-harm) often occurs.

Did I read that correctly?

MS. BORELLI: Objection.

Lincoln, I think you may have said "substance abuse" instead of "substance use."

MR. WILSON: I'm sorry. If I did not read it correctly, I'm glad you noted that.

Q. (BY MR. WILSON) Apart from Tara's eagle-eye read of the text there, is there anything else I missed?

A. No.

Q. Okay. So what I'm trying to understand is paragraph 22 describes sex as relating primarily to gender identity, that someone's sex is their gender identity, it's the most important and determinative factor; is that correct?

MS. BORELLI: Objection; misstates

testimony.

THE WITNESS: So what paragraph 22 says: When there's a divergence between these characteristics, gender identity is the most important and determinative factor.

Q. (BY MR. WILSON) Then paragraph 25 describes a condition and the treatments that you maintain are necessary for that condition; is that correct?

MS. BORELLI: Objection; misstates testimony, the document speaks for itself.

Q. (BY MR. WILSON) You can answer.

A. Paragraph 25 indicates the importance of, you know, obtaining competent and necessary treatment for people who have the incongruence that's described in paragraph 22.

Q. So what I'm trying to understand is: Are you describing these therapies as treatments for a condition that people have or as things that are making them become what they are?

MS. BORELLI: Objection; vague, misstates the testimony, compound.

THE WITNESS: So for the diagnosis of gender dysphoria, the distress is related to the incongruence. So that's how we conceptualize and

understand gender dysphoria, that that incongruence that somebody has, it is what causes the distress, not the gender identity itself.

Q. (BY MR. WILSON) So is that incongruence a condition that needs to be treated?

MS. BORELLI: Objection; vague.

THE WITNESS: Gender dysphoria is a diagnosis that can be treated with different components, such as social transition and medical transition procedures.

Q. (BY MR. WILSON) Is it primarily an identity or a condition?

MS. BORELLI: Objection; misstates testimony, vague, compound.

THE WITNESS: Gender dysphoria is the diagnosis and transgender is the identity.

Q. (BY MR. WILSON) If we did a Venn diagram of gender dysphoria and transgender identity, is it the same circle, in your view?

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) I know you're pretty smart, so I think you know what I mean, but if you don't know what I mean, let me know.

A. Well, as an expert in this area, what I can tell you is that the gender dysphoria is the

actual diagnosis, and that in order to receive the diagnosis, you do need to be transgender.

But the identity itself is not -- is not the component that is what you're trying to say, like, a condition. The identity is not a condition, right? But the distress that's related to the incongruence is the diagnosis. That's how we conceptualize it.

Q. So is it true that the two things are coextensive, that all transgender people have gender dysphoria and all people with gender dysphoria are transgender?

MS. BORELLI: Objection; vague, compound, asked and answered.

THE WITNESS: In order to receive a diagnosis of gender dysphoria, one must be transgender.

Q. (BY MR. WILSON) And if one is transgender, one should receive a diagnosis of gender dysphoria.

Is that also correct?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: The majority of people who are transgender, at least in my clinical practice, have

been diagnosed with gender dysphoria. It's possible that there -- it could be a -- you know, a minor -- small group of people who are transgender who do not meet criteria for gender dysphoria.

MR. WILSON: That's a helpful clarification.

I think we're probably at a good place for another break.

And, Tara, just for -- well, we can go off the record, if that's all right with you.

MS. BORELLI: Sure.

THE VIDEOGRAPHER: Okay. So the time is 9:46 a.m. Mountain Time, and we are off the record.

(A recess was taken from 9:46 a.m. to 9:58 a.m.)

THE VIDEOGRAPHER: All right. So we are recording. The time is 9:58 a.m. Mountain Time, and we are back on the record.

Q. (BY MR. WILSON) Dr. Budge, would it be fair to say that you believe in the importance of gender-affirming care?

MS. BORELLI: Objection; vague.

THE WITNESS: It would be fair to say that the evidence indicates that gender-affirming care is the component that we attribute to improved mental health and identity congruence for transgender people.

Q. (BY MR. WILSON) And because you believe in doing the things that improve those things, you believe in the importance of gender-affirming care; is that correct?

MS. BORELLI: Objection; vague, misstates testimony.

THE WITNESS: I mean, I would say, when I read the evidence and the evidence that I have seen that's done in the most rigorous way and the way that seems -- that focuses on all of the components that are supposed to be included in scientific study, that my read of the data for gender-affirming care is that it is the most effective treatment.

Q. (BY MR. WILSON) To clarify our terms, when we say "gender-affirming care," we mean that you would do therapies that would affirm someone's gender identity, even if it is incongruent with their biological sex; is that correct?

MS. BORELLI: Objection; vague, compound, misstates testimony.

THE WITNESS: If there is a transgender person in my office who comes to see me clinically, I do affirm that transgender identity, that that's something that -- you know, if they indicate that

they are trans, that's the process that we go through in terms of using care and techniques that are supportive of that identity.

Q. (BY MR. WILSON) You would do that for minors as well as for adults; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Yes. If a transgender adolescent comes into my office and indicates that they're transgender, the -- I use similar processes regarding psychotherapy techniques and also assessment processes for gender-affirming care.

MR. WILSON: So I just sent around, via e-mail, the study that you were dying to see. It's Exhibit 2. So just let me know when you've got it in front of you.

(Deposition Exhibit No. 2 was marked.)

MS. BORELLI: Thank you, Lincoln.

THE WITNESS: I have it in front of me.

MS. BORELLI: Actually, can I ask us just to pause? I unfortunately have not received it.

MR. WILSON: Sorry if our Internet is slow in Idaho.

MS. BORELLI: I suspect it's Atlanta Internet.

All right. Thank you. I just received

it.

MR. WILSON: Yeah.

Q. (BY MR. WILSON) So Kenneth Zucker is a name you're familiar with in your research community; is that correct, Dr. Budge?

A. That's correct.

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) Are you also familiar with Dr. Susan Bradley and Dr. Devita Singh?

MS. BORELLI: Compound.

THE WITNESS: I have seen both of their names.

Q. (BY MR. WILSON) So this is a study that -- it says in the first sentence of the abstract that it: Reports follow-up data on the largest sample to date of boys clinic-referred for gender dysphoria (N equals 139) with regard to gender identity and sexual orientation.

Did I read that correctly?

A. Did you include the N in there?

Q. I think I did.

A. Okay.

MS. BORELLI: Lincoln, I just want to pause for a moment. One of our primary objections was that there wasn't an ability to review it, but that

also means meaningful time to review it.

Can we pause so that Dr. Budge can familiarize herself with the study before we continue with questions?

MR. WILSON: Why don't we say, if it's all right with you, let's take a break. So I don't want this time to count against us, especially since there's a dispute about how time will count. So let's go off the record. She can take -- you can take whatever time you need, and then we'll go back on. Is that okay?

MS. BORELLI: That's fine. Just while we're on the record, before we go off, I do want to make sure that we've memorialized our positions about the dispute that you refer to. Let's make sure that we're clear. I understand that to be Plaintiff's position that the federal rules allow a total of seven hours of deposition time, and our position is also of course that this deposition time would count against that total and that any remaining time would be confined to the total of seven hours minus the time spent today. That's Plaintiff's position.

Is that the dispute that you're referring to?

MR. WILSON: That's the dispute we're referring to, and I'm going to state our position super fast because I don't want to waste any time.

But our position is that if the witness serves another report at a later stage in the case, that we would be entitled to seven hours on that report as well. We're not going to use our full seven hours today, though, in an abundance of caution in not knowing how this issue is going to sort out.

With that, can we go off the record?

MS. BORELLI: I think we've preserved our positions. Let's go off the record.

THE VIDEOGRAPHER: Okay. So the time is 10:05 a.m. Mountain Time, and we are off the record.

(A recess was taken from 10:05 a.m. to 10:11 a.m.)

THE VIDEOGRAPHER: Okay. So we are recording. The time is 10:11 a.m. Mountain Time, and we are back on the record.

Q. (BY MR. WILSON) So, Dr. Budge, as the DSM criteria for gender dysphoria have changed over time, have the criteria become more broad or more strict for a diagnosis?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: The criteria are more specific about gender identity.

Q. (BY MR. WILSON) And diagnoses of gender dysphoria have increased over time on the whole; is that correct?

MS. BORELLI: Objection; assumes facts not in evidence, vague.

THE WITNESS: We have -- so the diagnosis of gender dysphoria was only introduced in the DSM-5 in 2013, so we only have data regarding that specific diagnosis from 2013 until now.

Q. (BY MR. WILSON) And the corresponding terms of gender identity disorder in prior DSMs, there are more diagnoses with gender dysphoria now than there were for that prior diagnosis; is that correct?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: Well, they are different diagnoses.

Q. (BY MR. WILSON) Is it your position that there's no correspondence between a diagnosis of gender identity disorder in the DSM-3 and the gender dysphoria in the DSM-5?

MS. BORELLI: Objection; lacks foundation.

You can answer.

THE WITNESS: The diagnosis has become more specific.

Q. (BY MR. WILSON) Is there correspondence, though, between those diagnoses?

MS. BORELLI: Objection; vague, misstates testimony.

THE WITNESS: Well, I don't know if "correspondence" is the word that I would use.

I would say that gender dysphoria has built upon or that we understand more about gender dysphoria because of what we know from previous diagnoses, specifically becoming more -- more specific about what the actual diagnosis is, like making sure that we're actually including transgender people in the diagnosis.

Q. (BY MR. WILSON) If we did that Venn diagram thing again, the circle that's the gender dysphoria circle is a bigger circle than the gender identity disorder circle; is that correct?

MS. BORELLI: Objection; vague.

Q. (BY MR. WILSON) Again, I think you're smart and you know what I mean, but if you don't, then I can try to be less dumb.

A. I believe I am smart related to this; I don't understand what your question is.

Q. Okay. So is the subset of -- are those who are diagnosed with gender dysphoria under DSM-5, is that a larger set of people than those who were diagnosed with gender identity disorder under DSM-3?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: The data say, right now, that there has been an increase in diagnoses related to gender dysphoria, and our understanding of that is because there is more visibility regarding transgender identity, and not that there's a change in how many people are actually transgender, that the change is actually in how -- in what type of visibility and the kinds of access to medical care that's available now.

Q. (BY MR. WILSON) So would you expect that if the DSM-5 criteria had been applied back in the 1980s and 1990s, that we would see more diagnoses with gender dysphoria than we did of gender identity disorder at that time?

MS. BORELLI: Objection; vague, compound, calls for speculation.

THE WITNESS: I would predict -- so right now, we're in a very different time period than it was in the '80s and '90s, so it's impossible to

actually answer your question.

I think if all things were exactly the same as they are right now, I would predict that would see the same thing in the '80s and '90s.

Q. (BY MR. WILSON) What do you mean by "the same thing"?

A. Like, the same level of diagnoses, same number. But that would have to include all the same social processes, visibility, greater understanding.

Q. The Singh study that we are talking about, it states in the abstract, midway down the page: Of the 139 participants, 17, that's 12.2 percent, were classified as persisters, and the remaining 122, 87.8 percent, were classified as desisters.

Did I read that correctly?

A. I didn't follow where you were in the end. What part are you at? What does the sentence --

Q. Well, it's a little bit above halfway through the first paragraph.

A. Okay. Does it start with "Of"?

Q. Yes.

Of the 139 participants, 17, 12.2

percent, were classified as persisters, and the remaining 122, 87.8 percent, were classified as desisters.

Did I read that correctly?

A. You read that correctly.

Q. And under your approach, all of these people, if they were diagnosable with gender dysphoria from the outset, should have been treated with gender-affirming care; is that correct?

MS. BORELLI: Objection; misstates testimony, vague.

THE WITNESS: Can you say that question again, please?

Q. (BY MR. WILSON) Under your approach, all of these participants, if they were diagnosed with gender dysphoria, should have been treated with gender-affirming care; is that correct?

MS. BORELLI: Objection; vague, misstates testimony, lacks foundation.

THE WITNESS: I can't believe that this study got published. When I was reading through the study, the participants are from 1975 to 2006, and they've classified these -- the kids are as boys. And so the thing is is that none of these kids that I could even see potentially -- they

couldn't even be classified as transgender from my read of how they talk about these children in this article.

And so it's impossible to talk about where we are right now with our understanding of gender dysphoria and transgender identity and to compare that with what was happening in this particular article.

Q. (BY MR. WILSON) I'll just repeat my question.

Under your approach, these 139 participants, if they were diagnosable with gender dysphoria, they should have all been treated with gender-affirming care; is that correct?

MS. BORELLI: Objection; vague, lacks foundation, misstates testimony, asked and answered.

THE WITNESS: It's impossible for me to answer the question because the kids who were included in the study, from my read, don't -- aren't actually transgender. None of them were transgender from the way that they're described in the article.

So if a kid who is not transgender comes into my office and indicates that they are not

transgender, then I wouldn't move forward with this -- with gender-affirming care. It's really the gender-affirming care and the gender-affirming treatment is specific to transgender adolescents and transgender adults.

Q. (BY MR. WILSON) Are you saying that because they ultimately did not have a gender identity that was incongruent with their biological sex, that you were determining that they are not transgender?

A. Oh, they weren't classified --

MS. BORELLI: Dr. Budge, let me just make sure I get my objections in.

Objection; vague, misstates testimony, lacks foundation, compound.

You can answer.

THE WITNESS: This article never says that any of these children were transgender at the start.

Q. (BY MR. WILSON) And what's your basis for concluding that they were not?

A. The article does not state that any of the children were transgender when they began to be seen at the clinic.

Q. It says they were all referred for

gender identity disorder; is that correct?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: Can you point me to the referral piece?

Q. (BY MR. WILSON) The first sentence: This study reports follow-up data on the largest sample to date of boys clinic-referred for gender dysphoria.

A. Sure. They -- yeah, right. This article, when you talk about it, these kids were assessed at a clinic, but they were never identified as transgender.

Q. Is today the first day you've read this study?

A. I can't recall if this is the first time that I've read this study.

Q. Are you aware that it was cited in Dr. Cantor's rebuttal to your report in Oklahoma?

MS. BORELLI: Objection; lacks foundation.

THE WITNESS: I would need to see the report.

Q. (BY MR. WILSON) And this report is not cited in your expert report, is it?

A. Which report are you referring to?

Q. Sorry.

This study, the Singh study, is not cited in your declaration, is it?

A. That's correct. It's not cited in my declaration.

Q. And you were not aware of it until today; is that correct?

MS. BORELLI: Objection; lacks foundation, misstates testimony.

THE WITNESS: I don't recall when or if I've seen this previously, but it's possible that I have seen it, especially if it was cited in a previous declaration that I've read.

Q. (BY MR. WILSON) You say that it should not have been published; is that correct?

A. That's correct.

Q. And you don't believe that it's reliable; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: My critique of this article is that they don't follow transgender adolescents or children.

And also my other critique is that this is old. It's old data that don't follow the procedures and understandings that we now have

regarding the best practices for transgender adolescents, the -- yeah.

Q. (BY MR. WILSON) Now, do you think that a researcher who disagrees with other conclusions in the literature needs to give an account of those conclusions when expressing an opinion?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: Can you repeat the question, please?

Q. (BY MR. WILSON) When a researcher is expressing an opinion on an issue, they need to give an account for contrary findings in the literature; isn't that correct?

MS. BORELLI: Same objections.

THE WITNESS: When researchers are providing information about the research questions and the hypotheses, it's most typical that we talk about the theories, the theory testing that's happening, and that we also provide literature that indicates supportive pieces.

Typically, in the discussion of an article when we're publishing our results, we can provide and do provide articles that either contradict or don't agree with the findings that we

have in order to talk about the scope of the data. So that's a very typical practice.

Q. (BY MR. WILSON) If I told you that Dr. Cantor's report in the Bridge matter rebutting you was served on November 16th, 2022, would you have any reason to disagree with that?

MS. BORELLI: Objection; lacks foundation.

THE WITNESS: I would need to see the date.

Q. (BY MR. WILSON) But you have no reason to think that it's any date other than that, do you?

MS. BORELLI: Same objection.

THE WITNESS: No.

Q. (BY MR. WILSON) And your report was dated July 6th, 2023; is that correct -- or filed at that time?

A. There were two reports for the Bridge case.

Q. I'm sorry.

Your declaration in this case was -- actually, we'll go down to the bottom here and get the signature date.

It was executed the 12th of May 2023; is that correct?

A. For this case?

Q. Yes.
A. Yes.
Q. And you didn't cite the Singh study, did you?
MS. BORELLI: Objection; argumentative, asked and answered.
THE WITNESS: I did not cite the Singh study.
Q. (BY MR. WILSON) In fact, Dr. Cantor's report identified 11 cohort studies regarding persistence of gender dysphoria in adolescents, and you didn't cite any of them in your declaration in this case, did you?
MS. BORELLI: Objection; assumes facts not in evidence, lacks foundation.
THE WITNESS: I would need to see the citations that he included to answer that question.
Q. (BY MR. WILSON) So the law that's at issue in this case, Senate Bill 1100, it provides for an accommodation to individuals, whether they have gender dysphoria or otherwise, that would allow them to use a single-user restroom if they're not comfortable using the restroom that correlates with their biological sex.
Is that your understanding?

MS. BORELLI: Objection; compound, vague.
THE WITNESS: That's my understanding of one component of the bill.
Q. (BY MR. WILSON) And is it your opinion that that accommodation is not adequate?
MS. BORELLI: Objection; vague.
THE WITNESS: It is my opinion that that is not an appropriate -- it's not even an accommodation.
In this instance, it's denying access to a facility that relates to someone's gender identity that's different from their sex assigned at birth.
Q. (BY MR. WILSON) Now, if we wanted to study how that affects people with gender dysphoria, then we could do a study that compared the results for those who had access to those single-user facilities and those who did not and see if there was a statistically significant difference; is that right?
MS. BORELLI: Objection; vague, compound, calls for speculation.
THE WITNESS: When I had mentioned before that you're using controlled studies for treatments, this is not the instance in which you

would use a control group.

We have a lot of data that indicate that it is harmful for transgender students to be forced to use a bathroom that does not align with their gender identity, and that's -- the data are robust and there are many studies that have indicated that that's the case.

Q. (BY MR. WILSON) So is there anything that would be improper, though, about that type of a study, about single-user restrooms, that I've described?

MS. BORELLI: Objection; vague, calls for speculation.

THE WITNESS: From a research ethics perspective, I don't -- I can't imagine that an institutional review board would approve that because we know that it's harmful to have -- or force a transgender youth to use a bathroom that isn't in alignment with their identity.

We also have a lot of data regarding that youth -- that these bathrooms are often not easily available. They're often far away from their classrooms, they have to hold their urine, or it outs them to be able to have to use a bathroom that they're made to use because they are trans.

So there are a lot of things that we know in the data why that would be a harmful process, and institutional review boards, when they review data, they look at the ethics surrounding the design. And so this -- that would be a component that institutional review boards would consider as part of the research design.

Q. (BY MR. WILSON) So if you take a look at paragraph 52 of your report.

A. Hold on just a second.

Q. Let me know when you're there.

A. Okay.

Q. So if you go after the paragraph with all the numbers, it says: In addition, when -- I'm sorry, the sentence with all the numbers.

A. Okay.

Q. It says: In addition, when accommodations are offered to transgender individuals that require them to use a separate restroom that is not usually designated for their group (e.g., sending a high school student to a faculty or nurse's restroom) or when a transgender person, unlike others, is told that they, but not their peers, must use a single-user restroom, that individual, likewise, is being told not only that

their gender identity is invalid, but that they are something "other" and must be separated from all their peers because of who they are.

Numerous research studies have confirmed the negative psychological impact of being invalidated and "othered" in these ways.

Then there's a few citations.

Did I read that correctly?

A. Yes.

Q. And are these the citations that you were referring to when you said there was robust data on this question?

MS. BORELLI: Objection; misstates the document.

THE WITNESS: These studies are all methodologically sound and indicate the harm regarding being required to use a bathroom that doesn't match your gender identity.

Q. (BY MR. WILSON) How many of these studies specifically addressed single-user restrooms?

MS. BORELLI: Objection; vague.

THE WITNESS: I would have to read through them. My recollection is that at least two of them discuss the concept of single-user restrooms, but I

would have to go back to those studies to look specifically at what they say.

MR. WILSON: I'm sending another document here. I've just sent what's being marked as Exhibit 3.

(Deposition Exhibit No. 3 was marked.)

Q. (BY MR. WILSON) This is the Price-Feeney study, the first study cited there.

Let me know when you received it.

A. I received it.

MS. BORELLI: It's my Atlanta Internet. Unfortunately, it hasn't come through. It will be just a minute.

MR. WILSON: Let me know when you've got it, Tara.

MS. BORELLI: Also, so as not to slow you down, I don't know if you're able to upload to the chat as well. That way I would be able to access it directly. But I'm also happy to do e-mail to keep things simple. I'm just recognizing it seems to have a delay on my end.

MR. WILSON: I think we're okay, but I appreciate you being sensitive to my time.

Q. (BY MR. WILSON) Now, a single-user bathroom is gender-neutral; is that correct?

MS. BORELLI: Objection; vague.
THE WITNESS: That's a term that we sometimes use for them. It's usually just a single-stall bathroom that anybody can use.
MR. WILSON: Tara, are you still waiting for the article on your end?
MS. BORELLI: Unfortunately.
MR. WILSON: Now you're forcing me to actually know how to use Zoom and that's never a good idea. I'll try again here.
(Clarification by the court reporter.)
MR. WILSON: That's because Veritext wants us to use Exhibit Share, right?
(Clarification by the court reporter.)
MR. WILSON: Okay. Yeah. Well, the State of Idaho is really cheap and we don't do that.
MS. BORELLI: Has anybody else gotten it? Could anyone re-forward it to me? Or we could go off the record if you prefer, Lincoln.
MR. WILSON: Yeah. Why don't we just go off the record for a second.
MS. BORELLI: Okay. Thanks.
THE VIDEOGRAPHER: Okay. So the time is 10:35 a.m. Mountain Time, and we are off the record.

(A recess was taken from 10:35 a.m. to 10:36 a.m.)

THE VIDEOGRAPHER: Okay. So we are recording. The time is 10:36 a.m. Mountain Time, and we are back on the record.

Q. (BY MR. WILSON) Dr. Budge, if you'd take a look at the second page of this PDF marked 1143 at the top, this is the Price-Feeney article cited in your declaration.

Do you see the first full paragraph on the left-hand column on that page?

A. Yes.

Q. Okay. And if you look at the fourth sentence down, it says: Specifically, providing gender-neutral bathrooms or allowing youths to use the bathroom that corresponds to their gender identity can be viewed as part of gender-affirming support and care.

Did I read that correctly?

A. Yes.

Q. Do you disagree with that statement?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: For that statement, that applies -- my interpretation of that is that it applies to youth who desire to use a gender-neutral

bathroom, not to youth who are being required to use a bathroom that doesn't align with their gender.

Q. (BY MR. WILSON) Right.

So do you disagree that it can be viewed as gender-affirming care to provide a gender-neutral bathroom?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: Yeah. My -- so in my field and the way that we talk about this, it is considered affirming care for a transgender youth where that is something that they desire and that they want, but not if they're being restricted from using the bathrooms that align with their gender identity.

Q. (BY MR. WILSON) So this study, you cited, correct?

And you said that it was so clear that gender-neutral bathrooms were not an adequate accommodation that we couldn't even get a review board to approve a study about them.

But this study says that they are properly viewed as gender-affirming care; is that correct?

MS. BORELLI: Objection; vague compound, misstates testimony.

THE WITNESS: What I said was that I can't imagine that an institutional review board would approve a study regarding youth who were told that they are banned from using a bathroom that aligns with their gender identity and that they then had to use a single-stall bathroom.

That's different than youth who elect to use a gender-neutral bathroom.

Q. (BY MR. WILSON) We could also do an observational study where we had data on people who had access to a gender-neutral bathroom and data on those who had only sex-separated bathrooms and compare the two; is that correct?

MS. BORELLI: Objection; vague, compound, assumes facts not in evidence.

THE WITNESS: There are a lot of things that are included in this. I would say if youth are being told that they are banned from using a bathroom that aligns with their gender identity as part of this process, that would be an unethical component related to a research process.

So it's impossible to actually answer the question given the context that's at hand.

Q. (BY MR. WILSON) So I'm referring to sort of a retrospective study on what's already happened, because there are places that only allow for sex-separated restrooms; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Is the question that there are places that only allow gender-neutral bathrooms?

Q. (BY MR. WILSON) No. Let me try to break it down.

There are some places in America that only allow sex-separated restrooms and do not allow those with gender dysphoria to use a bathroom different than their biological sex; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: They don't allow people to use...

I mean, I would imagine that that would be an instance. I think that you're saying that in some places in the United States, that there are places that there are only sex-segregated bathrooms where trans people aren't allowed to use the bathroom that aligns with their gender identity.

Is that what you're asking?

Q. (BY MR. WILSON) Yes.

A. I mean, that's possible.

Q. I think I'm okay on this.

As you sit here today, you don't know whether any of the other articles cited in your report specifically studied gender-neutral or single-sex restrooms; is that correct?

A. Well, I would need to see them, but this --

MS. BORELLI: Let me just interpose on objection.

Objection; misstates her testimony and the document.

You can answer.

THE WITNESS: I would need to see them, but this Price-Feeney article does -- is inclusive of transgender youth who were required to use a single-stall bathroom in place of, you know, a sex-designated bathroom that aligned with their gender identity, given -- the research question that was at hand regarding bathroom discrimination was inclusive of this scenario that's described in the bill.

Q. (BY MR. WILSON) I'm going to have you take a look at paragraph 30 of your report.

Let me know when you're there.

A. Okay.

Q. So it's referring to the WPATH standards of care, and it says in the last sentence of the paragraph: These standards are developed by the foremost experts in the field of transgender health based on systematic review of the evidence-based research on transgender health.

Is that correct?

A. That's correct.

Q. Did you conduct your own systematic review in this case to determine what the appropriate standards of care are for individuals with gender dysphoria?

MS. BORELLI: Objection; vague.

THE WITNESS: I've been an expert in this field for many years, so I've been able to conduct a host of systematic reviews regarding the field of evidence for transgender care, and so that is something that is a part of my expertise.

Q. (BY MR. WILSON) Are any of those articles published?

MS. BORELLI: Objection; misstates the testimony, vague.

Q. (BY MR. WILSON) Let me rephrase.

Are any of those systematic reviews that

you've conducted published?

MS. BORELLI: Same objection.

THE WITNESS: Yes. I published a systematic review with Dr. Elliott Tebbe in 2022.

Q. (BY MR. WILSON) In paragraph 31, it says: Every major medical and mental health organization within the United States that has taken a position on gender-affirming care -- and then it lists several examples -- agrees with WPATH and the Endocrine Society that, when clinically indicated, puberty-delaying medication and gender-affirming hormones are appropriate and medically necessary treatments for adolescents.

Did I read that correctly?

A. Yes.

MS. BORELLI: Objection; document speaks for itself.

THE WITNESS: Did you hear my response?

I'm sorry, I said yes.

MR. WILSON: I believe -- yeah, you said yes. Thank you.

Hold on just a second here. I gotta check something.

Now, I'm going to send another article around here. This is going to be Exhibit 4. If

you let me know when you got it. And, Tara, you as well.

(Deposition Exhibit No. 4 was marked.)

MS. BORELLI: Will do.

THE WITNESS: I've received it.

MR. WILSON: Tara, you got it yet?

MS. BORELLI: It looks like I'm going to need another minute. Thank you for bearing with.

I've received it. Thank you.

Q. (BY MR. WILSON) Dr. Budge, this is an article in the New York Times dated August 3rd, 2023, by Azeen Ghorayshi; is that correct -- or Ghorayshi. I'm sorry.

A. That's correct.

Q. It refers to a recent decision by the American Academy of Pediatrics; is that correct?

A. That's correct.

Q. Are you familiar with --

MS. BORELLI: Sorry, Lincoln, can I just take a moment?

Dr. Budge, have you had a chance to review the document? I just want to make sure you've had a chance to look at it. I don't know if you've seen it previously.

THE WITNESS: I have seen it previously, but

I haven't had a chance to review it.

MS. BORELLI: Could we give her a moment just to review it?

MR. WILSON: Should we go off the record?

Q. (BY MR. WILSON) Do you need more than a few moments or...

A. It shouldn't -- it's short. It shouldn't take very long.

MR. WILSON: Okay. Tara, I assume that if we come back for a fight over an extra five minutes at the end of all this case, you're going to give it to me, but maybe you play hardball. I don't know.

Q. (BY MR. WILSON) Are we close enough there or should we go off the record?

A. I'm almost done.

Okay.

Q. So, Dr. Budge, are you familiar with the decision by the American Academy of Pediatrics that's referred to in this article?

A. Yes.

Q. And the American Academy of Pediatrics has commissioned a systematic review of the evidence concerning the efficacy for puberty blockers in treating gender dysphoria; is that

correct?

MS. BORELLI: Objection; vague.

THE WITNESS: My understanding is that every five years the AAP guidelines for any medical condition or component, that they do a review every five years, so this is just -- my reading of it is that it's standard practice.

Q. (BY MR. WILSON) They review their position statements every year, but they don't commission a systematic review every five years; is that correct?

MS. BORELLI: Objection -- sorry. Objection; form.

THE WITNESS: I mean, I would need to review all of the procedures that the AAP does. My understanding is that this is not limited -- doing systematic reviews is not limited to this particular component, this particular diagnosis.

Q. (BY MR. WILSON) And there's a reference -- let me ask it a different way.

Gender dysphoria isn't just something that happens in America, right?

MS. BORELLI: Objection; vague.

THE WITNESS: The diagnosis that we use in the DSM is based on the American Psychiatric

Association. Worldwide, usually the ICD classification is used for gender incongruence.

Q. (BY MR. WILSON) But the phenomenon is a worldwide phenomenon; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Transgender people exist everywhere.

Q. (BY MR. WILSON) And there's data from other countries and commissioned by other countries on the question; is that correct?

MS. BORELLI: Objection; compound, lacks foundation.

THE WITNESS: On the question? Can you be more specific, please?

Q. (BY MR. WILSON) Regarding gender dysphoria and transgender people; is that correct?

MS. BORELLI: Same objections.

THE WITNESS: Can you restate the whole question, please?

Q. (BY MR. WILSON) Other countries besides America have studied these issues; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: So my read of other countries describing gender-affirming care is that all of them so far, that I have read, indicate a support

for -- specifically if we're talking about transgender adolescents, support for transgender adolescents, and especially the ones in Europe that are talked about in this particular article, none of them have banned any particular care.

Q. (BY MR. WILSON) So if you look at the second paragraph from the bottom on page 1, it says: In June, England's National Health Service announced that it would restrict the use of puberty blockers to clinical trials because there's not enough evidence to support their safety or clinical effectiveness as a routinely available treatment.

Did I read that correctly?

A. Yes.

Q. Do you disagree with that position that the National Health Service has taken in England?

MS. BORELLI: Objection; assumes facts not in evidence, lacks foundation.

THE WITNESS: When I've read some of the statements regarding what is happening in England, as I mentioned, the statements are in support of transgender adolescents and that there is no ban regarding the care that's involved.

Q. (BY MR. WILSON) So you agree, then -- if you don't disagree, you agree there's not enough

evidence to support the safety or clinical effectiveness of puberty blockers as routinely available treatment?

MS. BORELLI: Objection; misstates testimony.

THE WITNESS: I do not agree that there is not enough evidence. The evidence that we have is strong, it's robust, and indicates that it is not unsafe for youth, and in fact, that it is lifesaving.

Q. (BY MR. WILSON) So that came out in June of this year; is that right?

MS. BORELLI: Objection; lacks foundation.

THE WITNESS: In the article, it says: In June.

Q. (BY MR. WILSON) And then it says: Last year Sweden's national healthcare oversight body similarly determined that, on the basis of its systematic review, the risks of puberty-inhibiting and gender-affirming hormone treatment for those under 18 currently outweigh the possible benefits.

Did I read that correctly?

MS. BORELLI: Objection -- sorry.

Let me just finish this before you -- and then you can answer the question, Dr. Budge.

Assumes facts not in evidence, lacks foundation, vague.

THE WITNESS: Yes.

Q. (BY MR. WILSON) And were you aware of these two determinations by the National Health Service and by Sweden around the time that they happened?

MS. BORELLI: Objection; assumes facts not in evidence, lacks foundation, vague, compound.

THE WITNESS: Yes.

Q. (BY MR. WILSON) And you disagree with Sweden's determination, just like you disagree with the National Health Service's determination; is that correct?

MS. BORELLI: Objection; vague, misstates testimony.

THE WITNESS: These particular sentences are taken out of context for the entirety of the report. The report doesn't say that transgender adolescents shouldn't receive care.

And in fact, the -- when these reports are being written, they are talked about in terms of the evidence that does exist. I think that these -- these particular reports are indicating that, you know -- that they want to gather more

data and more information, and that's my read of what they're calling for.

Q. (BY MR. WILSON) And so do you agree or disagree with the statement that, "The risks of puberty-inhibiting and gender-affirming hormone treatment for those under 18 currently outweigh the possible benefits"?

MS. BORELLI: Objection; vague, lacks foundation.

THE WITNESS: The evidence for transgender adolescents right now regarding puberty-delaying hormones and gender-affirming hormone treatment all indicate that they are improve -- improve mental health and improve the quality of life for transgender adolescents, and that's the large body of research that we're finding, especially in the longitudinal data.

So the body of evidence that I know and that I have reviewed is indicative that it is important for transgender adolescents to receive this treatment.

Q. (BY MR. WILSON) So you disagree with what Sweden says; is that correct?

MS. BORELLI: Objection; vague, misstates testimony.

THE WITNESS: As I mentioned previously, the entirety of the report that you're describing, that there are -- that one sentence isn't exactly the conclusion of the entirety report.

Q. (BY MR. WILSON) But you disagree with that particular conclusion; is that correct?

MS. BORELLI: Objection; vague, asked and answered, misstates testimony.

THE WITNESS: The evidence that I have reviewed indicates that -- it's that the benefits of gender-affirming care, especially related to hormones and puberty-delaying treatments, outweigh risks.

Q. (BY MR. WILSON) And you would agree that it says: Significant development for two European countries to have reached these conclusions.

Is that correct?

MS. BORELLI: Objection; vague, lacks foundation, assumes facts not in evidence.

THE WITNESS: My read of the situation with these reports is that they are -- again, like I said, actually, both reports say that it's important to support transgender adolescents and that care should not be banned.

And so, you know, these reports are not

indicating that transgender adolescents should not receive any kind of treatment and that, in general, they indicate the importance of that process of supporting transgender adolescents.

Q. (BY MR. WILSON) And you didn't cite either of these systematic reviews by the National Health Service or by Sweden in your report, did you?

MS. BORELLI: Objection; vague, lacks foundation.

THE WITNESS: I did not.

How are we doing on time, everybody?

MR. WILSON: Yeah. Can we do this? I think -- first of all, let's just go off the record.

THE VIDEOGRAPHER: Okay. So the time is 10:59 a.m., and we are off the record.

(A recess was taken from 10:59 a.m. to 11:09 a.m.)

THE VIDEOGRAPHER: All right. So we are recording. The time is 11:09 a.m. Mountain Time, and we are back on the record.

MR. WILSON: I've just got to handle one thing here.

Okay. I'm going to send another exhibit. This will be Exhibit 5.

(Deposition Exhibit No. 5 was marked.)

Q. (BY MR. WILSON) Dr. Budge, just let me know when you've received it.

A. I've received it.

MS. BORELLI: I need one more minute. Sorry.

MR. WILSON: I'm just going to ask a foundation question, if it's all right, Tara, while we're waiting?

MS. BORELLI: I received it.

MR. WILSON: Okay. Great. You got it. We're moving faster now.

Q. (BY MR. WILSON) Dr. Budge, do you recognize this article I just sent?

A. I do.

Q. This is an article about your lab at UW-Madison; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: That's correct.

Q. (BY MR. WILSON) That's your picture with three other people at the top, right?

A. Yes.

Q. If you head down to the third page of the PDF, there's a heading that says: UW-Madison's Trans Research Lab doesn't work only on research.

Members of the lab aren't shy about their advocacy and activism, something that is unusual in research.

Did I read that correctly?

A. Yes.

MS. BORELLI: Objection; misstates the document, lacks foundation.

Q. (BY MR. WILSON) And it says, "Budge isn't concerned about tainting the lab's work or how some might view it as biased. 'I think all research is biased in some way, shape, or form. It's just what you do to ensure that all of that is out on the table,' Budge says."

Did I read that correctly?

A. Yes.

Q. Was that an accurate quote of you in this article?

MS. BORELLI: Objection; vague.

THE WITNESS: I do believe that in some way, shape, or form that there is bias that's involved in all aspects of life because we're human.

Q. (BY MR. WILSON) Is it also true that you aren't concerned about tainting the lab's work or how some might view it as biased?

MS. BORELLI: Objection; vague, misstates

the document.

THE WITNESS: Can you say that again, please?

Q. (BY MR. WILSON) Do you also agree with the statement that "Budge isn't concerned about tainting the lab's work or how some might view it as biased"?

A. Yeah, what I meant there --

MS. BORELLI: Objection; misstates the document.

You can answer.

THE WITNESS: What I meant there is that we are transparent about our process and about who we are and the work that we do. Insofar that that information is available for people to see and to understand and that I -- the way that we now talk about bias related to science and research is that it's important for you to put out all of the information about different components of the work so that that way people can understand how research questions come about and how they're understood and also how that information is communicated.

And as you can see right below that statement, I say that that particular component, it is a part of the rigorous part of our approach and

that we use all of the best evidence-based practice guidelines and processes in the way that we conduct research.

Q. (BY MR. WILSON) So in disclosing a potential bias, in academia that's typically done through a conflict disclosure at the beginning of an article; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: Yeah. I think the bias that I'm talking about here is different from a conflict of interest.

So bias -- the way that I'm defining bias in this particular quote is just that, you know, humans in general -- like, there is not a human who doesn't have any level of bias at all, and everybody in this room is included, every human being has it.

I think that our -- our goal as researchers and as scientists is to describe the science and to do the science in the most rigorous way possible so that any type of bias that may exist from any human being can be taken out of that equation or understood within the context of how the research is conducted.

Q. (BY MR. WILSON) It says, a couple

paragraphs down: Aside from its research, lab members meet once a week to engage in activism. In some meetings, members write letters to elected officials on issues, such as healthcare and nondiscrimination. Lab researchers met two UW-Madison employees who sued the state and the UW system over their refusal to pay for gender reassignment surgery, Budge says. The lab also does educational training on transgender issues for community groups and organizations.

Did I read that correctly?

A. You did.

Q. And that's a bit more than just sort of the basic bias that everybody inherently has, right?

MS. BORELLI: Objection; misstates the document, assumes facts not in evidence.

THE WITNESS: No. So the thing is is that when there is discrimination at hand, the scientists who I know who study discrimination, that it's an ethical duty that we have as scientists to ensure that discrimination doesn't continue.

And so in that instance, that's how scientists function and how they engage in the

work.

Q. (BY MR. WILSON) If someone were an activist, an admitted activist on a question, do you think that's something they should disclose when they write an academic paper on the subject of their activism?

MS. BORELLI: Objection; vague.

THE WITNESS: I think it depends on what the activism is. In this instance, it's advocacy work, which is something that is included within any kind of, you know, scientific academic work regarding when people's rights are being -- are not being maintained, that that kind of advocacy is part and parcel of the work and it's also part of my institution's mission.

Q. (BY MR. WILSON) So when you wrote this article with Dr. Tebbe, the systematic review, you didn't disclose that you're an activist on these questions, did you?

MS. BORELLI: Objection; vague, assumes facts not in evidence.

THE WITNESS: I don't have any conflicts of interest that were needed -- that needed to be disclosed.

Q. (BY MR. WILSON) And you didn't disclose

that you're an activist in that article, did you?

MS. BORELLI: Objection; asked and answered, argumentative, assumes facts not in evidence, vague.

THE WITNESS: I did not indicate that I was an activist in that article.

Q. (BY MR. WILSON) And you are an activist on this question; is that correct?

MS. BORELLI: Objection; asked and answered, argumentative, misstates testimony, lack of foundation.

THE WITNESS: I would describe my work more as advocacy and that that advocacy is something that is included within understanding the ways in which discrimination is experienced and how it comes about and that my work is to reduce the level of discrimination, and that's the advocacy that I engage in.

Q. (BY MR. WILSON) So is this article wrong when it says that you aren't shy about your advocacy and activism?

MS. BORELLI: Objection; vague, misstates the document.

THE WITNESS: I would describe my work more as advocacy, but I would say, you know, that this

is how the journalist decided to write that information.

Q. (BY MR. WILSON) And in fact, you -- a correction was submitted to this journal -- it's noted at the bottom -- after this article was published; is that correct?

A. Sorry --

MS. BORELLI: Lincoln, I'm sorry, where are you?

MR. WILSON: If you go down to Editor's Note at the bottom, it says: Editor's Note: This article originally stated that 30 people have agreed to have their therapy sessions monitored by the lab. The lab has not yet started recruiting people for the study, but the goal is to monitor 30 people's sessions.

Did I read that correctly?

A. You did.

Q. That would have been a correction that would have come from your lab after the original version of the article was published; is that correct?

MS. BORELLI: Objection; vague.

THE WITNESS: That's correct.

Q. (BY MR. WILSON) But you didn't ask them

to correct the statement that you're not shy about your advocacy and activism, did you?

MS. BORELLI: Objection; vague, argumentative, misstates testimony.

THE WITNESS: I did not.

Q. (BY MR. WILSON) I'd love to end there, but I have to ask one more question.

So, Dr. Budge, I just want to clarify for the record that in the adolescent patients that you've seen for gender dysphoria, have you ever been presented with a case where it was not appropriate for the patient to go through a social transition, in your view?

MS. BORELLI: Objection; vague, compound.

THE WITNESS: In my clinical practice, I have not seen a transgender adolescent who has not -- where it's not been appropriate to move forward with a social transition.

MR. WILSON: I have no further questions, subject to anything that Tara has.

MS. BORELLI: Let's go ahead and take a break, then, go off the record and take a break, and we will confer and come back to let you know whether we have any questions of our own.

MR. WILSON: All right. Sounds good.

Is this a five-minute? Ten-minute?

MS. BORELLI: Let's do at least ten minutes.

MR. WILSON: Okay.

MS. BORELLI: We'll come back sooner if we're able to finish earlier.

MR. WILSON: All right.

THE VIDEOGRAPHER: Okay. So the time is 11:21 a.m. Mountain Time, and we are off the record.

(A recess was taken from 11:21 a.m. to 11:32 a.m.)

THE VIDEOGRAPHER: All right. So we are recording. The time is 11:32 a.m. Mountain Time, and we are back on the record.

MS. BORELLI: Thank you. The plaintiffs have no further questions for Dr. Budge at this point, and we will read and sign.

MR. WILSON: (Inaudible.)

MS. BORELLI: I'm sorry, could you say that again?

MR. WILSON: I said it poorly.

That concludes the deposition, then. Thank you.

MS. BORELLI: Thank you, Lincoln.

We will read and sign.

THE VIDEOGRAPHER: Okay. So then this

concludes our video deposition with Dr. Stephanie Budge. It is August 16th, 2023. The time is 11:33 a.m. Mountain Time, and we are off the record.

(The deposition concluded at 11:33 a.m.)

* * *

(Signature was requested.)

VERIFICATION

STATE OF _____)
) ss.
COUNTY OF _____)

I, STEPHANIE BUDGE, PH.D., being first duly sworn on my oath, depose and say:

That I am the witness named in the foregoing deposition taken the 16th day of August, 2023, consisting of pages numbered 1 to 122, inclusive; that I have read the said deposition and know the contents thereof; that the questions contained therein were propounded to me; that the answers to said questions were given by me, and that the answers as contained therein (or as corrected by me therein) are true and correct.

Corrections Made: Yes_____ No_____

_____
STEPHANIE BUDGE, PH.D.

Subscribed and sworn to before me this ___ day of _____, 2023, at _____, _____.

_____
Notary Public for
Residing at_____,
My Commission Expires: _____

REPORTER'S CERTIFICATE

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

I, REBECCA MARTIN, Certified Shorthand Reporter and Notary Public in and for the State of Idaho, do hereby certify:

That prior to being examined, the witness named in the foregoing deposition was duly sworn remotely by me to testify to the truth, the whole truth and nothing but the truth;

That said deposition was taken down by me in shorthand at the time and place therein named and thereafter reduced to typewriting under my direction, and that the foregoing transcript contains a full, true and verbatim record of said deposition.

I further certify that I have no interest in the event of the action.

WITNESS my hand and seal this 16th day of August, 2023.

REBECCA MARTIN
RPR and Notary
Public in and for the
State of Idaho
My Commission Expires: 08-27-2024

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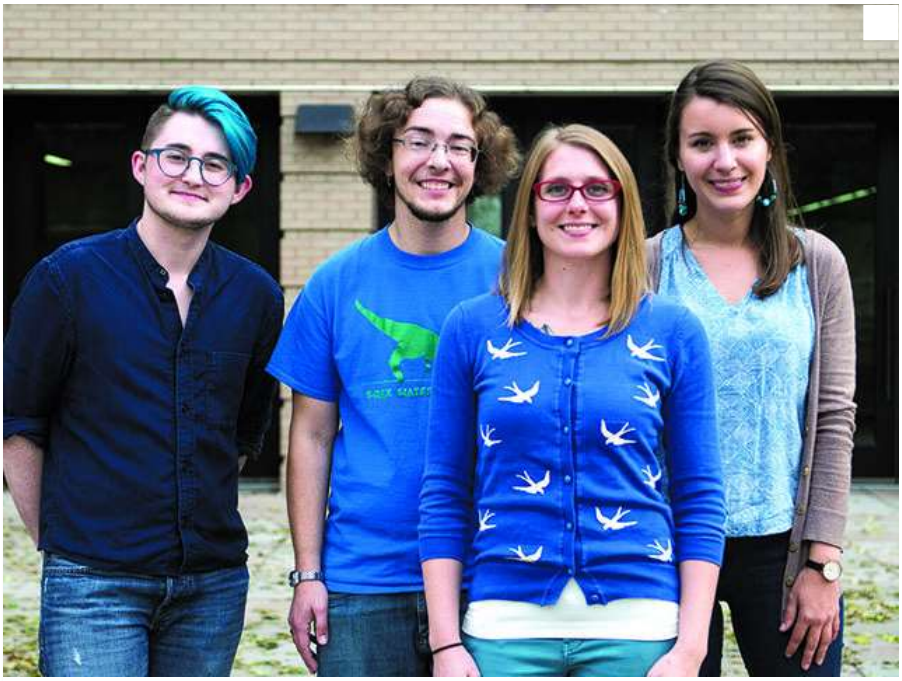
Changing the culture

UW-Madison lab is pioneering research on transgender issues

BY PETER COUTU
SEPTEMBER 21, 2017

RSS



LAUREN JUSTICE

Members of UW-Madison's Trans Research Lab (left to right) Sidra Dillard, Ben Andert, director Stephanie Budge, and Morgan Sinnard outside the Education Building.

After graduating from Guilford College in Greensboro, North Carolina, Sidra Dillard wanted to continue studying, and hoped to focus future research on transgender-related topics.

This, unfortunately, left few choices.

"I was talking to my psychology advisor in my undergrad who did research in some LGBT fields, not so much the T, though, and I asked her, 'How do I apply for graduate school?' She said, 'Really apply for places that have faculty that are interested in what you're interested in.' That didn't give me a lot of options."

So Dillard made a short list of institutions that fit that description, and UW-Madison, home to the largest transgender research lab in the nation, ended up at the top of the list.

The UW-Madison's Trans Research Lab has no physical space, a budget that consists only of grant money, and it only recently launched a website. Nevertheless, the lab is at the forefront of transgender studies and is attracting researchers to the university.

EXHIBIT 2

department. “There are only five other professors in the country in psychology who are really specializing in this work.”

Elliot Tebbe is one of those specialists. A University of Nebraska-Lincoln professor of educational psychology, he calls Budge a “pioneer.”

“[The lab] is changing the culture of the field,” Tebbe says. “When you have such a large, productive research lab that is doing really good work, coming up with new models that are helpful in training, that will happen.”

Both students and community members can volunteer at the lab and help with research. And although the lab has no regular schedule or location, it’s nevertheless generated significant interest. Budge gets emails every month from people interested in working there.

This word-of-mouth has led to a steady growth in membership since the lab started a few years ago. There are currently about 20 unpaid volunteer members, mostly students, doing research at the lab, Budge says. She hopes this number will continue to grow.

The lab conducts what Budge describes as “affirmative research.”

In 2016, the lab published research on the relationship between geographic location and level of anxiety and depression among transgender populations in America. Morgan Sinnard — a doctoral student in the counseling psychology department at UW and one of the authors of the research — says a review of survey data found that transgender people had the highest rates of anxiety in Southwestern states, such as Texas and Arkansas.

“It was a significantly higher difference than almost every other division of the U.S. So, we thought maybe this was because of social differences in attitudes toward trans people, cultural differences,” Sinnard says. “But, ultimately, we can’t know because we didn’t compare it to a control group.”

The lab is now focusing on studying the use of psychotherapy for transgender people — Budge says there’s little research in this area — with the aim of improving therapy practices.

To do this, the lab will monitor and record therapy sessions with transgender people conducted by members of the counseling psychology department, including clinical psychologists and doctoral students. The lab hopes to recruit 30 people to have their therapy monitored. Researchers will then analyze the sessions, noting and cataloguing what problems and struggles people experience and how they respond to therapy.

Budge has been researching transgender-related issues for more than a decade. In 2011, she founded the TSTAR lab at the University of Louisville — which she says was

little research being done in the area, Budge says, was often "really bad and really offensive," with researchers often using outdated and offensive terminology.

After Budge came to UW-Madison in 2014, TSTAR severed its ties with the university. It now exists as a community group.

UW-Madison's Trans Research Lab doesn't only work on research. Members of the lab aren't shy about their advocacy and activism — something that is unusual in research.

Budge isn't concerned about tainting the lab's work or how some might view it as biased. "I think all research is biased in some way, shape or form. It's just what you do to ensure that all of that is out on the table," Budge says. "We're really transparent about what we do, so I'm not really concerned about [our work coming across as biased]."

She says she believes in the "rigor of their approach" and that there is nothing the lab does "that is not based in science."

Aside from its research, lab members meet once a week to engage in activism. In some meetings, members write letters to elected officials on issues such as health care and non-discrimination. Lab researchers met two UW-Madison employees who sued the state and the UW System over their refusal to pay for gender reassignment surgery, Budge says. The lab also does educational training on transgender issues for community groups and organizations.

Dillard wanted to work with Budge, in part because Budge understands the importance of activism and practicing self-care.

"Stephanie wouldn't be the leader of the lab that she is if she wasn't so cognizant of how social events and political events impact the people of the lab," Dillard says.

After just a few years of steady growth, UW-Madison's lab has served as a model for similar, smaller labs throughout the country.

Jayvien McNeill, now a senior at the California State University, interned for UW-Madison's Trans Research Lab this summer. Without the lab, McNeill never would have come to Wisconsin, due to "how white" the campus is.

But after completing the internship, McNeill is now hoping to export what makes UW-Madison's trans research lab so successful back to California's lab, a small space that has roughly five active student-researchers.

"When I [came to Madison], I realized this is totally unique," McNeill says. "I definitely think that there is nothing like what is happening with [UW-Madison's] Trans Research Lab. It's influencing all of my work decisions now."

"I came here because Stephanie was here, first and foremost," says Dillard, who identifies as a transmasculine nonbinary individual. "I think now the lab is also nice for me because I think it's the biggest gathering of queer and trans folks that I have in Madison. It gives me the opportunity to spend more time with queer and trans folks."

Following years of research and data collection into psychology-related issues, Budge says the problems facing the transgender community are just now coming into focus, and she's hoping the lab will help address them.

"Trans people tend to experience more depression, anxiety, suicidality," Budge says. "Now that the health disparity is set," she adds, "what do we do about that?

Editor's note: This article originally stated that 30 people have agreed to have their therapy sessions monitored by the lab. The lab has not yet started recruiting people for the study, but the goal is to monitor 30 people's sessions.

NEWS UW-MADISON

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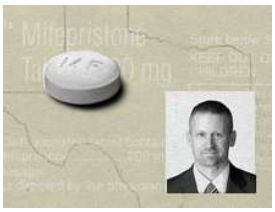

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MAR 15, 2023

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frontiers in Psychiatry

ORIGINAL RESEARCH
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A Follow-Up Study of Boys With Gender Identity Disorder

Devita Singh[1], *Susan J. Bradley*[2] *and Kenneth J. Zucker*[2]*

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This study reports follow-up data on the largest sample to date of boys clinic-referred for gender dysphoria (n = 139) with regard to gender identity and sexual orientation. In childhood, the boys were assessed at a mean age of 7.49 years (range, 3.33–12.99) at a mean year of 1989 and followed-up at a mean age of 20.58 years (range, 13.07–39.15) at a mean year of 2002. In childhood, 88 (63.3%) of the boys met the DSM-III, III-R, or IV criteria for gender identity disorder; the remaining 51 (36.7%) boys were subthreshold for the criteria. At follow-up, gender identity/dysphoria was assessed via multiple methods and the participants were classified as either persisters or desisters. Sexual orientation was ascertained for both fantasy and behavior and then dichotomized as either biphilic/androphilic or gynephilic. Of the 139 participants, 17 (12.2%) were classified as persisters and the remaining 122 (87.8%) were classified as desisters. Data on sexual orientation in fantasy were available for 129 participants: 82 (63.6%) were classified as biphilic/androphilic, 43 (33.3%) were classified as gynephilic, and 4 (3.1%) reported no sexual fantasies. For sexual orientation in behavior, data were available for 108 participants: 51 (47.2%) were classified as biphilic/androphilic, 29 (26.9%) were classified as gynephilic, and 28 (25.9%) reported no sexual behaviors. Multinomial logistic regression examined predictors of outcome for the biphilic/androphilic persisters and the gynephilic desisters, with the biphilic/androphilic desisters as the reference group. Compared to the reference group, the biphilic/androphilic persisters tended to be older at the time of the assessment in childhood, were from a lower social class background, and, on a dimensional composite of sex-typed behavior in childhood were more gender-variant. The biphilic/androphilic desisters were more gender-variant compared to the gynephilic desisters. Boys clinic-referred for gender identity concerns in childhood had a high rate of desistance and a high rate of a biphilic/androphilic sexual orientation. The implications of the data for current models of care for the treatment of gender dysphoria in children are discussed.

Keywords: gender dysphoria, gender identity disorder, gender non-conformity, sexual orientation, DSM-5

OPEN ACCESS

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EXHIBIT 3

INTRODUCTION

Gender identity is considered to be, for most people, a central aspect of one's sense of self (1–6).[1] By around 3 years of age, if not earlier, most children can self-label themselves as either a boy or a girl (11–14) although cognitive-developmental gender theory suggests that the understanding of gender as an "invariant" aspect of the self does not occur until early to middle childhood, with the achievement of concreate operational thought (12, 15, 16). Gender differences in the adoption of gender role behavior, i.e., behavior associated with cultural definitions of masculinity and femininity, also emerge during the preschool years, if not earlier. These behaviors span various domains, including peer, toy, role play, and activity preferences [e.g., (3, 17, 18)]. Normative developmental research has long documented that, on average, both gender identity and gender role behaviors show significant and substantial between-sex differences (19–21). Later in development, sexual orientation also shows a substantial between-sex difference, i.e., most males are sexually attracted to females and most females are sexually attracted to males (19, 22).

In the 1950s and 1960s, a small clinical literature began to describe the phenomenology of children who displayed marked gender-variant behavior, including the strong desire to be of the other gender [e.g., (23–27)]. Subsequent volumes by Stoller (28) and Green (29) provided more comprehensive descriptions of such children. These early works were the sequel to the introduction of the diagnostic term Gender Identity Disorder (GID) of Childhood to the psychiatric nomenclature in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-III; (30)], currently termed Gender Dysphoria (GD) in the DSM-5 (31). Since 1980, empirical research has examined a number of parameters pertaining to GID/GD: epidemiology, diagnostic and assessment methods, associated psychopathology, causal mechanisms, and therapeutic approaches [for reviews, see, e.g., (32–39)].

An additional parameter (the focus of the present study) pertains to the developmental course of GID in children. In the early literature, it was posited by some that pervasive gender-variant behavior in children might be a predictor of GID in adulthood (termed Transsexualism in the DSM-III) [e.g., (26, 40)]. At the same time, it was also recognized that gender-variant behavior in childhood was associated with sexual orientation (in males, androphilia, i.e., sexual attraction to men; in females, gynephilia, i.e., sexual attraction to women), but without co-occurring gender dysphoria [see, e.g., (41, 42); for a meta-analytic review, see (43)].

To date, there have been at least 10 follow-up studies of children whose behavior was consistent with the DSM diagnosis of GID (or GD per DSM-5) (44–53). Across these studies, the year at the time of first evaluation in childhood ranged from 1952 (49) to 2008 (51). For the 9 studies that included boys, the sample sizes (excluding those lost to follow-up) ranged from 6 to 79 (Mean age, 26 years). Most of these studies also provided the age at the time of first evaluation in childhood, which ranged from a mean of 7 years (47) to a mean of 9 years (48), with an age range from 4 to 12 years.

At the time of follow-up, using different metrics (e.g., clinical interview, maternal report, dimensional measurement of gender dysphoria, a DSM diagnosis of GID, etc.), these studies provided information on the percentage of boys who continued to have gender dysphoria (herein termed "persisters") and the percentage of boys who did not (herein termed "desisters").[2] Of the 53 boys culled from the relatively small sample size studies (Bakwin, Davenport, Kosky, Lebovitz, Money and Russo, Zuger), the percentage classified as persisters was 9.4% (age range at follow-up, 13–30 years). In Green (47), the percentage of persisters was 2% (total $n = 44$; Mean age at follow-up, 19 years; range, 14–24); in Wallien and Cohen-Kettenis (52), the percentage of persisters was 20.3% (total $n = 59$; Mean age at follow-up, 19.4 years; range, 16–28); and in Steensma et al. (51), the percentage of persisters was 29.1% (total $n = 79$; Mean age at follow-up, 16.1 years; range, 15–19). Across all studies, the percentage of persisters was 17.4% (total $N = 235$), with a range from 0 to 29.1%.[3]

These studies also provided information on the sexual orientation of the boys at the time of follow-up. In the early studies, sexual orientation was ascertained from various sources (e.g., open-ended interviews with the patient, parent-report, chart information, etc.). In the more recent studies, sexual orientation was assessed in a more systematic manner, such as the use of a structured interview to assign a Kinsey-based rating of sexual orientation in fantasy and a rating of sexual orientation in behavior, dummy coded where a 0 = gynephilia and a 6 = androphilia [e.g., (47)].

Of the 53 boys culled from the relatively small sample size studies (op. cit.), 13 (34.2%) of the patients were classified as gynephilic and 25 (65.8%) were classified as biphilic/androphilic.[4] In the remaining 15 patients (28.3% of the combined samples), their sexual orientation was either uncertain or unknown.

[1]In one study, Turner and Brown (7) found that school-age children rarely mentioned their gender when providing open-ended self-descriptions; the most frequent descriptor pertained to activities and preferences. Turner and Brown suggested that it might be the case that gender is so central to one's self-concept that it "goes without saying" (p. 709). In contemporary times in the West, a very small number of parents choose to not "gender" their children ("theybies") by not referring to them as boys or girls (and, at times, not even announcing to others the child's biological sex), dressing them in gender-neutral ways, etc. Little is known about the gender identity and gender role patterns of these children (8–10).

[2]The terms persistence and desistance have been used for a long time in clinical developmental psychiatry and psychology [e.g., (54)]. Zucker (55) was the first to apply these terms to describe the developmental psychosexual trajectories of children diagnosed with GID.

[3]The percentages provided here differ somewhat from other summary reviews [(39), pp. 285–286, (56, 57)] because we have excluded patients who were seen for the first time in adolescence [for this reason, data from Zuger (58) are also not included]. One other follow-up study was conducted by Nakamura (59). Unfortunately, this dissertation is not available for purchase at ProQuest (Ann Arbor, MI) and is only available for loan at the University of Essex library. Due to COVID-19 restrictions, it is currently inaccessible (K. Clarke, personal communication to G. Rieger, June 15, 2020). The director of the clinic at the time when the data were collected does not have a copy of the dissertation (D. Di Ceglie, personal communication, June 15, 2020).

[4]As pointed out by Reviewer 1, biphilic is a dubious neologism, combining Latin and Greek derivatives. Diphilic would be the more accurate derivative. However, introducing this term would probably confuse many readers, so we have retained the term biphilic (see https://en.wikipedia.org/wiki/Androphilia_and_gynephilia).

In Green's (47) study, 11 (25%) of the boys were classified as gynephilic (Kinsey ratings of 0–1) and 33 (75%) were classified as biphilic/androphilic in fantasy (Kinsey ratings of 2–6). For behavior, 6 (20%) were classified as gynephilic and 24 (80.0%) were classified as biphilic/androphilic. The remaining 14 boys (31.8% of the total sample) could not be classified with regard to behavior because they had had no interpersonal sexual experiences. In Green's study, the sexual orientation of a comparison group of boys, who had been recruited from the community, was also assessed: 100% of these boys ($n = 35$) were classified as gynephilic in fantasy and 96% ($n = 25$) were classified as gynephilic in behavior.

In the Wallien and Cohen-Kettenis (52) study, sexual orientation was assessed for attraction (2 items), fantasy (2 items), behavior (4 items), and sexual identity (1 item) using a self-developed Sexual Orientation Questionnaire. As in Green, Kinsey-type ratings were used in the analysis. Depending on the metric, data on sexual orientation were not available for anywhere between 22 and 40 (27.2–67.7%) patients. For attraction, 32% were classified as gynephilic and 68% were classified as androphilic (total $N = 37$); for fantasy, 19% were classified as gynephilic, 19% were classified as biphilic, and 62% were classified as androphilic (total $N = 21$); for behavior, 21% were classified as gynephilic, 16% were classified as biphilic, and 63% were classified as androphilic (total $N = 19$); lastly, for sexual identity, 19% were classified as gynephilic ("heterosexual"), 19% were classified as biphilic ("bisexual"), and 62% were classified as androphilic ("homosexual") (total $N = 27$). Steensma et al. (51) used the same metrics as Wallien and Cohen-Kettenis. Depending on the metric, data on sexual orientation were not available for anywhere between 25 and 40 (31.6%-50.6%) patients. For attraction, 19.2% were classified as gynephilic, 15.4% were classified as biphilic, and 65.4% were classified as androphilic (total $N = 52$); for fantasy, 14% were classified as gynephilic, 22% were classified as biphilic, and 64% were classified as androphilic (total $N = 50$); for behavior, 35.9% were classified as gynephilic, 12.8 were classified as biphilic, and 51.3% were classified as androphilic (total $N = 39$); lastly, for sexual identity, 13% were classified as gynephilic ("heterosexual"), 27.8% were classified as biphilic ("bisexual"), and 59.3% were classified as androphilic ("homosexual") (total $N = 54$).

In recent years, there have been various criticisms of these follow-up studies [see, e.g., (60–63); for a rebuttal, see (64)], particularly with regard to the putatively high percentage of desistance. It has been questioned, for example, to what extent the patients in these studies truly had GID/GD. For example, in the early studies, prior to the publication of DSM-III, one could reasonably argue that the diagnostic status of the patients was unclear because there were no formal diagnostic criteria to rely upon. However, one could argue in return that the behavior of these boys was phenomenologically consistent with the subsequent DSM criteria.

Consider, for example, the systematic study by Green [(47), Figure 1.2]. Green reported that 15% of the feminine boys, per parent-report, had "never" expressed the desire to be a girl or a woman at the time of the baseline assessment, 60% "occasionally" had such a desire, and only 25% had such a desire "frequently." Thus, a conservative critic might argue that only the last group would have met one of the key indicators for the GID/GD diagnosis in the DSM.[5] On the other hand, suppose a boy "occasionally" voiced the desire to be a girl over a period of several years. One might want to make the case that this would be consistent with the DSM descriptors of "persistently" or "repeatedly," etc. Of course, one could debate what would genuinely count as "occasionally" (in Green's trichotomous metric, it would be anything more than "never" and less than "frequently"). In any case, it is probably reasonable to argue that, in Green's study, some boys were threshold and some boys were subthreshold for the equivalent of a DSM diagnosis. Given that in Green's study only one boy persisted with gender dysphoria at the time of follow-up, the threshold-subthreshold distinction would not really matter.

Studies that employed DSM criteria for GID/GD allow for a more formal examination of the "No True Scotsman" argument (https://en.wikipedia.org/wiki/No_true_Scotsman).

In the Wallien and Cohen-Kettenis (52) study, the DSM-III-R criteria were used to diagnose GID. Of the 12 persisters, all met the criteria for GID at the time of the baseline assessment; in contrast, only 68% of the 47 desisters met the criteria for GID; the remainder were deemed subthreshold for the diagnosis. Thus, in their study, the threshold-subthreshold distinction appears to have been an important one in predicting outcome; nonetheless, it should be noted that 68% of the desisters had been threshold for the diagnosis in childhood—perhaps a strong rebuttal to the No True Scotsman argument. In Steensma et al. (51), the DSM-IV-TR criteria were used. Of the 23 persisters, 21 (91.3%) met the criteria for GID; in contrast, only 22 (39.3%) of the 56 desisters were threshold for the diagnosis, suggesting an even more substantial difference in the threshold-subthreshold distinction than was found in Wallien and Cohen-Kettenis. Although the latter percentage was lower than what was found in Wallien and Cohen-Kettenis, that almost 40% of the desisters met the criteria for GID in childhood still argues in favor that the children were desisting from something.[6]

From Wallien and Cohen-Kettenis (52) and Steensma et al. (51), one predictor of outcome, therefore, was the distinction between being threshold or subthreshold for the GID diagnosis in childhood. Dimensional measures of gender-variant behavior have also proven useful. In both Wallien and Cohen-Kettenis and Steensma et al., dimensional measures of sex-typed behavior in childhood also significantly discriminated between the persisters and desisters, with the former group having, on average, more severe gender-variant behavior at the time of the childhood

[5]The situation is compounded even further because in the DSM-IV, unlike in the DSM-III and DSM-III-R (65), the stated desire to be of the other gender was not a necessary criterion for the diagnosis [for the rationale, see (66), pp. 483–486]. In DSM-5, the desire to be of the other gender does not require explicit verbalization; the clinician is allowed leeway in drawing inferences based on other sources of information [see (67), pp. 904–905].

[6]In the follow-up study by Drummond et al. (46) of 25 girls from our clinic, the desistance rate was 88%. Of the 22 desisters, 13 (59.0%) met the DSM-III, III-R or IV criteria for GID. In Wallien and Cohen-Kettenis (52), of the 9 girls who desisted, 55.5% met the DSM-III-R criteria for GID. In Steensma et al. (51), of the 24 girls who desisted, 58.3% met the DSM-IV criteria for GID.

assessment. Steensma et al. found two other predictors of persistence: boys who were assessed at an older age and boys who had made either a partial or complete gender "social transition" [see (68–70)]. Of the 12 boys who had partially or completely transitioned prior to puberty, 10 (83.3%) were classified as persisters. In contrast, of the 67 boys who had not socially transitioned, only 13 (19.4%) were classified as persisters.

In the present study, we provide follow-up data with regard to both gender identity (persistence vs. desistance) and sexual orientation (gynephilia vs. biphilia/androphilia) on the largest sample of boys studied to date. Apart from providing percentage data on these two variables, which will be discussed in a comparative perspective in relation to the prior studies and the epidemiological literature, we also examine the predictors of outcome in relation to both demographic and sex-typed behavior measures (including whether or not the boys were threshold or subthreshold for GID) collected at the time of the baseline assessment in childhood.

METHOD

Participants

The participants were 139 boys ("birth-assigned males")[7] who, in childhood, had been referred to and then assessed in the Gender Identity Service, Child, Youth, and Family Program at the Centre for Addiction and Mental Health (CAMH) in Toronto, Ontario between 1975 and 2009 (Mean year of assessment, 1989.36) and were adolescents or adults at follow-up (Mean year at follow-up, 2002.35).[8]

Participants entered the follow-up study through two methods of recruitment. The majority of participants (77%) were recruited for research follow-up. There were two main waves of participant recruitment through research contact, from 1986 to 1993 (n = 32) and then from 2009 to 2011 (n = 71). During the period of data collection, 32 patients re-contacted the service for clinical reasons (eight for gender dysphoria, six for sexual orientation, and 18 for heterogeneous concerns) [for details, see (77), Appendix E]. They were informed about the opportunity to participate in the follow-up study and subsequently completed the study protocol. The majority of the patient-initiated participants had contacted the clinic between the two main waves of research recruitment. Thus, from 1994 to 2008, the participants who entered the study were primarily those who had contacted the service for clinical reasons.

In the early wave of follow-up, a lower-bound age for participation was set at 14 years, but by the mid-1990s this was changed to a lower-bound age of 16 years. In total, 110 (79.1%) participants were at least 16 years of age and 29 (20.9%) were younger than 16. Across the entire period of data collection, eligible participants, after review of the medical chart, were contacted at random (other than the participants who had returned to the service for clinical reasons). Due to lack of study resources and time constraints, contact with 162 other eligible participants was not attempted.

In total, 145 patients were approached about the follow-up study, either through research contact (n = 113) or following their clinical involvement with the Gender Identity Service (n = 32). Six patients declined, which yielded a participation rate of 95.9%. For those recruited for research purposes, initial contact, by telephone, letter or email, was first made with the parents because the patients were minors at the time of the childhood assessment and may have had no recollection of their clinic attendance. A total of 19 (14.3%) potential participants could not be reached/traced through previous addresses, registrars, and personal contacts.

Of the 139 participants, 110 were seen for a face-to-face assessment. For various reasons, the remaining 29 patients could not be seen for the face-to-face assessment (e.g., lived in another province or country, "too busy," severe mental health issues). For some patients, they provided some information over the phone or information was provided by the parents; thus, for these patients, it was possible to obtain some follow-up data about their gender identity and sexual orientation.

The demographic characteristics of the participants, including their age at assessment in childhood and at the time of follow-up, are shown in **Table 1**. The GID diagnosis in childhood was based on the DSM-III (n = 53), DSM-III-R (n = 46), or DSM-IV (n = 40) criteria applicable at the time of assessment.[9] A total of 88 (63.3%) boys met complete DSM criteria for GID in childhood. The remaining 51 (36.7%) boys were subthreshold for a DSM diagnosis, but all had some indicators of GID, and, based on the historical information provided during the assessment, some would have met the complete DSM criteria at some point in their lives prior to their assessment in childhood.[10] The percentage who met the complete DSM criteria for GID did not differ significantly as a function of DSM edition, $\chi^2_{(2)} < 1$.

Procedure

The majority of participants who completed the face-to-face assessment were evaluated on a single day. Three participants were seen twice. In these instances, the participants completed the self-report measures during their second visit as the complexity of their clinical presentation extended the duration of the assessment. Participants were provided a stipend for their participation in the follow-up assessment and reimbursement for travel expenses. For participants followed-up prior to 2009 (n = 68), the data were collected by the third author; for those followed-up between 2009 and 2011, the data were collected

[7]Two reviewers asked why we chose to use the noun "boys" instead of the noun "males." In our view, the question was reasonable but also a matter of semantics and taste. The third edition of *The Oxford Dictionary of Current English* (71) defines boy as "a male child..." Thus, we believe that the two words can be used synonymously. Males can refer to any age in the life-span whereas boys connote childhood. The participants in our study were coded as male at the time of their birth in the hospital delivery record, of which we had the actual birth records for the majority of the participants in the current study (72). As per Bouman et al. (73), one would say that the participants were "assigned male at birth" and then declared socially to be "boys" (74).

[8]The clinic was established in 1975 at the Clarke Institute of Psychiatry (75, 76), which became part of the CAMH in 1998.

[9]For boys seen prior to the publication of DSM-III in 1980, the draft criteria were used.

[10]In DSM-III, termed Atypical Gender Identity Disorder; in DSM-III-R and DSM-IV, termed Gender Identity Disorder Not Otherwise Specified.

TABLE 1 | Demographic characteristics ($N = 139$).

Characteristic	*M*	*SD*	Range	%
From childhood				
Age (in years)	7.49	2.66	3.33–12.99	
Year of birth	1981.87	7.50	1966–1996	
Year of assessment	1989.36	7.50	1975–2004	
IQ[a]	105.93	15.47	69–138	
Social class[b]	40.74	15.15	8.0–66.0	
Marital status[c]				
Two-parent family				64.7
Other				35.3
Caucasian				84.9
At follow-up				
Age (in years)	20.58	5.22	13.07–39.15	
Year of follow-up	2002.35	9.08	1986–2011	
Follow-up interval (in years)[d]	12.88	6.07	2.77–29.29	
IQ[e,f]	105.88	16.03	65–138	

[a] *Full-Scale IQ was obtained with age-appropriate Wechsler intelligence scales.*
[b] *Hollingshead's (78) Four Factor Index of Social Status (absolute range, 8–66).*
[c] *Other included the following family constellations: single parent, separated, divorced, living with relatives, or in the care of a child protection agency.*
[d] *Interval denotes the time between childhood assessment and follow-up assessment.*
[e] *Full Scale IQ estimated using four subtests: Vocabulary, Comprehension, Block Design, and Object Assembly.*
[f] *An IQ score was available only for participants who completed the face-to-face assessment. Of these, scores were not available for one participant.*

by the first author ($n = 71$). The study was approved by the Institutional Review Boards at the Clarke Institute of Psychiatry (subsequently the Centre for Addiction and Mental Health; Protocol #198/2008–2011) and the University of Toronto.

Measures

Below, we describe the measures from assessment and follow-up of relevance for this article. A list of all measures used in the follow-up study can be found in Singh [(77), Table 4].

Childhood Assessment

Cognitive Functioning

Based on the child's age at the time of assessment, the appropriate version of the Wechsler Intelligence Scale for Children was administered (WPPSI-R or the WISC-R/WISC-III/WISC-IV). Full scale IQ scores were used to characterize level of cognitive functioning.

Behavioral and Emotional Problems

Parents completed the Child Behavior Checklist (CBCL), a measure of behavioral and emotional problems (79). Although not the focus of the present study, it is noted here because we used three CBCL indices (sum of all behavior problems and Internalizing and Externalizing *T* scores) as part of an internal validity analysis when comparing participants vs. non-participants (see Results).

Sex-Typed Behavior

Five child informant and two parent informant measures were used to assess the participants' sex-typed behavior in childhood: (1) Draw-a-Person [DAP] test (80); (2) a free-play task (81); (3) the Playmate and Playstyle Preferences Structured Interview (PPPSI) (82, 83); (4) sex-typed responses on the Rorschach test (84); (5) the Gender Identity Interview for Children (GIIC) (85–87); (6) the Gender Identity Questionnaire for Children (GIQC) (88–90); and (7) a measure of activity level/extraversion [(39); see also (91)]. These child and parent informant measures all have established discriminant validity, that is, they significantly differentiated the boys clinic-referred for gender identity concerns from control boys [for reviews, see (18, 92)]. A Childhood Sex-Typed Behavior Composite was subsequently computed for each participant (see below).

Follow-Up Assessment

Cognitive Functioning

Four subtests from the age-appropriate version of the Wechsler Intelligence Scales were administered (Vocabulary, Comprehension, Block Design, and Object Assembly). The standard scores from the subtests were averaged to form a prorated IQ score for cognitive functioning (93).

Concurrent Gender Identity

Concurrent gender identity was evaluated using a semi-structured interview and self-report questionnaires. During an audiotaped interview, each participant was asked to describe their current feelings about being a biological male. They were also asked to describe positive and negative aspects about their gender identity. For example, participants who reported a "male" gender identity were asked to describe positive and negative aspects of being male. The semi-structured interview also included questions based on the adolescent and adult GID criteria outlined in the DSM-III-R or DSM-IV (65, 94). Participants were asked to respond to these questions according to the last 12 months with *No, Sometimes,* or *Yes* [for details, see (77), Appendix G].

Two self-report measures were also used to assess current gender identity and gender dysphoria: (1) The Gender Identity/Gender Dysphoria Questionnaire for Adolescents and Adults (GIDYQ-AA) (95–97) or (2) the Gender Dysphoria/Identification questionnaire (GDIQ) (98). The GDIQ was developed prior to the GIDYQ-AA. As such, the GIDYQ-AA was introduced to the protocol subsequent to the GDIQ and, as a result, the more recent participants completed the GIDYQ-AA while earlier participants completed the GDIQ.

The male version of the GIDYQ-AA was completed. This 27-item questionnaire measures gender identity and gender dysphoria in adolescents or adults; participants over the age of 17 completed the adult version and younger participants completed the adolescent version. The adolescent and adult versions are identical except that, in the adult version, the words "man" and "woman" are used instead of "boy" and "girl." Each item was rated on a 1–5 point response scale with verbal anchor points ranging from *Never* to *Always* based on a time frame of the past 12 months. Coding was such that a "lower" score signified more gender dysphoria. Item examples include the following:

"In the past 12 months, have you felt unhappy about being a man?" and "In the past 12 months, have you had the wish or desire to be a woman?" Principal axis factor analysis identified a one-factor solution that accounted for 61.3% of the variance. All factor loadings were ≥0.30 (median, 0.86; range, 0.34–0.96). The GIDYQ-AA has strong evidence for discriminant validity and a high threshold for specificity (i.e., low false positive rate for non-GID individuals) [see (95, 96, 99–102)].

The GDIQ (98) contains 8 items pertaining to gender identity and gender dysphoria. Factor analysis identified two factors, accounting for 31.4 and 12.5% of the variance, respectively (all factor loadings ≥0.45). Factor 1 consisted of five items pertaining to gender dysphoria and Factor 2 consisted of three items pertaining to gender role identification. For the present study, only the questions for Factor 1 were used. Each item was rated on a 3-point or 5-point scale for the past 12 months (see **Appendix 1** in **Supplementary Material**).

Participants were classified as having persistent gender dysphoria if their mean score on the GIDYQ-AA was ≤3.00, in line with sensitivity and specificity analyses from other data sets (95, 96). For participants who did not complete the GIDYQ-AA, the GDIQ was used. A participant was classified as a persister if two or more of the following five items on the GDIQ were endorsed: wish to have been born a girl (Item 1), wish to have surgery to change body (Item 2), feel more like a girl than a boy (Item 3), wonder if would be happier as a girl (Item 4), and somewhat or very dissatisfied with being a boy (Item 5).

Information regarding participants' gender identity/gender dysphoria was also obtained during the semi-structured clinical interview and, therefore, allowed for cross-validation of these questionnaire data. For those participants who did not complete the face-to-face interview, clinical information regarding gender identity/gender dysphoria was obtained through self- or parent-report or chart review. Across the entire sample, the GIDYQ-AA was used to classify persistence or desistence for 64 participants, the GDIQ for 42 participants, and interview/chart data/parent report for 33 cases.

Sexual Orientation

Sexual orientation in fantasy was assessed with specific questions from an audiotaped face-to-face interview and the self-report Erotic Response and Orientation Scale (EROS) (103).

The interview asked about four types of sexual fantasy over the past 12 months: (1) crushes on other people; (2) sexual arousal to visual stimuli (e.g., acquaintances, partners, and individuals from movies, television, etc.); (3) sexual content of night dreams; and (4) sexual content of masturbation fantasies. During the interview, participants were not asked directly about the gender of the person or persons who elicited sexual arousal, thus allowing time for the participant to provide this information spontaneously. Directed questions about the gender of the person(s) who elicited sexual arousal were asked only if the participant did not volunteer specific information about whether their arousal was directed to same-sex or opposite-sex individuals, or both. By the end of the interview, each participant provided information about sexual arousal to both same-sex and opposite-sex individuals. Using the Kinsey scale criteria (104), the interviewer assigned Kinsey ratings that ranged from 0 (exclusively gynephilic in fantasy) to 6 (exclusively androphilic in fantasy) for each question. A dummy score of 7 denoted that the participant did not experience or report any fantasies. A global fantasy score was also derived based on ratings from the four questions. Kinsey ratings for sexual orientation in fantasy were available for 129 participants.

Inter-rater reliability on Kinsey ratings for sexual orientation in fantasy was examined for 29 participants, selected at random. The second scorer listened to the audio recordings of the semi-structured interview, with specific attention to the information collected on sexual orientation. The inter-rater agreement on the Kinsey global fantasy rating was very good (kappa = 0.95) and the kappa values for the four specific components ranged from 0.81 to 1.00.

The EROS is a 16-item self-report measure assessing sexual orientation in fantasy over the past 12 months. Half of the questions pertained to gynephilic fantasy (e.g., "How often have you noticed that you had sexual feelings [even the slightest] while looking at a woman?") and the other half pertained to androphilic fantasy (e.g., "How often have you noticed that you had sexual feelings [even the slightest] while looking at a man?"). Participants who were 18 years and older completed the adult version and younger participants completed the adolescent version. The adolescent and adult versions are identical except that, in the adult version, the words "man" and "woman" were used instead of "boy" and "girl." Each item was rated on a 5-point scale for frequency of occurrence, ranging from 1 ("none") to 5 ("almost every day"). Mean androphilic and gynephilic fantasy scores were derived for each participant. In the present study, we calculated a difference score between the participants' mean androphilic and gynephilic scores. Previous use of the EROS has shown good evidence of discriminant validity (98, 101).

Sexual orientation in behavior was assessed with specific questions during the face-to-face interview and with a modified version of the Sexual History Questionnaire (SHQ) (105). In the interview, questions asked about five types of sexual behavior: (1) dating; (2) holding hands in a romantic manner; (3) kissing; (4) genital fondling or touching a woman on the breasts, and (5) intercourse (penile-vaginal and anal). Kinsey ratings for behavior in the past 12 months were made in the same manner as fantasy ratings. Kinsey ratings for sexual orientation in behavior were available for 108 participants. Inter-rater reliability on Kinsey ratings for sexual orientation in behavior was examined for the same 29 participants. There was perfect inter-rater agreement on the Kinsey global behavior rating (kappa = 1.0) and the kappa values for the five specific components ranged from 0.91 to 1.00.

The modified SHQ consists of 20 questions. Ten questions pertained to gynephilic experiences (e.g., "How many women have you kissed on the lips in a romantic way?") and 10 questions pertained to androphilic experiences (e.g., "How many men have you kissed on the lips in a romantic way?"). Participants who were 18 years and older completed the adult version and younger participants completed the adolescent version. The adolescent and adult versions are identical except that, in the adult version, the words "man" and "woman" were used instead of "boy" and "girl." Each item was rated on a 5-point scale for frequency

of occurrence, ranging from 1 ("none") to 5 ("11 or more"), based on a time frame of the past 12 months. Mean total scores for gynephilic and androphilic experiences were derived. In the present study, we calculated a difference score between the participants' mean androphilic and gynephilic scores.

On the basis of Kinsey ratings, participants who completed the face-to-face interview were classified, similar to Green (47), into the following three sexual orientation groups for both fantasy and behavior: (1) gynephilic (Kinsey global ratings of 0–1); (2) biphilic/androphilic (Kinsey global ratings of 2–6), and (3) no sexual fantasy or behavior.

Social Desirability

Social desirability refers to the desire to cast a favorable impression on others. It can threaten the validity of self-report scales if in answering questions respondents seek social approval or try to represent themselves in a favorable manner (106). People scoring high on social desirability tend to provide socially acceptable answers regardless if their response accurately describes them. Participants 18 years and older completed the Marlow-Crowne Social Desirability Scale (M-CSDS) (107), which consists of 33 true-false items. The scale contains 18 culturally acceptable but unlikely statements keyed in the true direction and 15 socially undesirable but probable statements keyed in the false direction for a maximum possible score of 33. Participants 17 years and under were given a shorter version of the M-CSDS (108), containing 20 items that consist of 12 culturally acceptable but improbable statements keyed in the true direction and eight socially undesirable but probable statements keyed in the false direction for a maximum possible score of 20. For the present study, the percentage of endorsed socially desirable items was calculated for each participant. In order to integrate the data from both versions of the M-CSDS, participants' percentage score on each measure was converted to a proportion score which ranged from 0 to 1, which was used in all analyses. A higher proportion score indicates a greater propensity to give socially desirable responses. Several studies have found that the MCSDS is a reliable and valid measure of social desirability (107, 109, 110).

RESULTS

Preliminary Analyses

Participants vs. Non-participants

Given that not all eligible participants were seen for follow-up, it is important to see to what extent the participants vs. non-participants were similar with regard to baseline characteristics, in part to gauge the internal validity of the sample (111).

The non-participants consisted of three subgroups: (1) patients who were eligible to participate in the study but were not contacted ($n = 163$), (2) patients who declined to participate ($n = 6$), and (3) patients who were not successfully traced ($n = 19$). Two sets of analyses were conducted to compare study participants vs. non-participants. First, the participants were compared to the patients who were eligible but not contacted. Second, the participants were compared to those who declined to participate and to those where contact was attempted but not successfully traced. Group comparisons were conducted on five demographic variables (age at assessment in childhood, IQ, ethnicity, and parents' marital status and social class), parent-report of behavior problems on the CBCL (three indices), and nine measures of childhood sex-typed behavior.

Of these 17 variables, there was only one significant difference between the 139 boys in the study compared to the 163 boys who were eligible to participate but were not contacted: participants had a higher IQ than non-participants, $t_{(289)} = 2.01$, $p = 0.046$.[11] The effect size for this comparison was small (unpooled $d = 0.22$) [for details, see (77), Tables 5, 6]. When compared to the six cases where participation in the study was declined and to the 19 cases where the families could not be traced, there was also only one significant difference: parent's marital status, $\chi^2_{(2)} = 9.02$, $p = 0.011$. The participants did not differ significantly from the non-participants who refused; however, they differed significantly from the cases that could not be traced, $\chi^2_{(1)} = 6.39$, $p = 0.012$. The participants were more likely to have originated within a two-parent household than those who could not be traced. The comparison between the non-participants who refused and those who could not be traced approached significance ($p = 0.056$, Fisher's exact test). Again, the non-participants who could not be traced were more likely to have come from a family composition that was not two-parent. A further summary of comparisons between the participants and those who declined or could not be traced can be found in the **Supplementary Material**.

Participants: Method of Recruitment

Using *t*-tests or chi-square tests, the 107 participants who entered the study through research contact were compared to the 32 participants who were recruited into the study after they had re-contacted the clinic for clinical reasons on the demographic variables, CBCL behavior problems in childhood, and the measures of childhood sex-typed behavior. There were no significant differences between the two groups on the demographic variables of age at assessment, ethnicity or parents' social class and marital status ($ps > 0.05$). The comparison on childhood IQ approached significance, $t_{(137)} = 1.97$, $p = 0.051$, with the research entry participants having, on average, a higher IQ than the clinical entry participants. On the CBCL, there was a significant difference on Internalizing problems only, $t_{(137)} = -2.02$, $p = 0.046$, with the clinical entry participants rated by their parents as having more internalizing problems compared to the research entry participants. Of the nine measures of childhood sex-typed behavior, the two groups differed significantly on three: (1) free play, $t_{(119)} = -2.11$, $p = 0.037$, (2) the Gender Identity Interview for Children, $t_{(83)} = -2.09$, $p = 0.04$, and (3) the Gender Identity Questionnaire for Children, $t_{(95)} = 2.39$, $p = 0.019$, with the clinical entry participants having, on average, more childhood cross-gender behavior than the research entry participants. The percentage of clinical entry participants who were threshold for the diagnosis of GID in childhood did not differ significantly from the research entry participants (75.8 vs. 59.8%), $\chi^2_{(1)} = 1.83$. Of the 32 clinical entry participants, 8 had re-contacted the clinic because

[11] IQ data were not available for 11 of the 163 boys who were eligible for the study but were not contacted.

of gender dysphoria. The above-described comparisons were repeated to compare the research and clinical entry participants but with these 8 participants excluded. With the eight participants who contacted the clinic for gender dysphoria removed, there were no significant group differences on demographic variables, CBCL behavior problems, and measures of childhood sex-typed behavior (all *p*s > 0.05).

Gender Identity at Follow-Up

Appendix 2 in Supplementary Material shows the follow-up data for gender identity and sexual orientation for each participant. Of the 139 participants, 17 (12%) were classified as persisters and the remaining 122 (88%) were classified as desisters. The age at the time of follow-up did not differ significantly between the persisters (Mean, 20.12 years; SD = 5.54) and desisters (Mean, 20.64 years; SD = 5.19), $t_{(137)} < 1$. Of the 107 participants who, for research purposes only, were contacted for the follow-up study, 10 (9%) were classified as persisters; of the 32 participants who were recruited into the study after they were seen for some type of clinical concern, 7 (22%) were classified as persisters. The difference in persistence rate as a function of recruitment entry type was not significant, $\chi^2_{(1)} = 2.53$, $p = 0.112$. The difference in persistence rate between those patients seen for the face-to-face assessment vs. those who were not (14.5 vs. 3.4%) was also not significant, $\chi^2_{(1)} = 1.70$, $p = 0.192$. **Supplementary Table 1** summarizes information on some domains of gender role outcome for the 17 participants classified as having persistent gender dysphoria.

For the 42 participants where the GDIQ was used to determine gender identity status at follow-up, four were classified as persisters and 38 were classified as desisters. Of the 38 desisters, three endorsed one item and the remainder endorsed none of the items.[12] The four participants classified as persisters endorsed between three and five items.

For the 64 participants where the GIDYQ-AA was used to determine gender identity status at follow-up, 12 were classified as persisters and 52 were classified as desisters. All 52 desisters had a mean score >3.00 on the GIDYQ-AA. Of the 12 persisters, 10 had a mean score ≤3.00 and two had mean scores that were >3.00. In spite of having mean scores on the GIDYQ-AA that were above the recommended cutoff for caseness (95), these two participants were considered persisters because their clinical interview data indicated that they were experiencing significant gender dysphoria. Thus, clinical judgment was used to make the final classification for these two participants.

For the remaining 33 participants, clinical interview, parent-report or chart data were used to classify the percentage who were persisters ($n = 1$; 3%) or desisters ($n = 32$; 97%).

The persistence rate of gender dysphoria was examined as a function of participants' GID diagnostic status in childhood (threshold vs. subthreshold). Of the 88 participants who met the full diagnostic criteria for GID in childhood, 12 (13.6%) were classified as persisters and the remaining 76 (86.4%) were not. Of the 51 participants who were subthreshold for the GID diagnosis in childhood, 5 (9.8%) were classified as persisters and the remaining 46 (90.2%) were not. A chi-square analysis indicated that the rate of persistence did not differ significantly between the threshold and subthreshold groups, $\chi^2_{(1)} < 1$.

Over the years, prevalence rates for gender dysphoria in adults have varied considerably. The variation is likely a function of many factors, including definition, time period, and source of ascertainment. For example, in the Standards of Care of the World Professional Association for Transgender Health (112), probably relying on an estimate given in the DSM-IV-TR, the prevalence of gender dysphoria in adult males was estimated to be 1 in 30,000. In the meta-analysis by Arcelus et al. (113), the prevalence in adult males was estimated at 1 in 14,705. Lastly, Zhang et al.'s (114) review of recent population-based surveys estimated the prevalence of a self-reported transgender identity in adults to range between 0.33 and 0.53% (males and females combined). Regardless of which base rate figure one might choose to use as a point of comparison, the persistence rate of 12% (while low in an absolute sense) would be considerably higher than what one would detect in the general population.

Sexual Orientation at Follow-Up

Table 2 shows the Kinsey ratings for sexual orientation in fantasy. Data were not available for 10 participants, all of whom were desisters with regard to gender dysphoria. Based on the global rating for sexual orientation in fantasy, 43 (33.3%) participants were classified as gynephilic in fantasy and 82 (63.6%) were classified as biphilic/androphilic in fantasy. In the remaining four (3.1%) cases, the participants were classified as having no sexual fantasies and, therefore, a Kinsey rating could not be assigned.[13] In all four cases, the participants were desisters. Of the 17 participants classified as persisters, 1 (5.9%) was gynephilic in fantasy and 16 (94.1%) were biphilic/androphilic in fantasy. For participants assigned a Kinsey rating between 0 and 6 in fantasy, we correlated the interviewer's Kinsey rating with the participants' responses on the EROS in which their mean gynephilic score was subtracted from their mean androphilic score. This yielded an $r(101) = 0.86$, $p < 0.001$.

Table 2 also shows the Kinsey ratings for sexual orientation in behavior. Data were available for 108 participants. Based on the global rating for sexual orientation in behavior, 29 (26.9%) participants were classified as gynephilic and 51 (47.2%) were classified as biphilic/androphilic. The remaining 28 (25.9%) participants did not report any sexual behaviors in the 12 months preceding the follow-up assessment. For participants assigned a Kinsey rating between 0 and 6 in behavior, we correlated the

[12]By "endorsed," we mean that the participants answered other than "never" on Items 1–4 or response options d-e for Item 5 (see **Appendix 1** in Supplementary Material).

[13]For 104 participants, the Kinsey rating in fantasy was based on the information provided in the face-to-face interview. For 21 other participants, the Kinsey rating in fantasy was based on self-report (by telephone), information available in the participant's health record, or parent-report. Participants were assigned a Kinsey rating of 6 if the participant self-identified as "gay" or if the health record indicated that the patient was "homosexual" or gay, etc. Participants were assigned a Kinsey rating of 0 if the patient self-identified as "straight" or "heterosexual," etc. A chi-square test showed that the percentage of participants who were classified as Kinsey 0–1 vs. 2–6 did not differ significantly as a function sexual orientation ascertainment method, $\chi^2_{(1)} = 1.49$.

TABLE 2 | Kinsey ratings for sexual orientation in fantasy and behavior.

Variable	Kinsey rating (fantasy)[a]															
	0		1		2		3		4		5		6		No fantasy	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
Crush	36	36.7	0	0	2	2.0	4	4.1	2	2.0	11	11.2	29	29.6	14	14.3
Visual	31	31.6	1	1.0	2	2.0	10	10.2	3	3.1	12	12.2	29	29.6	10	10.2
Dreams	13	13.3	1	1.0	1	1.0	4	4.1	3	3.1	3	3.1	27	27.6	46	46.9
Masturbation	21	21.9	2	2.1	3	3.1	6	6.3	2	2.1	7	7.3	33	34.4	22	22.9
Global fantasy rating	40	31.0	3	2.3	3	2.3	8	6.2	2	1.6	14	10.9	55	42.6	4	3.1
	Kinsey rating (behavior)[a]															
	0		1		2		3		4		5		6		No sexual behavior	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
Holding hands	26	26.3	0	0	0	0	5	5.1	1	1.0	1	1.0	35	35.4	31	31.3
Kissing	21	21.2	0	0	0	0	6	6.1	2	2.0	2	2.0	34	24.3	34	34.3
Genital/breast contact	13	13.1	0	0	0	0	3	3.0	2	2.0	1	1.0	35	35.4	45	45.5
Intercourse	8	8.2	0	0	0	0	3	3.1	2	2.0	0	0	27	27.6	58	59.2
Global behavior rating	28	25.9	1	0.9	0	0	4	3.7	3	2.8	1	0.9	43	39.8	28	25.9

[a] *0 = Exclusively gynephilic to 6 = Exclusively androphilic.*

interviewer's Kinsey rating with the participants' responses on the SHQ in which their mean gynephilic score was subtracted from their mean androphilic score. This yielded an $r(75) = 0.79$, $p < 0.001$.

For those participants who could be assigned a Kinsey rating (i.e., excluding those participants who did not report any sexual fantasies or behavior or for whom data were not available), the correlation between Kinsey global fantasy and global behavior ratings was very strong, $r(78) = 0.92$, $p < 0.001$.

Group Classification as a Function of Gender Identity and Sexual Orientation in Fantasy at Follow-Up[14]

Combining gender identity (i.e., persister or desister) and sexual orientation in fantasy (i.e., gynephilic or biphilic/androphilic) at follow-up, the participants were classified into one of four outcome groups (for which we had all of the relevant data): (1) persistence of gender dysphoria with a biphilic/androphilic sexual orientation ($n = 16$); (2) desistance of gender dysphoria with a biphilic/androphilic sexual orientation ($n = 66$); (3) desistance of gender dysphoria with a gynephilic sexual orientation ($n = 42$); and (4) persistence of gender dysphoria with a gynephilic sexual orientation ($n = 1$). The participants who reported no sexual fantasies ($n = 4$) could not be included in this outcome classification. Given that only one participant was classified as gender dysphoric with a co-occurring gynephilic sexual orientation (Group 4), this category was excluded from subsequent analyses that compared these outcome groups.

[14]Given the strong correlation between Kinsey fantasy and behavior ratings and that there were fewer missing data on the Kinsey fantasy variable, participants were classified into one of the four outcome groups based on their fantasy ratings.

Demographic Characteristics in Childhood as a Function of Gender Identity and Sexual Orientation in Fantasy

Table 3 shows the demographic variables in childhood as a function of group. One-way ANOVAs and chi-square were conducted to evaluate whether the outcome groups differed on these variables. The groups differed significantly on four of the five childhood demographic variables. Duncan's multiple range test for unequal Ns showed that the biphilic/androphilic persisters were, on average, significantly older at the time of the childhood assessment than both the gynephilic desisters and the biphilic/androphilic desisters, who did not differ significantly from each other. The biphilic/androphilic desisters had, on average, a higher IQ than the biphilic/androphilic persisters but did not differ significantly from the gynephilic desisters. There was no significant difference in childhood IQ score between biphilic/androphilic persisters and gynephilic desisters. The biphilic/androphilic persisters were significantly more likely to come from a lower social class background compared to the gynephilic desisters and the biphilic/androphilic desisters, who did not differ significantly from each other (see also **Figure 1**). The biphilic/androphilic desisters were more likely to be living with both parents compared to the biphilic/androphilic persisters. There was no significant difference on marital status between the two desister groups.

The demographic variables from childhood on which the three groups differed–age at assessment, IQ, social class, and marital status–were significantly correlated (*r*s ranged from |0.32–0.58|) [see Table 12 in (77)]. To evaluate the predictive status of these variables on group outcome at follow-up, a multinomial logistic regression was performed. **Table 4** shows the results. For these analyses, the biphilic/androphilic desisters served as the reference

TABLE 3 | Demographic characteristics as a function of group.

Variable		Group			*F or* χ^2	*p*	η^2 or Cramer's V
		Persisters Biphilic/ Androphilic (*n* = 16)	Desisters Biphilic/ Androphilic (*n* = 66)	Desisters Gynephilic (*n* = 42)			
Childhood							
Age (in years)	*M*	8.85	6.96	7.49	3.57	0.031	0.06
	SD	1.67	2.69	2.62			
IQ[a]	*M*	101.63	110.20	103.18	3.77	0.026	0.06
	SD	14.81	14.56	15.16			
Social class[b]	*M*	23.76	44.97	39.44	15.30	<0.001	0.20
	SD	10.22	13.64	15.91			
Marital status[c]							
Two-parent	*N* (%)	7 (43.8)	49 (74.2)	24 (57.1)	6.74	0.034	0.23
Other	*N* (%)	9 (56.3)	17 (25.8)	18 (42.9)			
Ethnicity							
Caucasian	*N* (%)	14 (87.5)	58 (87.9)	32 (76.2)	2.77	0.250	0.14
Other	*N* (%)	2 (12.5)	8 (12.1)	10 (23.8)			
Follow-up							
Age at follow-up (in years)[d]	*M*	20.32	22.13	17.85	10.41	<0.001	0.15
	SD	5.67	4.97	3.95			
IQ at follow-up[a,e,f]	*M*	99.07	110.47	104.19	3.82	0.025	0.07
	SD	16.29	13.54	17.50			
Follow-up interval (in years)	*M*	11.47	15.17	10.36	9.63	<0.001	0.04
	SD	6.77	6.03	4.85			
Social desirability[g]	*M*	0.44	0.43	0.52	3.07	0.051	0.07
	SD	0.17	0.18	0.19			

[a] *Full-Scale IQ was obtained with age-appropriate Wechsler intelligence scales.*
[b] *Hollingshead's (78) Four Factor Index of Social Status (absolute range, 8–66).*
[c] *Other included the following family constellations: single parent, separated, divorced, living with relatives, or in the care of a child protection agency.*
[d] *Interval denotes the time between childhood assessment and follow-up assessment.*
[e] *Full Scale IQ was estimated using four subtests: Vocabulary, Comprehension, Block Design, and Object Assembly.*
[f] *An IQ score was available only for participants who completed the face-to-face assessment.*
[g] *Absolute range, 0.00–1.00. Higher score indicates a greater propensity to give socially desirable responses. Age at follow-up, IQ at follow-up, social class, and parent's marital status were co-varied.*

group. Each coefficient, *B*, represents the change in the log odds for Group for a 1-unit increase in the corresponding predictor, controlling for all other predictors in the model. The next column presents the standard error (SE) for each *B*. The Wald statistic was the quantity used to determine the significance level of each predictor variable. The quantity, e^B, is the multiplicative change in the odds of being classified as a biphilic/androphilic persister (Model 1) or a gynephilic desister (Model 2) for a 1-unit increase in the corresponding predictor, and thus $100 \times (e^B - 1)$ represents the percentage change in the odds ratio for a 1-unit increase in that predictor (115).

It can be seen from **Table 4** that only social class had a significant contribution to the prediction of group outcome at follow-up (see also **Figure 1**). The biphilic/androphilic persisters had a 13% increase in odds of coming from a lower social class background compared to the biphilic/androphilic desisters. However, social class did not predict outcome when the two desister groups were compared.

Table 3 also shows the variables of age, IQ, and social desirability scores at follow-up as a function of group. One-way ANOVAs revealed that both age and IQ differed significantly among the three groups ($ps < 0.01$), but social desirability scores did not. Duncan's multiple range test for unequal Ns showed that the gynephilic desisters were, on average, younger than both the biphilic/androphilic persisters and the biphilic/androphilic desisters (both $ps < 0.05$), who did not differ significantly from each other. Regarding IQ at follow-up, the results were similar to those for IQ in childhood. The biphilic/androphilic desisters had, on average, a higher IQ than the biphilic/androphilic persisters ($p < 0.05$) but did not differ significantly from the gynephilic desisters. There was no significant difference in IQ between the biphilic/androphilic persisters and the gynephilic desisters.

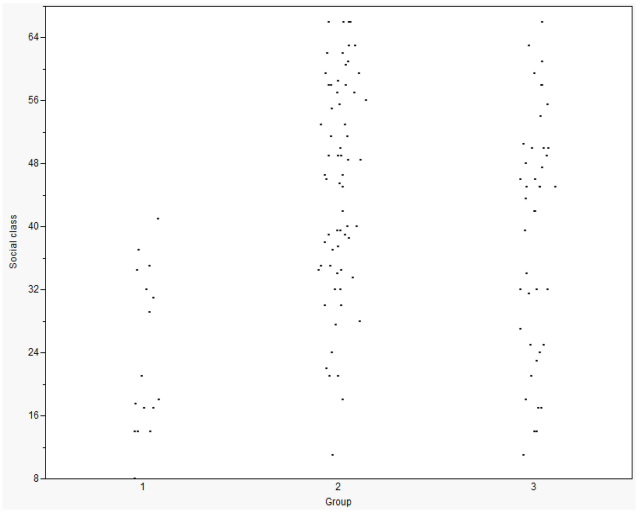

FIGURE 1 | Distribution of social class for the outcome groups at follow-up. 1 = Biphilic/androphilic persisters ($n = 16$; $M = 23.76$, $SD = 10.22$). 2 = Biphilic/androphilic desisters ($n = 66$; $M = 44.97$, $SD = 13.64$). 3 = Gynephilic desisters ($n = 42$; $M = 39.44$, $SD = 15.91$).

Childhood Sex-Typed Behavior as a Function of Gender Identity and Sexual Orientation at Follow-Up

Supplementary Table 2 shows the means or percentage scores (for dichotomous measures) of the nine sex-typed measures obtained at the assessment in childhood as a function of the three outcome groups. ANCOVAs (with age at assessment, IQ, social class, and marital status covaried) or chi-square were used to examine whether the groups differed on any of these variables.[15] There was a significant difference between the groups on four child-report measures (first drawn person on the Draw-a-Person, free play, Gender Identity Interview, and cross-sex peer preference on the Playmate and Play Style Preferences Structured Interview, and one parent-report measure (Gender Identity Questionnaire for Children). A statistical summary of these individual measures can be found in the **Supplementary Text** and the data are shown in **Supplementary Table 2**.

The childhood sex-typed behavior measures on which the groups differed were all significantly correlated (*r*s ranged from |0.30–0.76|) [reported in (77), Table 15].[16] From these six measures (first drawn person on the Draw-a-Person, free play, Gender Identity Interview, cross-sex peer preference on the Playmate and Play Style Preferences Structured Interview, cross-sex toy preference on the Playmate and Play Style Preferences Structured Interview, and the Gender Identity Questionnaire for Children), a composite score of childhood sex-typed behavior was derived for each participant by taking the average of the six variables (each expressed as *z*-scores).[17] A higher composite *z*-score indicates more cross-gender behavior at the assessment in childhood.

To evaluate the influence of childhood sex-typed behavior and demographic variables on group outcome at follow-up, a multinomial logistic regression was performed using the composite score and the demographic variables on which the groups differed–age at assessment, IQ, and social class–as predictor variables. It can be seen from **Table 5** that both social class and the composite score of childhood sex-typed behavior were significant predictors of group outcome at follow-up in the first model, which compared the biphilic/androphilic persisters to the biphilic/androphilic desisters.

The biphilic/androphilic persisters had a 274% increase in odds of having a higher composite score (i.e., more childhood cross-gender behavior) and an 11% reduction in the odds of coming from a higher social class compared to the biphilic/androphilic desisters. Age at childhood assessment and IQ did not have a significant effect on group outcome (both *p*s > 0.05). In the second model, which compared the gynephilic desisters to the biphilic/androphilic desisters, the only significant predictor of group outcome was the composite measures of sex-typed behavior. The biphilic/androphilic desisters had a 48% increase in odds of having a higher composite score compared to the gynephilic desisters.

DISCUSSION

Methodological Issues

We were not able to recruit into the study all eligible patients; however, our analyses which compared the participants vs. the non-participants did not show any substantive or pervasive differences with regard to the baseline assessment characteristics, suggesting that the internal validity of the sample was not grossly compromised (111). The majority of follow-up participants were recruited for research purposes; however, a minority entered the study after having been seen in adolescence for some clinical issue. There was some evidence that the patients who were enrolled in the study after recontacting the clinic were, on average, more extreme in their gender-variant behavior in childhood; however, the percentage who were threshold for the GID diagnosis in childhood did not differ significantly between the two subgroups. Although the percentage of persisters was higher in the subgroup that had recontacted the clinic than the subgroup recruited for research purposes only (22% vs. 9%), the difference was also not statistically significant. If anything, the direction of the difference would suggest that the overall rate of persistence may have been slightly overestimated had we relied entirely on a "research-only" follow-up sample.

Another methodological issue is that we relied on different metrics to assess gender identity and gender dysphoria at follow-up. For example, we replaced the GDIQ with the GIDYQ-AA as we viewed the latter as a better measure; in some instances,

[15] The ANCOVA model was adjusted to accommodate a categorical covariate.

[16] Although the groups did not differ significantly on cross-sex toy preference on the PPPSI, this measure is included here because there was a trend in the direction of a significant group difference.

[17] For some participants, data were not available on all six measures. In these cases, the composite score was the average of the number of variables for which there were data.

TABLE 4 | Multinomial logistic regression of group outcome at follow-up.

Predictor	Biphilic/Androphilic persisters					Gynephilic desisters				
	B	SE	Wald	*p*	e^B	*B*	SE	Wald	*p*	e^B
Age at assessment	0.11	0.14	0.62	0.433	1.12	−0.02	0.09	0.03	0.856	0.98
IQ	0.02	0.03	0.85	0.358	1.02	−0.02	0.02	1.91	0.167	0.98
Social class	−0.14	0.04	13.66	<0.001	0.87	−0.01	0.02	0.13	0.716	0.99
Marital status	0.76	0.80	0.88	0.349	0.47	−0.43	0.52	0.70	0.402	1.54

Reference group is the Biphilic/Androphilic Desisters. This group was chosen as the reference because it had the largest group size.

TABLE 5 | Multinomial logistic regression predicting group outcome at follow-up.

Predictor	Biphilic/Androphilic persisters					Gynephilic desisters				
	B	SE	Wald	*p*	e^B	*B*	SE	Wald	*p*	e^B
Age at assessment	0.26	0.16	2.90	0.09	1.30	−0.14	0.11	1.55	0.21	0.87
IQ	0.02	0.03	0.58	0.45	1.02	−0.03	0.01	2.77	0.10	0.97
Social class	−0.12	0.03	12.28	<0.001	0.89	−0.01	0.01	0.51	0.47	0.99
Composite *z*-score	1.32	0.55	5.82	0.02	3.74	−0.66	0.31	4.38	0.04	0.52

Reference group is the Biphilic/Androphilic Desisters. This group was chosen as the reference because it had the largest group size. A preliminary analysis with marital status included as a predictor variable showed that it did not have a significant effect and was, therefore, excluded in the final regression model. As suggested by Reviewer 3, per Benjamin et al. (116), for the "discovery of new effects," p-values between 0.05 and 0.005 should be viewed as "suggestive" (i.e., informative, but cautiously interpreted), and p-values < 0.005 as "significant" (i.e., stronger evidence for the implausibility of a difference merely by chance).

we relied solely on interview data or information available in the patient's medical chart. However, we did not detect any substantive difference in the percentage of persisters across these different sources of information and thus do not believe that such method variance challenges the validity of the findings.

Although a minority of participants were seen on more than one occasion for follow-up, the majority were not. Thus, our results and interpretation of the follow-up data are largely limited to one "moment in time," at a mean age of 20.58 years. It would, of course, be of value to have additional follow-up of the patients as they move further into adulthood in order to assess the stability (or lack thereof) of the data with regard to both gender identity and sexual orientation. In our own clinical experience, for example, we have observed that some of the patients seen during adolescence "fluctuated" between self-identifying as transgender and self-identifying as gay. Others have noted that a small number of apparent or presumed desisters during adolescence subsequently identified as transgender when seen at a later point in time (117).

Summary of Key Findings

The present study provided follow-up data with regard to gender identity and sexual orientation in boys referred clinically for gender dysphoria. There were three key findings: (1) the persistence of gender dysphoria was relatively low (at 12%), but obviously higher than what one would expect from base rates in the general population; (2) the percentage who had a biphilic/androphilic sexual orientation was very high (in fantasy: 65.6% after excluding those who did not report any sexual fantasies; in behavior: 63.7% after excluding those who did not have any interpersonal sexual experiences), markedly higher than what one would expect from base rates in the general population; (3) we identified some predictors (from childhood) of long-term outcome when contrasting the persisters with a biphilic/androphilic sexual orientation with the desisters with a biphilic/androphilic sexual orientation and when contrasting the desisters with a biphilic/androphilic sexual orientation and the desisters with a gynephilic sexual orientation.

The 12% persistence rate was somewhat lower than the overall persistence rate of 17.4% from the prior follow-up studies of boys combined. When compared to the three most methodologically sound follow-up studies, the persistence rate was higher than the 2.2% rate found by Green (47), but lower than the 20.3% rate found by Wallien and Cohen-Kettenis (52) and the 29.1% rate found by Steensma et al. (51). There is one methodological caveat regarding the Steensma et al. study that is worth noting. In their study, the mean interval between assessment and follow-up was relatively short (7.21 years). The patients were eligible for follow-up if they were at least 15 years of age. Given the relatively short interval between the assessment in childhood and the follow-up assessment in adolescence, this meant that patients who had been assessed at younger ages in childhood would not have been old enough to participate in the follow-up assessment. Given that Steensma et al. found that (older) age at the time of the assessment in childhood was a significant predictor of persistence, it is conceivable that their persistence rate was an overestimate. Nonetheless, in the broadest sense, our data were quite consistent with the general finding from the prior follow-up studies that desistance from gender dysphoria is by far the more common outcome.

In our study, we did not find that persistence was more common among boys who were threshold for the diagnosis of GID when compared to the boys who were subthreshold (13.6% vs. 9.8%) although the pattern was in the same direction

as that found by Wallien and Cohen-Kettenis (52) and Steensma et al. (51). We would, therefore, argue that the threshold-subthreshold distinction should not be abandoned in future follow-up studies although such studies might profit from using a symptom count of DSM indicators in addition to the dichotomous coding of the diagnosis as threshold vs. subthreshold. Consistent with both Wallien and Cohen-Kettenis and Steensma et al., our composite measure of sex-typed behavior in childhood was a significant predictor of outcome in that the patients classified as persisters with a biphilic/androphilic sexual orientation had more severe gender-variant behavior than the patients classified as desisters with a biphilic/androphilic sexual orientation; in addition, desisters with a biphilic/androphilic sexual orientation had more gender-variant behavior than the desisters with a gynephilic sexual orientation. Thus, dimensional measurement of gender identity and gender role behaviors from childhood provides added nuance in characterizing longer term trajectories with regard to both gender identity and sexual orientation.

With regard to sexual orientation at follow-up, the percentage of patients with a biphilic/androphilic sexual orientation in either fantasy or behavior was reasonably similar to those reported on in the prior follow-up studies which included standardized assessment measures (47, 51, 52). This finding also converges with three representative, general population prospective studies (118–120) and many retrospective studies (43) which document a significant association between patterns of gender-typed behavior in childhood and later sexual orientation.

The multinomial logistic regression analysis (**Table 4**) also showed a trend for the persisters with a biphilic/androphilic sexual orientation to be older at the time of the assessment in childhood compared to the desisters with a biphilic/androphilic sexual orientation; however, when the composite measure of sex-typed behavior in childhood was added to the equation (**Table 5**), age at assessment in childhood no longer showed such a trend [cf. Steensma et al. (51)]. In our smaller study of girls with GID (46), the persisters were, on average, 2.5 years older than the desisters at the time of the assessment in childhood (11.08 vs. 8.59 years) although the difference was not significant. It is our view that age at the time of a childhood assessment in relation to long-term outcome should continue to be examined in future follow-up studies.

Social class was a significant predictor of outcome: the persisters with a biphilic/androphilic sexual orientation were from a lower social class background compared to the desisters with a biphilic/androphilic sexual orientation (even after controlling for the other demographic variables). Why might this be the case? Because we had not made formal a priori predictions of outcome regarding any of our demographic variables, it is, of course, important to see whether or not it will be replicated in new follow-up studies. At present, our interpretation of the social class effect reflects on its relationship to other literatures.

One possibility pertains to the notion that acceptance of a gay or homosexual sexual identity is less in "working class" subculture (121). If this is, in fact, the case, it has been argued that transitioning from male to female—the so-called "homophobic" hypothesis with regard to gender dysphoria in adults (122)–would allow an androphilic sexual orientation to be more acceptable. Future studies would need to systematically examine whether boys with persistent GID first attempt to live as gay men before transitioning to the female gender role and whether or not this temporal sequence, when it occurs, is related to social class background.

In the present study, it could be hypothesized that the parents of persisters held less favorable views of androphilia (homosexuality) compared to the desisters and thus predisposed to persistence in order to "normalize" one's sexual orientation. However, this is simply a conjecture as parental attitudes toward homosexuality were not measured in the study sample. Indeed, none of the follow-up studies to date on boys with gender dysphoria have specifically examined attitudes toward homosexuality as a predictor of outcome.

Social class could also be a proxy for other explanatory factors. For example, in the present study, a lower social class background was significantly correlated with age at assessment in childhood ($r = 0.44$) and families where there had been a separation/divorce, etc. ($r = 0.58$). If one wanted to make the case that a later age at assessment might be associated with persistence (for a variety of reasons), perhaps social class is associated with a "delay" in seeking out an assessment and possible treatment (e.g., family stress, various other mental health challenges in the child and/or the family, etc.). In one study comparing the demographic characteristics of children vs. adolescents clinic-referred for gender dysphoria, it was found that the adolescents were more likely than the children to come from a lower social class background and from families in which there had been a separation/divorce, etc. (123).

Clinical Implications

What clinical implications might be drawn from our data on the persistence and desistence rates of gender dysphoria in children? First, it should be recognized that the boys in the current study were seen during a period of time when treatment recommendations, if such were made, often aimed to reduce the gender dysphoria between the child's felt gender identity and biological sex. If one peruses the treatment literature, such recommendations were carried out using many therapeutic modalities: psychotherapy or psychoanalysis, behavior therapy, group therapy, parent-counseling, and interventions in the naturalistic environment, such as encouragement of same-sex peer relations [see, e.g., (124–126); for reviews, see (127, 128)].[18]

[18]This "broad stroke" summary of therapeutic goals is not meant to minimize the complexity of ethical issues regarding how treatment has been conceptualized over the years [see, e.g., (129–133)]. In the early years, treatment recommendations included other goals: for example, Bakwin (44) wrote that "Suggestions for management…[were]…designed to encourage gender appropriate behavior *and* to prevent homosexuality" [p. 620, emphasis added; see also (134)]. Rekers (135) was subsequently quite transparent regarding the influence of his own religious beliefs in formulating treatment goals, sometimes congruent with parents' religious beliefs (see p. 131). Prayer appears to have guided Rekers' selection of behavior therapy as a treatment modality for the treatment of his patients with childhood GID (p. 131). Money and Russo (50) wondered what the course of psychosexual differentiation might be if "a group of boys with discordance of gender identity/role [were] transferred from the home of origin to, say, a children's recovery center or foster home…as happens in the case of child-abuse dwarfism…" (p. 40). In our own clinic, although some parents might have desired or requested that treatment be designed in order to prevent homosexuality, this was a goal that we never endorsed [see (136), pp. 391–393]. Over the years, many secular-minded

In our own sample, the kinds of treatments that the boys received, if any, were quite variable but it is beyond the scope of this article to describe them in general [however, for examples, see (136, 140, 141)]. It can, however, be said with certainty that the vast majority of boys were seen during a particular period of time when the therapeutic approach of recommending or supporting a gender social transition prior to puberty was not made. Indeed, in the current study, there was only one patient who had socially transitioned prior to puberty (at the suggestion and support of the professionals involved in this individual's care) and this particular patient was one of the persisters with a biphilic/androphilic sexual orientation. Second, it should also be recognized that, for the boys seen in the current study, none who were in late childhood and had (likely) entered puberty (Tanner Stage 2) had received puberty-blocking hormone treatment (GnRH analogs) to suppress somatic masculinization (142, 143) until sometime during adolescence.

In contrast, in recent years, it has become more common for some clinicians to recommend a gender social transition prior to puberty [e.g., (69, 144–147); for discussion, see (148–150)]. It has also become more common for parents to have already implemented a gender social transition on their own, without any formal input from a health professional (151). As argued by Zucker (64, 152), this is a very different type of psychosocial treatment designed to reduce gender dysphoria when compared to the other kinds of treatments noted above that have been recommended over the years.

The study by Steensma et al. (51), which found the highest rate of persistence, included some patients who had made a partial or complete gender social transition prior to puberty and this variable proved to be a unique predictor of persistence (see the Introduction). Rae et al. (153) recruited from a variety of community groups a sample of 85 markedly gender non-conforming children (Mean age, 7.5 years), none of whom had socially transitioned at a baseline assessment. At the time of follow-up, at a mean of 2.1 years later, 36 (42.3%) had socially transitioned and 49 (57.6%) had not. Using a composite of various metrics of gender identity and gender role behaviors, Rae et al. found that those who subsequently socially transitioned had more extreme gender-variant behavior at baseline than those who had not. Thus, this short-term follow-up study was consistent with the longer-term findings reported on by Wallien and Cohen-Kettenis (52), Steensma et al. (51), and the present study.

To date, however, there are no long-term follow-up studies of clinic-referred samples of children who had all socially transitioned prior to puberty. Future follow-up studies should be able to capture a much larger subgroup of such children and compared to those who have not with regard to long-term outcome with regard to persistence and desistance [e.g., (154)]. The persistence-desistance rates found in this study and the ones preceding it can be used as a comparative benchmark for samples in which a social transition took place prior to puberty.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The research protocol was reviewed and approved by Clarke Institute of Psychiatry (subsequently the Centre for Addiction and Mental Health) and the University of Toronto. All participants who completed the face-to-face assessment gave written informed consent.

AUTHOR CONTRIBUTIONS

DS contributed to the conceptualization, data collection, data analysis, interpretation, and writing of the paper. SB contributed to the conceptualization and interpretation of the study. KZ contributed to the conceptualization, data collection, data analysis, interpretation, and writing of the paper. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyt.2021.632784/full#supplementary-material

clinicians–although clearly opposed to any type of preventive efforts with regard to sexual orientation–argued in favor of reducing gender dysphoria vis-à-vis natal sex, if that was feasible. Meyer-Bahlburg (125), for example, wrote: "…we cannot rule out the possibility that early successful treatment of childhood GID will diminish the role of a continuation of GID into adulthood. If so, successful treatment would also reduce the need for the long and difficult process of sex reassignment which includes hormonal and surgical procedures with substantial medical risks and complications" (p. 362). Along similar lines, Cohen-Kettenis and Pfäfflin (33) remarked: "Relatively little dispute exists regarding the prevention of transsexualism, though evidence about the effectiveness of treatment in preventing adult transsexualism is also virtually nonexistent" (p. 120). In more recent years, what the best-practice should be for the treatment of gender dysphoria in children has been widely discussed and debated, which highlight the various limitations of treatment effectiveness studies (137–139).

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Impact of Bathroom Discrimination on Mental Health Among Transgender and Nonbinary Youth

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A B S T R A C T

Purpose: Nascent research has found that transgender and/or nonbinary (TGNB) youths experience higher rates of poor mental health outcomes than cisgender youths. The minority stress model highlights experiences of rejection and discrimination on mental health disparities for TGNB individuals.
Methods: Using data from a quantitative cross-sectional survey of TGNB youth aged 13–24 years, we examined the association between experiencing bathroom discrimination and depressive mood, seriously considering suicide, and attempting suicide.
Results: Overall, 58% of TGNB youths in this sample reported being prevented or discouraged from using a bathroom that corresponds to their gender identity. Among the TGNB youth who experienced bathroom discrimination, 85% reported depressive mood and 60% seriously considered suicide. Furthermore, 1 in three TGNB youths who experienced bathroom discrimination reported a past-year suicide attempt, with 1 in five reporting multiple suicide attempts. After adjusting for demographic variables and general discrimination due to one's gender identity, bathroom discrimination significantly increased the odds of reporting depressive mood (adjusted odds ratio [aOR] = 1.34), seriously considering suicide (aOR = 1.40), a suicide attempt (aOR = 1.66), and multiple suicide attempts (aOR = 1.71).
Conclusions: These findings suggest that preventing TGNB youths from accessing appropriate bathrooms is associated with harmful mental health indicators. Addressing the suicide disparities for TGNB youths requires structural change. Policies and procedures need to be in place to ensure that all youths have equal access to appropriate bathrooms.

IMPLICATIONS AND CONTRIBUTION

Understanding factors contributing to mental health outcomes is crucial for addressing disparities for transgender and nonbinary youths. Transgender and nonbinary youths who experienced bathroom discrimination were at increased odds of depressed mood and suicidality, suggesting that preventing transgender and nonbinary youths from accessing appropriate bathrooms is associated with harmful mental health indicators.

Considerable research has found that lesbian, gay, bisexual, queer, and questioning (LGBTQ) youths disproportionately experience negative mental health outcomes. LGBTQ youths are more likely to report depression, anxiety, and other forms of emotional distress [1,2] as well as self-harm, suicidal ideation, and attempted suicide compared with straight cisgender youths [3–5]. The few studies that have examined mental health outcomes among transgender and nonbinary (TGNB) youths, those whose sex assigned at birth is different from their current gender identity, find that they are at increased risk of poor mental health outcomes compared with their cisgender peers. Transgender youths report higher rates of depression, self-harm, and suicidality than their cisgender peers [6–8]. More recently, studies comparing TGNB youths with their cisgender lesbian, gay, or bisexual peers found that TGNB youths were at highest risk for

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EXHIBIT 4

depressive symptoms and suicidality [9,10]. Disparities in mental health outcomes between TGNB youths and their cisgender peers are thought to stem from chronic stress as a result of the marginalized social status that TGNB individuals have in society [11–13]. Distal stressors (external events and conditions) include rejection, victimization, and discrimination, which are experienced by TGNB youths at higher rates compared with their cisgender peers [14–16]. One form of discrimination specific to TGNB individuals is the denial of access to appropriate bathrooms.

TGNB youths often report bathroom access as one of their most pressing challenges [17,18]. National attention was brought to this issue in the United States when North Carolina passed the Public Facilities Privacy & Security Act, also known as HB2, restricting the use of government building bathrooms to those that correspond with the sex listed on an individual's birth certificate and the resultant legislative battles and advocacy efforts to fight it. Access to bathrooms that match their gender identity affords broad benefits including prevention from harm and reduced dysphoria. Specifically, providing gender-neutral bathrooms or allowing youths to use the bathroom that corresponds to their gender identity can be viewed as part of gender-affirming support and care. Gender-affirming care for TGNB youths may involve social, medical, and legal aspects. Social transition involves encouraging TGNB youths to present in the way that feels most genuine to them. TGNB children who have socially transitioned demonstrate comparable levels of self-worth and depression as non-TGNB children [19,20]. Social transitioning can also reduce suicide ideation and attempts in transgender individuals [21,22]. Inclusive bathroom policies support TGNB youths in their social transition by allowing them to present authentically and affirming their doing so [23].

However, TGNB students often report that school staff place limitations on their bathroom or locker room use [15,24–26]. A national study found that 26% of TGNB people were denied access to gender-appropriate bathrooms across all educational settings and 22% of TGNB people were denied access in the workplace [27]. When using gendered-segregated restrooms, TGNB individuals report verbal and physical harassment [28]. TGNB youths report having challenges using public bathrooms and feeling unsafe in public bathrooms [29,30], and youths whose bathroom and locker room use are restricted to their sex assigned at birth report higher rates of sexual assault [24]. These bathroom experiences, or the anticipation of experiencing them, have serious impacts on TGNB youths. They may lead to physical health consequences for TGNB youths, related to avoiding using the bathroom in public and drinking less fluids and social consequences resulting from avoiding going out in public altogether [28]. In addition, studies of transgender students' access to college bathrooms and housing found that denial of either of these spaces was significantly related to attempted suicide, even after controlling for interpersonal victimization [26]. Among transgender high-school students, lack of bathroom safety mediated the disparities in feelings of overall school safety, self-esteem, and academic achievement compared with cisgender youths [31]. Overall, the findings of previous research suggest that failing to provide TGNB youths with access to adequate bathrooms places them at risk for both physical and psychological harm.

Although previous studies have contributed to our understanding of how bathroom access can impact transgender youths, there are still some shortcomings that should be addressed. Most of the studies fail to include nonbinary youths; however, using a space predicated on the assumption that gender is binary, is inherently problematic for youths who are nonbinary. In addition, previous studies have only used regional samples. Finally, many of the previous studies only examine youths' bathroom experiences specific to school and workplace settings. The present study contributes to our current understanding of factors associated with increased rates of negative mental health outcomes among TGNB youths by examining the impact of bathroom discrimination on depressive mood, seriously considering suicide, and suicide attempts in a large, national sample of LGBTQ youth aged 13–24 years. We hypothesize that experiencing bathroom discrimination will be related to greater reports of negative mental health in the past year.

Methods

Participants and procedures

A sample of youths between the ages of 13 and 24 years residing in the United States were recruited through targeted Facebook and Instagram ads from February 2018 to September 2018. The ads were targeted at those who interacted with material considered to be relevant to the LGBTQ community. Recruitment was conducted to attempt to obtain adequate sample sizes with respect to geography (representation from each state in the United States). Participants completed a secure online questionnaire that included up to 110 questions, depending on skip logic. Consistent with Institutional Review Board protocol, a statement was included before mental health and suicidality questions that directed participants to call The Trevor Project's 24/7 Lifeline if they wanted to talk to someone about their mental health or thoughts of suicide. Survey completion took an average of 32 minutes, and respondents who completed the survey were eligible to be entered into a drawing for a $50 Amazon gift card by providing their e-mail address after being routed to a separate survey. The research proposal and protocol were approved by an independent institutional review board, Solutions Institutional Review Board. A waiver of parental consent was granted to protect youths from having their LGBTQ identity disclosed to a parent, which could potentially place them at risk for psychological or physical harm or result in a sample of youths who only have parents who are supportive.

Measures

Bathroom discrimination. Youths' lifetime experiences with bathroom discrimination were assessed by asking, "Have you ever been prevented or discouraged from using a bathroom that corresponds to your gender identity?"

Gender identity–based discrimination. To control for the impact of reports of general gender identity discrimination, youths were asked, "Have you ever been the subject of discrimination because of your gender identity?"

Depressive mood. Past-month depressed mood was measured using an item based on the Center for Disease Control and Prevention's (CDC) Youth Risk Behavior Surveillance System (YRBS) [4]. Youths were asked, "During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?"

Seriously considered suicide. Youths' reports of seriously considering suicide in the past 12 months were assessed using an item based on CDC's YRBS [4]. Youths were asked, "During the past 12 months, did you ever seriously consider attempting suicide?"

Suicide attempts. Based on CDC's YRBS [4], youth were asked "During the past 12 months, how many times did you actually attempt suicide?" with responses for "attempted suicide" coded as no attempts compared with 1 or more attempts and "multiple suicide attempts" coded as zero or 1 attempt compared with two or more attempts.

Sociodemographics. We also assessed sociodemographic variables that were thought to impact the mental health outcomes in this group. Youths' sexual orientation was assessed using a question from the National Center for Health Statistics [32]. Respondents were asked, "Do you think of yourself as" with the options (1) gay or lesbian; (2) straight, that is not gay or lesbian; (3) bisexual; (4) something else; and (5) do not know. Youths were asked to select their age using whole numbers from 13 to 24, and they were categorized as 13–17 and 18–24 to reflect minor status. Ethnicity was assessed by asking youths, "Do you consider yourself to be Hispanic or Latino?" Race was separately assessed by asking youths, "What race or races do you consider yourself to be?" Race/ethnicity was recoded as white non-Hispanic versus youth of color for the logistic regression analyses. To assess sex assigned at birth [33], youths were asked, "What sex were you assigned at birth? (meaning the sex showing on your original birth certificate)," with options of male or female. Youths were also asked, "What is your gender identity? Please select all that apply," with options (1) man; (2) woman; (3) transmale/transman; (4) transfemale/transwoman; (5) gender queer/gender nonconforming; and (6) different identity (please state). Youths who responded that their sex assigned at did not birth matched their current gender identity were coded as TGNB.

Data analysis

Identifying the analytical sample. A total of 34,808 youths consented to complete the online survey. Youths who lived outside of the United States (n = 475) and those who were both straight and cisgender (n = 294) were removed from the sample as they did not meet study criteria. In addition, a filter was applied such that any youth who a) responded to less than half the survey items or b) reached the end of the survey within 3 minutes (n = 8,091) were removed from the sample. The remaining data were examined for validity, and 52 (.15%) youth who provided highly unlikely answers (e.g., selecting all possible religious affiliations and race/ethnicity categories) and/or those who provided obvious anti-LGBTQ speech in the open-responses options were also removed for a sample of 25,896 LGBTQ youths. However, given our focus on TGNB youths' experiences with bathroom discrimination, these analyses excluded cisgender youths whose assigned sex at birth was consistent with their current gender identity (n = 17,031), youths who did not respond to the assessment of gender (n = 498), and youths who did not respond to the assessment of bathroom discrimination (n = 997). This resulted in a final analytical sample of 7,370 TGNB youths.

Analytic procedure. Bivariate comparisons were run comparing TGNB youths who experienced bathroom discrimination and those who did not on all predictor and outcome variables. Chi-square analyses were used to examine the difference in mental health between TGNB youths who experienced bathroom discrimination and those who had not. Logistic regression, controlling for the impact of demographic variables known to be associated with mental health as well as the impact of gender identity–based discrimination, was used to determine the relative odds of a poor mental health outcome among TGNB youths.

Results

Descriptive analyses

Of the 7,370 TGNB youths in the sample, 44% were transgender, 82% were assigned female at birth, 45% were 18–24 years of age, 12% Hispanic, and 73% White (See Table 1). In addition, 27% of the TGNB youths in this sample reported their sexual orientation as gay or lesbian, 29% as bisexual, 2% as straight, and 42% said it was "something else." Overall, 58% of TGNB youths in the sample reported ever having experienced bathroom discrimination. Transgender youths reported higher rates of bathroom discrimination (86%) than nonbinary youths (36%).

Table 1
Sample characteristics (n = 7,370)

% (n)	All TGNB youths (n = 7,370)	TGNB youths who did not experience bathroom discrimination (n = 3,099)	TGNB youths who experienced bathroom discrimination (n = 4,262)	*p* value
Age 18–24 years	44.9 (3,309)	47.9 (1,486)	42.7 (55.1)	χ^2 (1) = 19.95, $p < .001$
Assigned female at birth	82.2 (6,050)	76.3 (2,363)	86.5 (3,687)	χ^2 (1) = 128.99, $p < .001$
Race/Ethnicity				
Hispanic	12.3 (892)	12.7 (389)	12.0 (503)	χ^2 (5) = 25.88, $p < .001$
White	73.2 (5,297)	72.1 (2,203)	74.0 (3,094)	
Black/African American	2.1 (154)	2.9 (90)	1.5 (64)	
Asian/Pacific Islander	2.7 (192)	3.1 (95)	2.3 (97)	
American Indian/Alaskan Native	.8 (61)	.9 (27)	.8 (34)	
More than one race	8.8 (638)	8.2 (251)	9.3 (387)	
Sexual Orientation				
Gay or lesbian	26.9 (1,913)	30.6 (925)	24.1 (988)	χ^2 (3) = 75.01, $p < .001$
Straight	2.5 (177)	1.2 (35)	3.5 (142)	
Bisexual	29.1 (2,067)	29.5 (890)	28.7 (1,177)	
Something else	41.6 (2,958)	38.7 (1,170)	43.7 (1,788)	

Table 2
Mental health indicators among TGNB youths who experienced bathroom discrimination and those who did not

Mental health outcomes % (n)	All TGNB youth	TGNB youths who did not experience bathroom discrimination	TGNB youths who experienced bathroom discrimination	*p*-value
Depressive mood (n = 6,675)	82.6 (5,514)	78.8 (2,174)	85.3 (3,340)	χ^2 (1) = 48.26, $p < .001$
Seriously considered suicide (n = 6,493)	54.3 (3,524)	45.5 (1,228)	60.5 (2,295)	χ^2 (1) = 141.41, $p < .001$
Attempted suicide (n = 6,493)	29.1 (1,887)	20.3 (547)	35.3 (1,340)	χ^2 (1) = 172.10, $p < .001$
Multiple suicide attempts (n = 6,493)	15.9 (1,030)	10.1 (272)	20.0 (758)	χ^2 (1) = 151.17, $p < .001$

Bivariate analyses

TGNB youths who were younger (13–17 years) and TGNB youths assigned female at birth reported significantly higher rates of having experienced bathroom discrimination in the past year compared with older (18–24 years) TGNB youths and those assigned male at birth (Table 1). In addition, TGNB youths who identified as straight reported significantly higher rates of bathroom discrimination than TGNB youths who were gay or lesbian, bisexual, or identified as something else.

While 83% of youths overall reported depressive mood, youth who experienced bathroom discrimination reported significantly higher rates of depressive mood (85%) than those who did not (79%, χ^2 [1] = 48.26, $p < .001$, See Table 2). Similarly, while 54% of all TGNB youths reported having considered suicide in the past 12 months, significantly more youths who experienced bathroom discrimination (60%) reported having considered suicide compared with youths who did not (45%), χ^2 (1) = 141.41, $p < .001$. In addition, 29% reported a past-year suicide attempt; however, 35% of TGNB youths who experienced bathroom discrimination reported a past-year suicide attempt compared with 20% who did not, χ^2 (1) = 172.10, $p < .001$. Finally, 16% of the sample reported multiple suicide attempts with twice as many youths who experienced bathroom discrimination reporting multiple suicide attempts (20%) compared with youths who did not experience bathroom discrimination (10%), χ^2 (1) = 151.17, $p < .001$.

Associated mental health indicators

After adjusting for age, sex assigned at birth, race/ethnicity, sexual orientation, and gender identity–based discrimination, experiencing bathroom discrimination significantly increased the odds of depressive mood (adjusted odds ratio [aOR] = 1.34, confidence interval [CI] = 1.15–1.58; $p < .001$) and seriously considering suicide (aOR = 1.40, CI = 1.24–1.59, $p < .001$, Table 3). In addition, TGNB youths who experienced bathroom discrimination were nearly twice as likely to report both a suicide attempt (aOR = 1.67, CI = 1.45–1.93, $p < .001$) and multiple suicide attempts (aOR = 1.71, CI = 1.42–2.05, $p < .001$) in the past 12 months.

Discussion

The present study found that TGNB youths who reported bathroom discrimination experienced significantly higher rates of depressive mood, seriously considering suicide, attempted suicide, and multiple suicide attempts experienced in the past year than TGNB youths not exposed to this specific form of discrimination. These findings are particularly alarming given that rates of poor mental health outcomes are already higher among TGNB youths than among cisgender, straight youths [6,8] and even compared with cisgender LGBQ peers [9]. The overall finding that bathroom discrimination is associated with poor mental health indicators is consistent with previous studies of transgender students and young adults [26] but goes further to establish its association with the risk of suicide in one of the largest national samples of both transgender and nonbinary youths. Furthermore, these findings are above and beyond the impact of more general gender identity–based discrimination experienced by TGNB youths.

Rates of bathroom discrimination were higher among youths who identified as transgender than among youths who identified as nonbinary and also among TGNB youths who identified as straight compared with those who identified as LGB. While we did not assess enough in the present study to determine the specific reason for these discrepancies in rates, it could be related

Table 3
Multivariate logistic regression models: adjusted odds ratios (aOR) of experiencing poor mental health outcomes

Variables	Depressive ood (n = 5,584) aOR (95% CI)	Seriously considered suicide (n = 5,440) aOR (95% CI)	Attempted suicide (n = 5,440) aOR (95% CI)	Multiple suicide attempts (n = 5,440) aOR (95% CI)
Sex assigned at birth	**1.66 (1.40, 1.97)**	**1.20 (1.04, 1.40)**	1.05 (.89, 1.25)	1.22 (.98, 1.53)
Youth of color	1.14 (.97, 1.34)	**1.22 (1.07, 1.38)**	**1.34 (1.18, 1.54)**	**1.32 (1.12, 1.55)**
Age (18–24 year)	**.55 (.47, .63)**	**.51 (.45, .57)**	**.39 (.35, .45)**	**.33 (.28, .39)**
Sexual Identity				
Straight	(Ref)	(Ref)	(Ref)	(Ref)
Gay or lesbian	.92 (.60, 1.42)	.85 (.60, 1.20)	.68 (.46, 1.00)	.73 (.45, 1.18)
Bisexual	1.08 (.89, 1.30)	1.06 (.91, 1.23)	.89 (.76, 1.05)	.92 (.75, 1.12)
Something else	1.09 (.91, 1.30)	1.01 (.88, 1.15)	.86 (.74, 1.00)	.89 (.74, 1.07)
Gender identity–based discrimination	**1.42 (1.19, 1.69)**	**1.90 (1.64, 2.21)**	**2.05 (1.71, 2.47)**	**1.95 (1.52, 2.49)**
Bathroom discrimination	**1.34 (1.15, 1.58)**	**1.40 (1.24, 1.59)**	**1.67 (1.45, 1.93)**	**1.71 (1.42, 2.05)**

Bolded adjusted odds ratios are significant at $p < .05$.

to the way in which youths interpret the question and the interconnectedness of sexual orientation and gender identity. Nonbinary youths may not consider not having access to nonbinary bathroom options as having been prevented from using the bathroom that corresponds with their gender identity compared with binary transgender youths being forced to use a different bathroom. Furthermore, owing to the increased rates of transgender youths identifying as straight compared with nonbinary youths, these rates are also higher among straight youths. Despite these differences in rates of experiencing bathroom discrimination, we performed the analyses separately for transgender and nonbinary youths and the impact of bathroom discrimination on mental health was similar for both groups. These findings align with our previous analyses that found high and comparable rates of depressive symptoms and suicidality across subgroups of transgender and nonbinary youth identities [9]. The same holds true for analyses performed separately for 13- to 17-year-old and 18- to 24-year-old TGNB youths. Conclusively, the impact of bathroom discrimination is comparable for both transgender and nonbinary youths of all ages.

The primary concern expressed when adopting policies that allow the use of bathrooms appropriate to an individual's gender identity without regard to sex assigned at birth is the fear that cisgender individuals in the restroom might be harmed by someone whose genitals do not match the ones presumed by the signage or that predators will pose as TGNB and prey on cisgender individuals in the restroom [34]. It is also the case that, particularly in schools, parents fear their children will be "confused by" or "encouraged by" TGNB youths [35]. However, not only do previous studies refute the idea that TGNB youth are predators by demonstrating that sexual assault is actually sustained by TGNB youths [24,28], as opposed to perpetrated by them, there is also no support that youths' gender identity can be impacted by peers in restroom interactions. These unfounded claims of harm to cisgender youths are greatly outweighed by the current empirical findings that not being afforded equal access to bathrooms is associated with suicidality among TGNB youths.

Gendered bathrooms, when viewed through the lens of the minority stress model, represent a distal stressor that is built into the everyday lives of TGNB youths. Bathroom accessibility can arguably be addressed and has the potential to benefit TGNB youths in a dramatic way. In fact, gender-inclusive bathrooms not only signal identity safety for TGNB individuals but signal egalitarianism across many other stigmatized identities, such as race, as well [36].

Future research should continue to examine the impact of bathroom discrimination among TGNB youths, particularly from a longitudinal perspective, as it is of particular interest if policy changes directly decrease TGNB youths' suicidality. In addition, as it was not clear in the present study where the discrimination occurred (e.g., school, work, another public place) and who perpetrated it (e.g., friends, parents or other family members, staff, teachers at their school), future studies should provide a more nuanced examination of this form of discrimination.

Limitations

These findings, though important, should be considered in the context of limitations. These data are cross-sectional and therefore restrict our ability to determine temporality. They are also self-reported and completed entirely online by the youth themselves, which may lend itself to common-method bias. Furthermore, all of the measures of mental health are single-item constructs. While this is less of a concern for questions of suicidality, our assessment of depressive mood may have resulted in an undercount of rates of depression among TGNB youths. In addition, the recruitment strategy for the larger study does not lend for a truly representative sample, and thus, conclusions related to prevalence cannot be drawn from these data. However, a truly representative sample is complicated by the recruitment of LGBTQ youths for studies involving sensitive topics such as suicidality [37]. That said, the proportion of LGB youth who reported having attempted suicide in the past 12 months in CDC's YRBS (24%) [4] is comparable with age-matched LGBTQ youths in the present study (23%). Finally, this study is limited by the assessment of discrimination. Our assessment of bathroom discrimination is based on lifetime reports while our measures of mental health challenges are in the past year, which could mean this relationship is even stronger for those who are currently experiencing bathroom discrimination. Furthermore, although bathroom discrimination remained significantly related to mental health indicators after we controlled for gender identity–based discrimination, the assessment of gender identity–based discrimination could have, in part, included bathroom discrimination.

Conclusion

Offering gender-neutral bathrooms, avoiding restrictive policies, and providing private places to change clothes in locker rooms may not only improve mental health for these youths but could potentially save TGNB youths' lives. Because sex-segregated bathrooms are typically not an issue in youths' homes, this is a policy issue that needs to be addressed in places where youth spend time outside of the home, such as schools (e.g., restrooms, lockers rooms, dormitories), workplaces, restaurants, health care settings, and other public places. School administrators and teachers should explicitly support the right of students to use a bathroom that matches their identity and efforts to establish gender-neutral facilities on campuses. Employers should consider the implementation of gender-neutral bathrooms as not only a signal of safety for their TGNB employees but also as an overall indicator of an environment of equity for all employees.

Mental health care providers should consider bathroom discrimination as a possible contributor to psychological distress, physical health outcomes, and risk behaviors among TGNB youths. They should screen for bathroom safety and support youths in their endeavors to advocate for their own bathroom safety. Furthermore, clinicians and providers should ensure that the spaces in which they work have gender-neutral bathrooms so as to not contribute an additional barrier to care for TGNB youths. While there are many contributors to poor mental health in youths, and specifically for TGNB youths, this one is addressable.

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EXPERT REPORT

Andrew Bridge, et al.
- v -
Oklahoma State Department of Education, et al.

Submitted by
James M. Cantor, PhD
November 16, 2022

EXHIBIT
5

2/16 4/16 10/16	gay trans-/crossdress straight/uncertain	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128,* 1283–1289.
2/16 2/16 12/16	trans- uncertain gay	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years of follow-up. *Comprehensive Psychiatry, 19,* 363–369.
0/9 9/9	trans- gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology, 4,* 29–41.
2/45 10/45 33/45	trans-/crossdress uncertain gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172,* 90–97.
1/10 2/10 3/10 4/10	trans- gay uncertain straight	Davenport, C. W. (1986). A follow-up study of 10 feminine boys. *Archives of Sexual Behavior, 15,*511–517.
1/44 43/44	trans- cis-	Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.
0/8 8/8	trans- cis-	Kosky, R. J. (1987). Gender-disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146,* 565–569.
21/54 33/54	trans- cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 1413–1423.
3/25 6/25 16/25	trans- lesbian/bi- straight	Drummond, K. D., Bradley, S. J., Badali-Peterson, M., & Zucker, K. J. (2008). A follow-up study of girls with gender identity disorder. *Developmental Psychology, 44,* 34–45.
47/127 80/127	trans- cis-	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52,* 582–590.
17/139 122/139	trans- cis-	Singh, D., Bradey, S. J., & Zucker, K. J. (2021). A follow-up study of boys with gender identity disorder. Frontiers in Psychiatry. doi: 10.3389/fpsyt.2021.632784

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO

Rebecca Roe, et al.,

Plaintiffs,

v. Case No. 1:23-cv-315

Debbie Critchfield, et al.,

Defendants.
_____/

DECLARATION OF JAMES M. CANTOR, PH.D

Expert Declaration of

James M. Cantor, PhD

Table of Contents

I. Credentials and Qualifications

A. Education and professional background

1. I am a sexual behavior scientist, with an internationally recognized record studying the development of human sexualities, and an expert in research methodology of sexuality. My curriculum vitae is attached as Appendix 1 to this report. My publication record includes both biological and non-biological influences on sexuality, ranging from pre-natal brain development, through adulthood, to senescence. The primary, but not exclusive, focus of my own research studies has been the development of atypical sexualities. In addition to the studies I myself have conducted, I am regularly consulted to evaluate the research methods, analyses, and proposals from sexual behavior scientists throughout the world. The methodologies I am qualified to assess span the neurochemical and neuroanatomic level, individual behavioral level, and social and interpersonal levels.

2. I am trained as a clinical psychologist and neuroscientist, and I am the author of over 50 peer-reviewed articles in my field, spanning the development of sexual orientation, gender identity, hypersexuality, and atypical sexualities collectively referred to as *paraphilias*. Although I have studied many atypical sexualities, the most impactful of my work has been MRI and other biological studies of the origins of pedophilia. That work has revolutionized several aspects of the sex offender field, both with regard to the treatment of offenders and to the prevention of sexual abuse of children. In 2022, I received the Distinguished Contribution Award from the Association for the Treatment and Prevention of Sexual Abuse in recognition of my research and its integration into public policy. My efforts in this regard have been the subject of several documentary films.

3. Over my academic career, my posts have included Senior Scientist and Psychologist

at the Centre for Addiction and Mental Health (CAMH), and Head of Research for CAMH's Sexual Behaviour Clinic. I was on the Faculty of Medicine of the University of Toronto for 15 years and have served as Editor-in-Chief of the peer reviewed journal, *Sexual Abuse*. That journal is one of the top-impact, peer-reviewed journals in sexual behavior science and is the official journal of the Association for the Treatment and Prevention of Sexual Abuse. In that appointment, I was charged to be the final arbiter for impartially deciding which contributions from other scientists in my field merited publication. I believe that appointment indicates not only my extensive experience evaluating scientific claims and methods, but also the faith put in me by the other scientists in my field. I have also served on the Editorial Boards of *The Journal of Sex Research*, the *Archives of Sexual Behavior*, and *Journal of Sexual Aggression*. I am currently the Director of the Toronto Sexuality Centre in Canada. Thus, although I cannot speak for other scientists, I regularly interact with and am routinely exposed to the views and opinions of most of the scientists active in our field today, within the United States and throughout the world.

4. For my education and training, I received my Bachelor of Science degree from Rensselaer Polytechnic Institute, where I studied mathematics, physics, and computer science. I received my Master of Arts degree in psychology from Boston University, where I studied neuropsychology. I earned my doctoral degree in psychology from McGill University, which included successfully defending my doctoral dissertation studying the effects of psychiatric medication and neurochemical changes on sexual behavior, and included a clinical internship assessing and treating people with a wide range of sexual and gender identity issues.

5. I have a decades-long, international, and award-winning history of advocacy for destigmatizing people with atypical sexualities. While still a trainee in psychology, I founded the

American Psychological Association's (APA) Committee for Lesbian, Gay, and Bisexual Graduate Students. Subsequently, I have served as the Chair for the Committee on Science Issues for APA's Division for the Psychology of Sexual Orientation and Gender Diversity and was appointed to its Task Force on Transgender Issues. Throughout my career, my writings and public statements have consistently supported rights for transgender populations and the application of science to help policy-makers best meet their diverse needs. Because my professional background also includes neurobiological research on the development of other atypical sexualities, I have become recognized as an international leader also in the destigmatizing of the broader range of human sexuality patterns.

6. I am highly experienced in the application of sex research to forensic proceedings: I have served as the Head of Research for the Law and Mental Health Program of the University of Toronto's psychiatric teaching hospital, the Centre for Addiction and Mental Health, where I was appointed to the Faculty of Medicine.

7. I have served as an expert witness in 21 cases in the past four years, as listed on my *curriculum vitae*. These cases included criminal, civil, and custody proceedings, preliminary injunction and Frye hearings, as well as trials. I have testified in courts in Canada and throughout the U.S., including Alabama, Arizona, Florida, Illinois, Indiana, Kansas, Kentucky, Massachusetts, New York, Texas, Utah, and West Virginia. I have provided expert testimony concerning the nature and origins of atypical sexualities, as well as concerning gender dysphoria and gender identity in children.

8. For my work in this case, I am being compensated at the hourly rate of $400 per hour. My compensation does not change based on the conclusions and opinions that I provide here or later in this case or on the outcome of this lawsuit.

B. Clinical expertise vs. scientific expertise

9. In clinical science, there are two kinds of expertise: Clinicians' expertise regards applying general principles to the care of an individual patient and the unique features of that case. A scientist's expertise is the reverse, accumulating information about many individual cases and identifying the generalizable principles that may be applied to all cases. Thus, different types of decisions may require different kinds of experts, such that questions about whether a specific patient represents an exception to the general rule might be better posed to a physician's expertise, whereas questions about establishing the general rules themselves might be better posed to a scientist's.

10. In legal matters, the most familiar situation pertains to whether a given clinician correctly employed relevant clinical standards. Often, it is other clinicians who practice in that field who will be best equipped to speak to that question. When it is the clinical standards that are themselves in question, however, it is the experts in the assessment of scientific studies who are the relevant experts.

C. The professional standard to evaluate treatment models is to rely on objective assessors, not treatment model users in a conflict of interest with its results.

11. I describe in a later section the well-recognized procedures for conducting reviews of literature in medical and scientific fields to evaluate the strength of evidence for particular procedures or treatments. Importantly, the standard procedure is for such evaluations to be conducted by objective assessors with expertise in the science of assessment, and not by those with an investment in the procedure being assessed. Because the people engaged in providing clinical services are necessarily in a conflict of interest when claiming that their services are effective, formal evaluations of evidence are routinely conducted by those *without* direct

professional involvement and thus without financial or other personal interest in whether services are deemed to be safe or effective. This routine practice standard is exemplified by all of the only three systematic, comprehensive research reviews that have been conducted concerning the safety and efficacy of puberty blockers and cross-sex hormones as treatments for gender dysphoria in children.

12. In 2020, England's National Health Service (NHS) commissioned a major review of the use of puberty blockers and cross-sex hormones in children and young people and appointed prominent pediatrician Dr. Hilary Cass to lead that review, explicating that "Given the increasingly evident polarization among clinical professionals, Dr. Cass was asked to chair the group as a senior clinician with *no prior involvement* or fixed views in this area." (Cass 2022 at 35, italics added.) Dr. Cass's committee in turn commissioned formal systematic reviews of evidence from the England National Institute for Health & Care Excellence (NICE), a government entity of England's Department of Health and Social Care, established to provide guidance to health care policy, such as by conducting systematic reviews of clinical research, but without direct involvement in providing treatment to gender dysphoric individuals. (https://www.nice.org.uk/.) Similarly, the Finnish health care council commissioned its systematic review to an external firm, Summaryx Oy. (Pasternack 2019.) Summaryx Oy is a "social enterprise" (a Finnish organization analogous to a non-profit think-tank) that conducts systematic research reviews and other analyses for supporting that nation's medical and social systems. Its reviews are conducted by assessment professionals, not by clinicians providing services. (www.summaryx.eu/en/.) The systematic review by Sweden's National Board of Health and Welfare (NBHW) included four experts. (SBU Scoping Review 2019.) In addition to their own research fields, they provided clinical services in areas adjacent to but apart from gender

dysphoric children, such as physical disorders of sexual development (Dr. Berit Kriström) or gender dysphoria in adults (Dr. Mikael Landén).

13. My own most-cited peer-reviewed paper relating to gender dysphoria in minors illustrates the expertise in the evaluation of scientific evidence that I have and am recognized for. That is, that paper provided not clinical advice or a clinical study, but rather a review and interpretation of the available evidence concerning desistance in children who suffer from gender dysphoria, as well as of evidence (and lack of evidence) concerning the safety and efficacy of medical transition to treat gender dysphoria in minors. (Cantor 2019.)

14. My extensive background in the assessment of sexuality research and in the development of human sexuality places me in exactly the position of objectivity and freedom from conflict-of-interest required by the universal standards of medical research science.

15. I do not offer opinions about the best public policy. Multiple jurisdictions have attempted multiple different means of implementing that science into various public policies. Although I accept as an axiom that good public policy must be consistent with the scientific evidence, science cannot objectively assess societal values and priorities. Therefore, my opinions summarize and assess the science on which public policy is based, but I can offer no opinion regarding which public policy mechanisms would be best in light of that science.

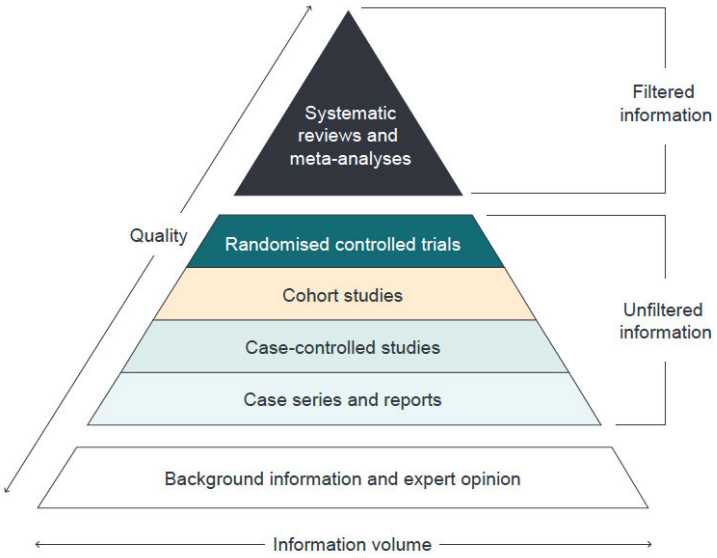
II. Clinical research has a standard *Pyramid of Evidence* that summarizes the relative strength of potential sources of information.

16. The widely accepted starting point in evidence-based medicine is the recognition that clinical experiences and recollections of individual practitioners (often called "expert opinion" or "clinical anecdote") do not and cannot provide a reliable, scientific basis for treatment decisions. Rather, in evidence-based medicine, clinical decision-making is based on objectively demonstrated evidence of outcomes from the treatment options. An essential first step in evidence-based medicine is identifying the relevant findings from among the immense flood of clinical journal articles published each year. Those studies and the evidence they report are then assessed according to the strength offered by the research methods used in each study. The research methods used in a study determine its reliability and generalizability, meaning the confidence one may have that using the same treatment again will have the same result again on other people. In this section, I explain the well-accepted criteria for evaluating the evidentiary value of clinical studies.

A. Clinical research comprises a standard *Pyramid of Evidence*, wherein studies from higher levels of evidence outrank even more numerous studies from lower levels of research.

17. The accepted hierarchy of reliability for assessing clinical outcomes research is routinely represented as a "Pyramid of Evidence" (Figure 1). Scientific questions are not resolved by the number of studies coming to one versus another conclusion. Studies representing higher levels of evidence outrank studies from lower levels. Even large numbers of lower-level studies cannot overcome a study representing a higher level of evidence. Indeed, because lower-level studies are generally faster and less expensive to conduct, it is typical for them to outnumber higher level studies. This is the property meant to be reflected by the pyramid's shape, which is larger at the base and smaller at the apex.

Figure 1: Pyramid of Standards of Evidence



Source: OpenMD. Retrieved from https://openmd.com/guide/levels-of-evidence.

B. The highest level of evidence for safety and effectiveness research is the systematic review of clinical experiments.

18. The most reliable and conclusive method of determining what is actually known or not known with respect to a particular treatment is the *systematic review.* Systematic reviews employ standardized procedures to assess comprehensively all available evidence on an issue, minimizing opportunities for bias in gathering and evaluating research evidence. As described by Dr. Gordon Guyatt, the internationally recognized pioneer in medical research who invented the term *evidence-based medicine,* "A fundamental principle to the hierarchy of evidence [is] that optimal clinical decision making requires systematic summaries of the best available evidence." (Guyatt 2015 at xxvi.)

1. Systematic reviews prevent the 'cherry-picking' of studies that favor a particular result.

19. Because systematic reviews are designed to prevent researchers from including only the studies they favor and other biases, systematic reviews are the routine starting point for

developing clinical practice guidelines. (Moher 2009.) The methods of a systematic review include:

- Define the scope, including the "PICO": Population/Patient, Intervention, Comparison/Control, and Outcome(s);
- Select and disclose the keywords used to search the (massive) available clinical research database(s) for potentially relevant articles, identify the databases they were applied to, and the date(s) of the searches, including any subsequent updates;
- Select and disclose the inclusion/exclusion criteria to be used to filter the "hits" from the keyword searches to identify research studies to be included in the detailed review;
- Review abstracts to select the final set of studies, using at least two independent reviewers to allow for measuring inter-rater reliability on the criteria;
- Code each study's results impacting the research question(s), disclosing the list of all studies and the results coded from each;
- Evaluate the reliability of the results [risk of bias] of each included study, applying uniform criteria across them all.

20. As detailed in Section V, several systematic reviews have been conducted of the outcomes of medicalized transition of gender in minors. Their conclusions are highly consistent with each other. Much of the expert testimony offered by plaintiffs' expert, however, depends on levels of evidence far lower on the pyramid of evidence (e.g., "expert opinion") or beneath the pyramid entirely (e.g., survey studies) while ignoring the thorough, high-quality systematic reviews available in the research literature. Doing so is in direct conflict with foundational principles of evidence-based medicine.

2. Systematic reviews prevent biased assessment of individual studies by uniformly applying standard criteria to each study reviewed. The most widely used criteria set is "GRADE."

21. In order to produce unbiased assessment of the studies within the systematic review, all the studies must be evaluated using the same evaluation criteria. Without such criteria, assessments can become influenced by researchers who, intentionally or not, hold the evaluative bar higher or lower for studies according to whether the studies' conclusions support or

challenge that researcher's perspective. Several such systems have been developed. The most widely used system is the "Grading of Recommendations, Assessment, Development and Evaluations" (GRADE). (Goldet & Howick 2013.) In the GRADE system, studies' findings are downgraded for:

- Risk of bias:[1]
    - Lack of clearly randomized allocation sequence,
    - Lack of blinding,
    - Lack of allocation concealment,
    - Failure to adhere to intention-to-treat analysis,
    - Trial is cut short,
    - Large losses to follow-up;
- Inconsistency;
- Indirectness of evidence;
- Imprecision; and
- Publication bias (when studies with 'negative' findings remain unpublished).

Studies' ratings are upgraded if their findings identify:

- A large effect of the treatment;
- A dose-response relationship (the size of the effect has a systematic association with the dose of the treatment given); or
- That all plausible biases only *reduce* the apparent effect of the treatment (necessarily making the estimated effect sizes conservative estimates).

22. GRADE assessments yield a four-point score representing the certainty that a reported treatment effect is true. These certainty scores are (GRADE Handbook, Section 5):

Certainty	**Meaning**
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.

[1] In science, including in the GRADE system, the term "bias" refers to any external influence leading to a systematic over- or underreporting of the outcome being measured. That is, in this context "bias" is not used in the sociopolitical sense of personal values.

Very Low We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

C. The highest level experimental study of clinical safety and effectiveness is the Randomized Controlled Trial (RCT). RCTs can demonstrate that a given treatment causes (rather than only correlates with) a given outcome.

23. Randomized Controlled Trials are the gold standard method of assessing the effects caused by an experimental treatment. The great scientific weight of RCTs follows from the randomization: People do not pick which research group they are in—a treatment group or a control group. Without random group assignment, it is not possible to identify which, if any, changes are due to the treatment itself or to the factors that led to who did and did not receive treatment.

24. Levels of evidence lower than RCTs are unable to distinguish when changes are caused by the experimental treatment, or by factors that can mimic treatment effects, such as 'regression to the mean' and the placebo effect.

25. In the absence of evidence that X causes Y, it is a scientific error to use language indicating there is causal relationship. In the absence of evidence of causality, it is scientifically unsupportable to describe a correlation with terms such as: increases, improves, benefits, elevates, leads to, alters, influences, results in, is effective for, causes, changes, contributes to, yields, impacts, decreases, harms, and depresses. Scientifically valid terms for correlations include: relates to, is associated with, predicts, and varies with.

26. I note that the plaintiffs' expert repeatedly misrepresent studies using causal language to describe studies that are unable to demonstrate causality. Such language incorrectly asserts that the evidence is stronger than it actually is.

1. RCTs, but not lower levels of evidence, overcome biases representing 'regression to the mean' and other factors that can mimic clinical improvement.

27. 'Regression to the mean' arises when researching issues, such as mood, depression, or levels of emotional distress that typically fluctuate over time. People are more likely to seek out treatment during low points rather than high points in their emotional lives. Thus, when tracking emotional states over time, the average of a group of people in a treatment group may often show an increase; however, without an untreated control group to which to compare them, researchers cannot know whether the group average would have increased anyway, with only the passage of time.

28. Blinding or masking participants in an RCT from which group they are in has been described as a preferred strategy since the 1950s, in order to exclude the possibility that a person's expectations of change caused any changes observed (the "placebo effect"). In practice, however, it has often made little or no significant difference. For example, a study using very high quality methods—meta-analysis of meta-analysis research—has revealed no statistical difference in the sizes of the effects detected by blinded/placebo-controlled studies from non-blinded/non-placebo-controlled studies of depression. (Moustgaard 2019.) That is, the pre-/post-treatment differences found in placebo groups are not as attributable to participants' expectations of improvement as they are to expectable regression to the mean. (Hengartner 2020.)

2. When a 'no treatment control group' is untenable, RCTs use an 'active comparator' group instead.

29. It is not always possible to compare a group receiving a treatment to a group receiving only an inactive procedure, such as a placebo treatment or no treatment at all. In such situations, the standard, ethical, clinical research method is to compare two active treatments with each other.

30. The systematic reviews from England explicitly called for 'active comparator' studies to test whether medicalized transition of minors shows mental health benefits superior to those obtained from psychotherapy. (NICE 2020a at 40; NICE 2020b at 47.) Risk:benefit analysis cannot justify the greater risks associated with medicalization without evidence of correspondingly greater benefit.

D. Cohort studies are the highest level of evidence about medicalized transition currently available.

31. The highest-level study of medicalized transition of minors conducted thus far are cohort studies: gathering a sample of individuals who chose to undergo treatment and tracking them over time. Cohort studies are able to answer some questions that lower-level studies cannot, such as whether a high-functioning group improved over time versus having been composed of people who were already high-functioning. Cohort studies are, however, unable to demonstrate causality, to identify how much of any change was due to regression to the mean, or to detect any placebo effects.

E. Expert opinion represents the least reliable evidence.

32. As Figure 1 illustrates, in evidence-based medicine, opinion based on clinical experience is identified as the *least* reliable source of medical knowledge. Among other reasons, this is because non-systematic recollections of unstructured clinical experiences with self-selected clientele in an uncontrolled setting is the most subject to bias. Indeed, mere "clinical experience" was long the basis of most medical and mental health clinical decisions, and it was precisely the scientific and clinical inadequacy of this type of "knowledge" that led to the development and widespread acceptance of the importance of evidence-based medicine. As Dr. Guyatt has written, "EBM places the unsystematic observations of individual clinicians lowest on the hierarchy," both because EBM "requires awareness of the best available evidence," and

because "clinicians fall prey to muddled clinical reasoning and to neglect or misunderstanding of research findings." (Guyatt 2015 at 10, 15.)

F. Surveys and cross-sectional studies cannot demonstrate treatment effectiveness.

33. Surveys represent observational research rather than experimental research. (In science, experiments are studies involving a manipulation, not merely observation, by the researcher.) Surveys and cross-sectional studies can provide only correlational data and cannot demonstrate causality. (See Section III below). It is not possible for a survey to yield evidence that a treatment is effective. No number of surveys can test a treatment, advancing it from 'experimental' to 'established' status.

34. Survey studies do not even appear on the *pyramid of evidence.* In accordance with the routine standards, systematic reviews of treatment studies exclude surveys.

III. Methodological defects limit or negate the evidentiary value of many studies of treatments for gender dysphoria in minors.

A. In science, to be valid, a claim must be objective, testable, and falsifiable.

35. In behavioral science, people's self-reports do not represent objective evidence. It is when emotional and other pressures are strongest that the distinction between and need for objective over subjective evidence is greatest. Surveys do not represent objective evidence. This is especially true of non-random surveys and polls, recruited through online social networks of the like-minded.

B. Correlation does not imply causation.

36. Studies representing lower levels of evidence are often used because they are faster and less expensive than studies representing higher levels. A disadvantage, however, is that they are often limited to identifying which features are *associated* with which other features, but they cannot show which ones are *causing* which. It is a standard property of statistical science that when a study reports a correlation, there are necessarily three possible explanations. Assuming the correlation actually exists (rather than represents a statistical fluke or bias), it is possible that X causes Y, that Y causes X, or that there is some other variable, Z, that causes both X and Y. (More than one of these can be true at the same time.) To be complete, a research analysis of a correlation must explore all three possibilities.

37. For example, assuming a correlation between treatment of gender dysphoria in minors and mental health actually exists (rather than is a fluke): (1) It is *possible* that treatment causes improvement in mental health. (2) Yet, it is also possible that having good mental health is (part of) what enabled transition to occur in the first place. That is, because of gate-keeping procedures in the clinical studies, those with the poorest mental health are typically not permitted to transition, causing the higher mental health scores to be sorted into the transitioned group.

(See Section III.E on *Selection Bias*.) (3) It is also possible that a third factor, such as wealth or socioeconomic status, causes both the higher likelihood of transitioning (by being better able to afford it) and the likelihood of mental health (such as by avoiding the stresses of poverty or affording psychotherapy).

38. This principle of scientific evidence is why surveys do not (cannot) represent evidence of treatment effectiveness: Surveys are limited to correlations. (See Section II.F. on *Surveys*.)

C. When two or more treatments are provided at the same time, one cannot know which treatment caused observed changes (i.e., 'confounding').

39. Confounding is a well-known issue in clinical research design. As detailed in the present report, it applies throughout treatment studies of gender dysphoria. Patients who undergo medical transition procedures in research clinics routinely undergo mental health treatment (psychotherapy) at the same time. Without explicit procedures to distinguish them, it cannot be known which treatment produced which outcome (or in what proportions). Indeed, that mental health improvement came from mental health treatment is a more parsimonious (and therefore, scientifically superior) conclusion than is medicalized treatment causing mental health improvement.

D. Extrapolation to dissimilar populations and dissimilar conditions.

40. The purpose of clinical science is to establish from a finite sample of study participants information about the effectiveness and safety, or other variables, of a treatment that can be generalized to other people. Such extrapolation is only scientifically justified with populations matched on all relevant variables. The identification of those variables can itself be a complicated question, but when an experimental sample differs from another group on variables already known to be related, extrapolation cannot be assumed but must be demonstrated directly

and explicitly.

41. Each of the systematic reviews from the UK, Sweden, and Finland emphasized that the recently observed, greatly increased numbers of youth coming to clinical attention are a population different in important respects from the subjects of often-cited research studies. Conclusions from studies of adult-onset gender dysphoria and from childhood-onset gender dysphoria cannot be assumed to apply to the current patient populations of adolescent-onset gender dysphoria. The Cass Report correctly advised:

> It is also important to note that any data that are available do not relate to the current predominant cohort of later-presenting birth-registered female teenagers. This is because the rapid increase in this subgroup only began from around 2014-15. Since young people may not reach a settled gender expression until their mid-20s, it is too early to assess the longer-term outcomes of this group. (Cass 2022 at 36.)

The report also indicated:

> [I]t is important that it is not assumed that outcomes for, and side effects in, children treated for precocious puberty will necessarily be the same in children or young people with gender dysphoria. (Cass 2022 at 63.)

42. Finland's review repeated the observation of greatly (20 times) increased numbers, an entirely different demographic of cases, and increased proportions of psychiatric co-morbidities. (Finnish Palko Preparation Memo at 4-6.) The Swedish review highlighted "the uncertainty that follows from the yet unexplained increase in the number of care seekers, an increase particularly large among adolescents registered as females at birth." (Swedish Socialstyrelsen Support 2022 at 11.)

43. It is well known that males and females differ dramatically in the incidence of many mental health conditions and in their responses to treatments for mental health conditions. Thus, research from male-to-female transitioners (the predominant population until recent years) cannot be extrapolated to female-to-male transitioners (the predominant population presenting at clinics today). Outcomes from patients who experienced clear pre-pubertal childhood gender

dysphoria cannot be extrapolated to patients who first manifest diagnosable gender dysphoria well into puberty. Outcomes from clinics employing rigorous and openly reported gate-keeping procedures cannot be extrapolated to clinics or clinicians employing only minimal or perfunctory assessments without external review. Developmental trajectories and outcomes from before the social media era cannot be assumed to apply to those of the current era or the future. Research from youth with formal diagnoses and attending clinics cannot be extrapolated to self-identifying youth and those responding to surveys advertised on social media sites.

44. Further, treatment of gender dysphoria in children and adolescents presents novel-use cases very dissimilar to the contexts in which puberty blockers and cross-sex hormones have previously been studied. Whereas use of puberty blockers to treat precocious puberty *avoids* the medical risks caused by undergoing puberty growth before the body is ready (thus outweighing other risks), use of blockers to treat gender dysphoria in patients already at their natural puberty pushes them *away* from the mean age of the healthy population. Instead of avoiding an objective problem, one is created: Among other things, patients become subject to the issues and risks associated with being late-bloomers, *very* late-bloomers. This transforms the risk:benefit balance, where the offsetting benefit is primarily (however validly) cosmetic.

45. Similarly, administering testosterone to an adult male to treat testosterone deficiency addresses both a different condition and a different population than administration of that same drug to an adolescent female to treat gender dysphoria; the benefits and harms observed in the first case cannot be extrapolated to the second.

E. Mental health assessment used for gate-keeping medicalized transition establishes a *selection bias,* creating a statistical illusion of mental health improvement among the selected.

46. Importantly, clinics are expected to conduct mental health assessments of applicants

seeking medicalized transition, disqualifying from medical services patients with poor mental health. (The adequacy of the assessment procedures of specific clinics and clinicians remains under debate, however.) Such gate-keeping—which was also part of the original "Dutch Protocol" studies—can lead to misinterpretation of data unless care is explicitly taken. A side-effect of excluding those with significant mental health issues from medical transition is that when a researcher compares the average mental health of the gender dysphoric individuals first presenting to a clinic with the average mental health of those who completed medical transition, then the post-transition group would show better mental health—but only because of the *selection bias*, (Larzelere 2004; Tripepi 2010) even when the transition had no effect at all.

IV. Definitions of sex, gender identity, and gender dysphoria.

A. Sex and sex-assigned-at-birth represent objective features.

47. Sex is an *objective* feature: It can be ascertained regardless of any declaration by a person, such as by chromosomal analysis or visual inspection. Gender identity, however, is *subjective:* There exists no means of either falsifying or verifying people's declarations of their gender identities. In science, it is the objective factors—and only the objective factors—that matter to a valid definition. Objectively, sex can be ascertained, not only in humans or only in the modern age, but throughout the animal kingdom and throughout its long history in natural evolution.

48. I use the term "sex" in this report with this objective meaning, which is consistent with definitions articulated by multiple medical organizations:

> Endocrine Society (Bhargava 2021 at 220.)
>
> > "Sex is dichotomous, with sex determination in the fertilized zygote stemming from unequal expression of sex chromosomal genes."
>
> American Academy of Pediatrics (Rafferty 2018 at 2 Table 1.):
>
> > "An assignment that is made at birth, usually male or female, typically on the basis of external genital anatomy but sometimes on the basis of internal gonads, chromosomes, or hormone levels."
>
> American Psychological Association (APA Answers 2014):
>
> > "Sex is assigned at birth, refers to one's biological status as either male or female, and is associated primarily with physical attributes such as chromosomes, hormone prevalence, and external and internal anatomy."
>
> American Psychological Association (APA Resolution 2021 at 1):
>
> > "While gender refers to the trait characteristics and behaviors culturally associated with one's sex assigned at birth, in some cases, gender may be distinct from the physical markers of biological sex (e.g., genitals, chromosomes)."
>
> American Psychiatric Association (Am. Psychiatric Ass'n Guide):
>
> > "Sex is often described as a biological construct defined on an anatomical, hormonal, or genetic basis. In the U.S., individuals are assigned a sex at birth based on external genitalia."

49. The phrases "assigned male at birth" and "assigned female at birth" are increasingly

popular, but they lack any scientific merit. Science is the systematic study of natural phenomena, and nothing objective changes upon humans' labelling or re-labelling it. That is, the objective sex of a newborn was the same on the day before as the day after the birth. Indeed, the sex of a fetus is typically known by sonogram or amniocentesis many months before birth. The use of the term "assign" insinuates that the label is arbitrary and that it was possible to have been assigned a different label that is equally objective and verifiable, which is untrue. Infants were born male or female before humans invented language at all. Indeed, it is exactly because an expected child's sex is known before birth that there can exist the increasingly popular "gender reveal" events. Biologically, the sex of an individual (for humans and almost all animal species) as male or female is irrevocably determined at the moment it is conceived. Terms such as "assign" obfuscate rather than clarify the objective evidence.

B. Gender identity refers to subjective feelings that cannot be defined, measured, or verified by science.

50. It is increasingly popular to define gender identity as a person's "inner sense," however, neither "inner sense" nor any similar phrase is scientifically meaningful. In science, a valid construct must be both objectively measurable and falsifiable with objective testing. The concept of an "inner sense" fits none of these requirements.

V. Distinct mental health phenomena must not be—but frequently are—confused or conflated.

51. One of the most widespread public misunderstandings about people expressing gender dysphoria is that all such cases represent the same phenomenon; however, the clinical science has long and consistently demonstrated that prepubescent children expressing gender dysphoria represent a phenomenon distinct from that of adults starting to experience it. That is, gender dysphoric children are not simply younger versions of gender dysphoric adults. They differ in virtually every objective variable measured, including in their responses to treatments. A third presentation has recently become increasingly observed among people presenting to gender clinics: these cases appear to have an onset in adolescence—after the onset of puberty and before adulthood—and occur in the absence of any childhood history of gender dysphoria. Such cases have been called adolescent-onset or "rapid-onset" gender dysphoria (ROGD). Despite having only recently been observed, they have quickly and greatly outnumbered the better characterized types. Moreover, large numbers of adolescents are today self-identifying in surveys as "gender fluid" and "non-binary." These are not recognized mental health diagnoses, and do not relate in any known way to gender dysphoric groups that have been the subject of previous treatment outcome studies. Because each of these phenomena differ in multiple objective features, it is scientifically invalid to extrapolate findings from one type to the others.

A. Adult-Onset Gender Dysphoria consists predominantly of males sexually attracted to females.

52. Whereas Childhood-Onset Gender Dysphoria occurs in biological males and females and is strongly associated with later homosexuality (next section), Adult-Onset Gender Dysphoria consists primarily of biological males sexually attracted to females. (Lawrence 2010.) They typically report being sexually attracted to women and rarely showed gender atypical

(effeminate) behavior or interests in childhood (or adulthood). Some individuals express being sexually attracted to both men and women, and some profess asexuality, but very few indicate having a primary sexual interest only in men. (Blanchard 1998.) Cases of adult-onset gender dysphoria are typically associated with a sexual interest pattern involving themselves in female form (a paraphilia called autogynephilia). (Blanchard 1989a, 1989b, 1991.)

53. Because of the numerous objective differences between adult-, childhood-, and adolescent-onset gender dysphoria, it is not possible to extrapolate from these results to juvenile populations, which responsible authors are careful not to do.

B. Childhood-onset gender dysphoria (prepubertal-onset) is a distinct phenomenon characterized by high rates of desistance in the absence of social or medical transition.

54. For many decades, small numbers of prepubescent children have been brought to mental health professionals for help with their unhappiness with their sex and in the belief they would be happier living as the other sex. The large majority of childhood onset cases of gender dysphoria occur in biological males, with clinics reporting 2–6 biological male children to each female. (Cohen-Kettenis 2003; Steensma Evidence 2018; Wood 2013.)

1. Eleven cohort studies followed children not permitted social transition, all showing the majority to desist feeling gender dysphoric upon follow-up after puberty.

55. Currently, the studies of outcomes among children who experience gender dysphoria before puberty that provide the most evidentiary strength available are only "cohort studies," which follow people over time, recording the outcomes of the treatments they have undergone. Such studies supersede (i.e., overrule) the outcomes of surveys, which are much more prone to substantial error. As I have explained above, however, cohort studies can describe developmental pathways, but cannot provide evidence of causation.

56. In total, there have been 11 cohort studies showing the outcomes for these children, listed in Table 2. I first published this comprehensive list of studies in my own peer-reviewed article on the topic. (Cantor 2019.)

Table 2. Cohort studies of gender dysphoric, prepubescent children.

Count	Group	Study
2/16 4/16 10/16	gay trans-/crossdress straight/uncertain	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128,* 1283–1289.
2/16 2/16 12/16	trans- uncertain gay	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years of follow-up. *Comprehensive Psychiatry, 19,* 363–369.
0/9 9/9	trans- gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology, 4,* 29–41.
2/45 10/45 33/45	trans-/crossdress uncertain gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172,* 90–97.
1/10 2/10 3/10 4/10	trans- gay uncertain straight	Davenport, C. W. (1986). A follow-up study of 10 feminine boys. *Archives of Sexual Behavior, 15,* 511–517.
1/44 43/44	trans- cis-	Green, R. (1987). The "sissy boy syndrome" and the development of homosexuality. New Haven, CT: Yale University Press.
0/8 8/8	trans- cis-	Kosky, R. J. (1987). Gender-disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146,* 565–569.
21/54 33/54	trans- cis-	Wallien, M. S. C., & Cohen-Kettenis, P. T. (2008). Psychosexual outcome of gender-dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 1413–1423.
3/25 6/25 16/25	trans- lesbian/bi- straight	Drummond, K. D., Bradley, S. J., Badali-Peterson, M., & Zucker, K. J. (2008). A follow-up study of girls with gender identity disorder. *Developmental Psychology, 44*, 34–45.
47/127 80/127	trans- cis-	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52,* 582–590.

17/139 122/139	trans- cis-	Singh, D., Bradley, S. J., Zucker, K. J. (2021). A follow-up study of boys with Gender Identity Disorder. *Frontiers in Psychiatry*, 12:632784.

*For brevity, the list uses "gay" for "gay and cis-", "straight" for "straight and cis-", etc.

57. The children in these studies were receiving professional mental health support during the study period, but did not "socially transition." In sum, despite coming from a variety of countries, conducted by a variety of labs, using a variety of methods, at various times across four decades, every study without exception has come to the identical conclusion: among prepubescent children who feel gender dysphoric, the majority cease to want to be the other gender over the course of puberty—ranging from 61–88% desistance across the large, prospective studies. Such cases are often referred to as "desisters," whereas children who continue to feel gender dysphoric are often called "persisters."

58. This interpretation of these studies is widely accepted, including by the Endocrine Society, which concluded:

> In most children diagnosed with GD/gender incongruence, it did not persist into adolescence. . . . [T]he large majority (about 85%) of prepubertal children with a childhood diagnosis did not remain GD/gender incongruent in adolescence. (Hembree 2017 at 3879.)

The developers of the Dutch Protocol, at the Vrije University gender clinic, likewise concluded based on these studies that "Although the persistence rates differed between the various studies…the results unequivocally showed that the gender dysphoria remitted after puberty in the vast majority of children." (Steensma & Cohen-Kettenis 2011 at 2.)

59. The consistent observation of high rates of desistance among pre-pubertal children who present with gender dysphoria demonstrates a pivotally important—yet often overlooked—feature: because gender dysphoria so often desists on its own, clinical researchers cannot assume that therapeutic intervention cannot facilitate or speed desistance for at least some patients. That

is, it cannot be assumed that gender identity is immune to influence such as from psychotherapy. Such is an empirical question, and there has not yet been any such research.

60. These same studies are often vaguely cited to assert that the high desistance rates uniformly reported in these 11 studies do not apply to children who have persisted until "the start of puberty" (which is taken to mean Tanner Stage 2), or in an alternative phrasing, that children "who persist until the start of puberty" are likely to continue to persist into adulthood. But these studies taken together do not support that degree of precision. Rather, the studies do not specify at exactly what developmental stage the reported desistance occurred—what they report is that the subjects had desisted by late adolescence or early adulthood. I am aware of no systematic study that establishes that—in the absence of social and/or medical transition—children who experience gender dysphoria are unlikely to desist if they have not desisted by the start of Tanner Stage 2.

2. One cohort study followed children who were permitted social transition. In contrast with children not permitted to transition socially, most persisted in expressing gender dysphoria.

61. In contrast, Olson et al. have now published a single cohort study of prepubescent children, ages 3–12 (average of 8), who had already made a complete, binary (rather than intermediate) social transition, including a change of pronouns. (Olson 2022.) The study did not employ DSM-5 diagnosis, as "Many parents in this study did not believe that such diagnoses were either ethical or useful and some children did not experience the required distress criterion." (Olson 2022.) Unlike the prior research studies, only 7.3% of these (socially transitioned) children ceased to feel gender dysphoric.

62. Although the team publishing this cohort study did not discuss it, their finding matches the prediction of other researchers, that social transition itself represents an active

intervention, such that social transition may *cause* the persistence of gender dysphoria when it would have otherwise resolved, avoiding any need for subsequent medicalization and its attendant risks. Conversely stated, social transition seems to prevent desistance. (Singh 2021; Zucker 2018, 2020.)

63. As recognized by multiple authors, the potential impact of social transition on rates of desistance is pivotal. The Endocrine Society cautions that "social transition...has been found to contribute to the likelihood of persistence." (Hembree 2017 at 3879.) WPATH has stated that after social transition, "A change back to the original gender role can be highly distressing and [social transition can] even result in postponement of this second transition on the child's part." (Coleman 2012 at 176.) In 2013, prominent Vrije University researchers observed:

> Childhood social transitions were important predictors of persistence, especially among natal boys. Social transitions were associated with more intense GD in childhood, but have never been independently studied regarding the possible impact of the social transition itself on cognitive representation of gender identity or persistence. [Social transition] may, with the hypothesized link between social transitioning and the cognitive representation of the self, influence the future rates of persistence. (Steensma 2013 at 588-589.)

3. There is no reliable method for predicting for which children who present with gender dysphoria will persist versus desist.

64. The Endocrine Society Guidelines stated in 2017 that "With current knowledge, we cannot predict the psychosexual outcome for any specific child" (Hembree 2017 at 3876), and this remains true today. Research has not yet identified any reliable procedure for discerning which children who present with gender dysphoria will persist, as against the large majority who will desist, absent transition and "affirmation." Such a method would be valuable, as the more accurately that potential persisters can be distinguished from desisters, the better the risks and benefits of options can be weighted. Such "risk prediction" and "test construction" are standard components of applied statistics in the behavioral sciences. Multiple research teams have

reported that, on average, groups of persisters are somewhat more gender non-conforming than desisters, but not so different as to usefully predict the course of any particular child. (Singh 2021; Steensma 2013.)

65. In contrast, one research team (the aforementioned Olson group) claimed the opposite, asserting that they developed a method of distinguishing persisters from desisters, using a single composite score representing a combination of children's "peer preference, toy preference, clothing preference, gender similarity, and gender identity." (Rae 2019 at 671.) They reported a statistical association (mathematically equivalent to a correlation) between that composite score and the probability of persistence. As they indicated, "Our model predicted that a child with a gender-nonconformity score of .50 would have roughly a .30 probability . . . of socially transitioning. By contrast, a child with gender-nonconformity score of .75 would have roughly a .48 probability." (Rae 2019 at 673.) Although the Olson team declared that "social transitions may be predictable from gender identification and preferences" (Rae 2019 at 669), their actual results suggest the opposite: the gender-nonconforming group who went on to transition (socially) had a mean composite score of .73 (which is less than .75), and the gender-nonconforming group who did not transition had a mean composite score of .61, also less than .75. (Rae 2019, Supplemental material at 6, Table S1.) Both of those are lower than the value of .75, so both of those would be more likely than not to desist, rather than to proceed to transition. That is, Olson's model does not distinguish likely from unlikely to transition; rather, it distinguishes unlikely from even less likely to transition.

66. Further, in the absence of long-term follow-up, it cannot be known what proportion of those who transition and persist through the early stages of puberty will later (for example as young adults) come to regret having transitioned and then *de*transition. Because only a minority

of gender dysphoric children persist in feeling gender dysphoric in the first place, "transition-on-demand" increases the probability of unnecessary transition and unnecessary medical risks.

4. Temple Newhook's attempts to dismiss evidence of high rates of desistance from childhood gender dysphoria are invalid.

67. The unanimous consistency across all 11 cohort studies of (non-transitioned) gender dysphoric children offers high confidence in the conclusion that most childhood-onset cases desist during the course of puberty. In 2018, however, a commentary was published, contesting that conclusion, criticizing four studies. (Temple Newhook 2018.) Multiple accomplished international researchers studying outcomes of gender dysphoric children responded (Zucker 2018; Steensma & Cohen-Kettenis 2018), to which the Temple Newhook team wrote a rejoinder. (Winters 2018.) I have reviewed each of these arguments, finding that the Temple Newhook comments rely on demonstrable falsehoods, whereas the responses remain consistent with the peer-reviewed evidence. The Temple Newhook commentary has not altered the consensus of the international medical community, which continues to cite and rely upon these cohort studies.

68. Before delineating each of their arguments, it should be noted that the Temple Newhook team based their analysis on the wrong research reports, attacking only a straw-person version of the contents of the research literature. Table 3 repeats the 11 cohort studies (on the left left) and the four studies Temple Newhook criticized (right):

Table 3.

• Lebovitz (1972)	
• Zuger (1978)	
• Money & Russo (1979)	
• Davenport (1986)	
• Green (1987)	
• Kosky (1987)	
• Wallien & Cohen-Kettenis (2008)	Wallien & Cohen-Kettenis (2008)
• Drummond, *et al.* (2008)	Drummond, *et al.* (2008)
• Steensma, *et al.* (2013)	Steensma, *et al.* (2011, 2013)

- Singh, 2012/Singh, *et al.* (2021)[2]

69. It should also be noted that the Temple Newhook 2018 commentary does not represent a systematic review. Temple Newhook did not indicate search strategies, inclusion/exclusion criteria, coding methods, reliability checks, or other standard procedures used for ensuring objective and unbiased assessment of all relevant studies. Rather, the Temple Newhook analysis targeted a small and selective subset of the research available—a scientifically invalid endeavor, which the systematic review process is meant to prevent. Not only did Temple Newhook skip most of the relevant science, but conversely, Temple Newhook inserted the Steensma 2011 study, which should have been rejected. (The data it reported was already included in Wallien & Cohen-Kettenis 2008.) The Temple Newhook commentary claimed it was "systematically engaging scholarly literature." (Temple Newhook 2018 at 2.) However, as the above reference lists demonstrate, that commentary involved no such systematic procedures.

70. Temple Newhook does not report any research evidence of its own. Rather, the commentary hypothesizes issues they assert could, theoretically, have affected the rates of desistance consistently detected. Scientifically, such a criticism is vacuous: In science, it is always possible for additional, external factors to have affected what was observed.

71. Also, as already detailed herein, the currently available level of evidence for outcomes of medicalized transition is the cohort study. The methodological issues highlighted by Temple Newhook are exactly why randomized, controlled trials (RCTs) need to be conducted, as such studies would be capable of resolving exactly those questions (in whichever direction). In the absence of randomized, controlled studies, however, the correct scientific process is to follow the results of the cohort studies (that is, the systematic reviews of the cohort studies).

[2] At the time of the 2018 Temple Newhook commentary, the Singh *et al.,* 2021 study was available as Singh, 2012.

72. In the science process, one cannot merely continue to retain a desired hypothesis, rejecting all counter-evidence until a perfect study emerges. This is especially important in clinical science, when the hypothesis relates to physical interventions, in children, with the potential to affect them for their entire lives. Rather, the scientific process proceeds by successive approximation, with results from the best available research replacing lesser quality research, increasing in confidence, but always with the possibility of changes imposed by future evidence.

73. By involving only a few of the full set of cohort studies, the Temple Newhook commentary removes one of the most compelling implications of the existing (cohort) studies: Their results are unanimous. However unlikely it might be for four studies to produce the same result randomly, it is even more unlikely for eleven studies all to come to the same result randomly.

74. Temple Newhook emphasized that gender identity issues differ across times and contexts/political environments, hypothesizing that children attending her clinic might differ from children attending the Toronto and the Amsterdam clinics. Returning once again to the full set of all studies, however, the evidence shows the very opposite: All studies yielded the same result, whether from the 1970s, 80s, 90s, 2000s, 2010s, and wherever in the world any clinic was. Acknowledging the possibility that future studies may lead to a different conclusion, the existing evidence shows majority desistance, constantly and across all time periods.

75. Consideration of the full set of studies also indicates that the contrast is not Toronto and Amsterdam versus whatever "reality" Temple Newhook perceives. Rather, they show the contrast is between Temple Newhook and every facility in every country ever reporting desistance data on childhood-onset gender dysphoria. Moreover, despite Temple Newhook's

mention of influences of political cultures, that commentary does not point out that Canada and the Netherlands are much more politically liberal than the U.S. Although the commentary offers the hypothesis that the Canadian and Dutch contexts might decrease persistence, the commentary does not include the inverse possibility: that these liberal environments might be *"iatrogenic"*—that is, causing dysphoria to continue when it might otherwise remit.

76. Also, the very evidence suggesting that gender dysphoria can be influenced by local environmental factors is itself evidence that gender identity is not, in fact, an innate and immutable feature, potentially amenable to change.

C. Adolescent-Onset Gender Dysphoria, the predominant clinical population today, is a distinct and largely unstudied phenomenon.

77. Concurrent with the advent of social media, a third profile began appearing clinically and socially, characteristically distinct from the two previously identified profiles. (Kaltiala-Heino 2015; Littman 2018.) Despite lacking any history before the current generation, this profile has now numerically overwhelmed the previously known and better characterized types in clinics and on Internet surveys. Unlike adult-onset or childhood-onset gender dysphoria, this group is predominately biologically female. This group typically presents in adolescence, but lacks the history of cross-gender behavior in childhood like the childhood-onset cases have. It is that feature which led to the term Rapid Onset Gender Dysphoria (ROGD). (Littman 2018.)[3] Cases commonly appear to occur within clusters of peers in association with increased social media use (Littman 2018), and among people with autism or other mental health issues. (Kaltiala-Heino 2015; Littman 2018; Warrier 2020.) (See section VII on Mental Health.)

78. There do not yet exist any cohort studies of people with adolescent-onset gender

[3] After initial criticism, the publishing journal conducted a reassessment of the article. The article was expanded with additional detail and republished. The relevant results were unchanged. Littman's paper as revised has been widely cited.

dysphoria undergoing medicalized transition. Current studies are limited to surveys typically of volunteers from activist and support groups on the Internet.

79. Moreover, no study has yet been organized in such a way as to allow for a distinct analysis of the adolescent-onset group, as distinct from childhood-onset or adult-onset cases. Many published studies fail to distinguish between people who had childhood-onset gender dysphoria and have aged into adolescence versus people whose onset was not until adolescence. (Analogously, there are reports failing to distinguish people who had adolescent-onset gender dysphoria and aged into adulthood from adult-onset gender dysphoria.) Studies selecting groups according to their current age instead of their ages of onset produces confounded results, representing unclear mixes according to how many of each type of case wound up in the final sample.

VI. Suicide and suicidality are distinct phenomena representing different mental health issues and indicating different clinical needs.

80. *Suicide* refers to completed suicides and the sincere intent to die. It is substantially associated with impulsivity, using more lethal means, and being a biological male. (Freeman 2017.) *Suicidality* refers to *para*-suicidal behaviors, including suicidal ideation, threats, and gestures.

A. Rates of suicidality among all adolescents have skyrocketed with the advent of social media.

81. The CDC's 2019 Youth Risk Behavior Survey found that 24.1% of female and 13.3% of male high school students reported "seriously considering attempting suicide." (Ivey-Stephenson 2020 at 48.)

82. The CDC survey reported not only that these already alarming rates of suicide attempt were still increasing (by 8.1%–11.0% per year), but also that this increase was occurring only among female students. No such trend was observed among male students. That is, the demographic increasingly reporting suicidality is the same demographic increasingly reporting gender dysphoria. (Ivey-Stephenson 2020 at 51.)

83. The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) produces a series of evidence-based resource guides which includes their Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youth. It noted (italics added):

> [F]rom 1999 through 2018, the suicide death rate doubled for females aged 15 to 19 and 20 to 24. For youth aged 10 to 14, the suicide death rate more than tripled from 2001 to 2018. Explanations for the increase in suicide may include bullying, social isolation, increase in technology and *social media*, increase in *mental illnesses*, and economic recession. (SAMHSA 2020 at 5.)

The danger potentially posed by social media follows from suicidality spreading as a social contagion, as suicidality increases after media reports, occurs in clusters of social groups, and in

adolescents after the death of a peer. (Gould & Lake 2013.)

84. Social media voices today loudly advocate "hormones-on-demand" while issuing hyperbolic warnings that teens will commit suicide unless this is not granted. Both adolescents and parents are exposed to the widely circulated slogan that "I'd rather have a living son than a dead daughter," and such baseless threats or fears are treated as a justification for referring to affirming gender transitions as 'life-saving' or 'medically necessary'. Such claims grossly misrepresent the research literature, however. Indeed, they are unethical: Suicide prevention research and public health campaigns repeatedly warn against circulating messages that can be taken to publicize or even glorify suicide, due to the risk of copy-cat behavior they encourage. (Gould & Lake 2013.)

85. Systematic review of 44 studies of suicidal thoughts and behaviors in LGBTQ youth and suicidality found only a small association between suicidality and sexual minority stress. (Hatchel 2021.) The quantitative summary of the studies (an especially powerful type of systematic review called *meta-analysis*) found no statistically significant association between suicidality and any of having an unsupportive school climate, stigma and discrimination, or outness/openness. There were, however, significant associations between suicidality and indicators of social functioning problems, including violence from intimate partners, victimization from LGBT peers and from non-LGBT peers, and sexual risk taking.

B. *Suicidality* is substantially more common among females, and *suicide,* among males. Sexual orientation is strongly associated with suicidality, but much less associated with suicide.

86. Notwithstanding public misconceptions about the frequency of suicide and related behaviors, the highest rates of death by suicide are among middle-aged and elderly men in high income countries. (Turecki & Brent 2016 at 3.) Males are at three times greater risk of death by

suicide than are females, whereas suicidal ideation, plans, and attempts are three times more common among females. (Klonsky 2016; Turecki & Brent 2016.) In contrast with completed suicides, the frequency of suicidal ideation, plans, and attempts is highest during adolescence and young adulthood, with reported ideation rates spanning 12.1–33%. (Borges 2010; Nock 2008.) Relative to other countries, Americans report elevated rates of each of suicidal ideation (15.6%), plans (5.4%), and attempts (5.0%). (Klonsky 2016.) Suicide attempts occur up to 30 times more frequently than completed suicides. (Bachmann 2018.) The rate of completed suicides in the U.S. population is 14.5 per 100,000 people. (WHO 2022.)

87. There is substantial research associating sexual orientation with suicidality, but much less so with completed suicide. (Haas 2014.) More specifically, there is some evidence suggesting gay adult men are more likely to die by suicide than are heterosexual men, but there is less evidence of an analogous pattern among lesbian women. Regarding suicidality, surveys of self-identified LGB Americans repeatedly report rates of suicidal ideation and suicide attempts 2–7 times higher than their heterosexual counterparts. Because of this association of suicidality with sexual orientation, one must apply caution in interpreting findings allegedly about gender identity: because of the overlap between people who self-identify as non-heterosexual and as transgender or gender diverse, correlations detected between suicidality and gender dysphoria may instead reflect (be confounded by) sexual orientation. Indeed, other authors have made explicit their surprise that so many studies, purportedly of gender identity, entirely omitted measurement or consideration of sexual orientation, creating the situation where features that seem to be associated with gender identity instead reflect the sexual orientation of the members of the sample. (McNeil 2017.)

C. There is no evidence that medicalized transition reduces rates of suicide or suicidality.

88. It is repeatedly asserted that despite the known risks, despite the lack of research into the reality or severity of unquantified risks, it is essential and "the only ethical response" to provide medical transition to minors because medical transition is known to reduce the likelihood of suicide among minors who suffer from gender dysphoria. This is simply untrue. *No studies* have documented any reduction in suicide rates in minors (or any population) as a result of medical transition. No methodologically sound studies have provided meaningful evidence that medical transition reduces suicidality in minors. Instead, multiple studies show tragically high rates of suicide after medical transition, with that rate beginning to spike several years after medical transition.

89. Among post-transition adults, completed suicide rates remain elevated. (Wiepjes 2020.) Among post-operative transsexual adults in Sweden's highly tolerant society, death by suicide is 19 times higher than among the cisgendered. (Dhejne 2011.) Systematic review of 17 studies of suicidality in transsexual adults confirmed suicide rates remain elevated even after complete transition. (McNeil 2017.) Among post-operative patients in the Netherlands, long-term suicide rates of six times to eight times that of the general population were observed depending on age group. (Asscheman 2011 at 638.) Also studying patients in the Netherlands, Wiepjes et al. (2020) reported the "important finding" that "suicide occurs similarly" before and after medical transition. (Wiepjes 2020 at 490.) In other words, *transition did not reduce suicide*. A very large dataset from the U.K. GIDS clinic showed that those referred to the GIDS clinic for evaluation and treatment for gender dysphoria committed suicide at a rate five times that of the general population, both before and after commencement of medical transition (Biggs 2022). Finally, in a still-ongoing longitudinal study of U.S. patients, Chen *et al.* have reported a

shockingly high rate of completed suicide among adolescent subjects in the first two years *after* hormonal transition, although they provide no pre-treatment data for this population to compare against. (Chen 2023 at 245.)

90. WPATH's systematic review of the effectiveness of puberty blockers and cross-sex hormones on suicide in minors concluded that "It was impossible to draw conclusions about the effects of [either] hormone therapy on death by suicide." (Baker 2021 at 12.) In short, I am aware of no respected voice that asserts that medical transition reduces suicide among minors who suffer from gender dysphoria.

91. As to the separate and far more common phenomenon of suicidality, of course, that claim is widely made. McNeil's systematic review revealed, however, a complicated set of interrelated factors rather than supporting the common hypothesis that rates of suicidal ideation and suicidal attempts would decrease upon transition. Rates of suicidal ideation did not show the same pattern as suicide attempts, male-to-female transitioners did not show the same patterns as female-to-male transitioners, and social transition did not show the same patterns as medical transition. Importantly, the review included one study that reported "a positive relationship between higher levels of social support from leaders (e.g., employers or teachers) and increased suicide attempt, which they suggested may be due to attempts instigating increased support from those around the person, rather than causing it." (McNeil 2017 at 348.)

92. Moreover, the 2020 Kuper, *et al.* cohort study of minors receiving hormone treatment found *increases* in each of suicidal ideation (from 25% to 38%), attempts (from 2% to 5%), and non-suicidal self-injury (10% to 17%). (Kuper 2020 at Table 5.) Research has found social support to be associated with *increased* suicide attempts, suggesting the reported suicidality may represent attempts to evoke more support. (Bauer 2015; Canetto 2021.)

93. Overall, the research evidence is only minimally consistent with the hypothesis that an absence of transition causes mental health issues and suicide, but very strongly consistent with the hypothesis that mental health issues, such as *Borderline Personality Disorder* (BPD), cause both suicidality and unstable identity formation (including gender identity confusion). (See section VII.) BPD is repeatedly documented to be greatly elevated among sexuality minorities (Reuter 2016; Rodriguez-Seiljas 2021; Zanarini 2021), and both suicidality and identity confusion are symptoms of that disorder. Thus, diverting distressed youth towards transition necessarily diverts youth away from receiving the psychotherapies designed for treating the issues actually causing their distress.

94. Despite the fact that mental health issues, including suicidality, are repeatedly required by clinical standards of care to be resolved before transition, threats of suicide are instead oftentimes used as the very justification for labelling transition a "medical necessity." However plausible it might seem that failing to affirm transition causes suicidality, the epidemiological evidence does not support that hypothesis.

VII. Mental health profiles differ across adult-, adolescent-, and childhood-onset gender dysphoria.

A. Mental health issues in Adult-Onset Gender Dysphoria.

95. Systematic review of all studies examining mental health issues in transgender adults identified 38 such studies. (Dhejne 2016.) The review indicated that many studies were methodologically weak, but nonetheless consistently found (1) that the average rate of mental health issues among adults is highly elevated both before *and after* transition, (2) but that the average was less elevated among adults who completed transition. It could not be concluded that transition improves mental health, however. Patients were commonly receiving concurrent psychotherapy, introducing a confound (meaning, again, that it cannot be determined whether the change was caused by the transitioning or the mental health treatment). Further, several studies showed more than 40% of patients to become "lost to follow-up." It remains unknowable to what extent the information from the remaining participants accurately reflects the whole population.

B. Mental health issues in Childhood-Onset Gender Dysphoria.

96. Elevated rates of multiple mental health issues among gender dysphoric children are reported throughout the research literature. A formal analysis of children (ages 4–11) undergoing assessment at the Dutch child gender clinic showed that 52% fulfilled criteria for a formal DSM diagnosis of a clinical mental health condition other than Gender Dysphoria. (Wallien 2007 at 1307.) A comparison of the children attending the Canadian versus Dutch child gender dysphoria clinic showed only few differences between them, and a large proportion in both groups were diagnosable with clinically significant mental health issues. Results of standard assessment instruments (Child Behavior Check List, or CBCL) demonstrated that among 6–11-year-olds, 61.7% of the Canadian and 62.1% of the Dutch sample satisfied the diagnostic criteria for one or more mental health conditions other than gender dysphoria. (Cohen-Kettenis 2003 at 46-47.)

97. A systematic review of all studies of Autism Spectrum Disorders (ASDs) and Attention-Deficit Hyperactivity Disorder (ADHD) among children diagnosed with gender dysphoria was recently conducted. (Thrower 2020.) It was able to identify a total of 22 studies examining the prevalence of ASD or ADHD youth with gender dysphoria. Studies reviewing medical records of children and adolescents referred to gender clinics showed 6–26% to have been diagnosed with ASD. (Thrower 2020 at 695.) Moreover, those authors gave specific caution on the "considerable overlap between symptoms of ASD and symptoms of gender variance, exemplified by the subthreshold group which may display symptoms which could be interpreted as either ASD or gender variance. Overlap between symptoms of ASD and symptoms of GD may well confound results." (Thrower 2020 at 703.) The rate of ADHD among children with GD was 8.3–11%. Conversely, data from children (ages 6–18) with Autism Spectrum Disorders (ASDs) show they are more than seven times more likely to have parent-reported "gender variance." (Janssen 2016 at 63.)

98. As shown by the outcomes studies (see Section V), there is little reliable evidence that transition improves the mental well-being of children. As shown repeatedly by clinical guidelines from multiple professional associations, mental health issues are expected or required to be resolved *before* undergoing transition. The reasoning behind these conclusions is that children may be expressing gender dysphoria, not because they are experiencing what gender dysphoric adults report, but because they mistake what their experiences indicate or to what they might lead. For example, a child experiencing depression from social isolation might develop the hope—and the unrealistic expectation—that transition will help them fit in, as a member of the other sex.

99. In cases where gender dysphoria is secondary to a different issue, efforts at transition

are aiming at the wrong target and leave the primary issue(s) unaddressed. Given the highly reliable, repeatedly replicated finding that childhood-onset gender dysphoria resolves with puberty for the large majority of children, the evidence indicates that blocking a child's puberty blocks the child's natural maturation that itself would resolve the dysphoria.

C. Mental health issues in Adolescent-Onset Gender Dysphoria (ROGD).

100. The literature varies in the range of gender dysphoric adolescents with co-occurring disorders. In addition to self-reported rates of suicidality (see Section VI), clinical assessments reveal elevated rates not only of depression (Holt 2016; Skagerberg 2013; Wallien 2007), but also anxiety disorders, disruptive behavior difficulties, Attention Deficit/Hyperactivity Disorder, Autism Spectrum Disorder, and personality disorders, especially Borderline Personality Disorder (BPD). (Anzani 2020; de Vries 2010; Jacobs 2014; Janssen 2016; May 2016; Strang 2014, 2016; Swedish Socialstyrelsen, Evolution 2020.)

101. Of particular concern in the context of adolescent-onset gender dysphoria is Borderline Personality Disorder (BPD; diagnostic criteria in Table 4 below). Symptoms of BPD overlap in important respects with symptoms commonly interpreted as signs of gender dysphoria, and it is increasingly hypothesized that very many cases appearing to be adolescent-onset gender dysphoria actually represent cases of BPD. (E.g. Anzani 2020; Zucker 2019.) That is, some people may be misinterpreting their experiencing of the broader "identity disturbance" of symptom Criterion 3 to represent a gender identity issue specifically. Like adolescent-onset gender dysphoria, BPD begins to manifest in adolescence, is three times more common in biological females than males, and occurs in 2–3% of the population, rather than 1-in-5,000 people. (Thus, if even only a portion of people with BPD experienced an identity disturbance, and focused that disturbance on gender identity resulting in transgender identification, they could

easily overwhelm the number of genuine cases of gender dysphoria.)

Table 4. DSM-5-TR Diagnostic Criteria for Borderline Personality Disorder.

> A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:
>
> 1. Frantic efforts to avoid real or imagined abandonment. (Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.)
> 2. A pattern of unstable and intense interpersonal relationship characterized by alternating between extremes of idealization and devaluation.
> 3. *Identity disturbance: markedly and persistently unstable self-image or sense of self.*
> 4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (Note: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)
> 5. *Recurrent suicidal behaviour, gestures, or threats, or self-mutilating behavior.*
> 6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
> 7. Chronic feelings of emptiness.
> 8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
> 9. Transient, stress-related paranoid ideation or severe dissociative symptoms.
>
> (Italics added.)

(American Psychiatric Association 2022 at 752-753.)

102. Mistaking cases of BPD for cases of Gender Dysphoria may prevent such youth from receiving the correct mental health services for their condition. A primary cause for concern is symptom Criterion 5: *recurrent suicidality.* (See Section VI on suicide and suicidality.) Regarding the provision of mental health care, the distinction between these conditions is crucial: A person with BPD going undiagnosed will not receive the appropriate treatments (the currently most effective of which is Dialectical Behavior Therapy). The problem was not about *gender* identity, but about having an *unstable* identity.

103. Regarding research, there have now been several attempts to document rates of suicidality among gender dysphoric adolescents. The scientific concern presented by BPD is that

it poses a potential confound: samples of gender dysphoric adolescents could appear to have elevated rates of suicidality, not because of the gender dysphoria (or transphobia in society), but because of the number of people with BPD in the sample.

D. Neuroimaging studies have associated brain features with sex and with sexual orientation, but not gender identity.

104. Claims that transgender identity is an innate property resulting from brain structure remain unproven. Neuroimaging and other studies of brain anatomy repeatedly identify patterns distinguishing male from female brains, but when analyses search for those patterns among transgender individuals, "gender identity and gender incongruence could not be reliably identified." (Baldinger-Melich 2020 at 1345.) Although much smaller than male/female differences, statistically significant neurological differences are repeatedly associated with sexual orientation (termed "homosexual" vs "nonhomosexual" in the research literature). Importantly, despite the powerful associations between transsexuality and homosexuality, as explicated by Blanchard, many studies analyzing gender identity failed to control for sexual orientation, representing a problematic and centrally important confound. I myself pointed this out in the research literature, noting that neuroanatomical differences attributed to gender dysphoria should instead be attributed to sexual orientation. (Cantor 2011, Cantor 2012.) A more recent review of the science, by Guillamon, et al. (2016), agreed, stating:

> Following this line of thought, Cantor (2011, 2012, but also see Italiano, 2012) has recently suggested that Blanchard's predictions have been fulfilled in two independent structural neuroimaging studies. Specifically, Savic and Arver (2011) using VBM on the cortex of untreated nonhomosexual MtFs and another study using DTI in homosexual MtFs (Rametti et al., 2011b) illustrate the predictions. *Cantor seems to be right*". (Guillamon 2016 at 1634, italics added; see also Italiano 2012.)

In addition to this confound, because snapshot neurobiological studies can provide only correlational data, it would not be possible for such studies to distinguish whether brain

differences cause gender identity or if gender atypical behavior modifies the brain over time, such as through neuroplasticity. As noted by one team of neuroscientists, "[I]t remains unclear if the differences in brain phenotype of transgender people may be the result of a sex-atypical neural development or of a lifelong experience of gender non-conformity." (Fisher 2020 at 1731.) In sum, at present assertions that transgender identity is caused by neurology represent faith, not science.

VIII. Assessment of expert declaration of Dr. Stephanie Budge.

105. In the body of my report above, I summarized the nature and strength of the published scientific evidence regarding the central issues pertaining to the medicalized transition of gender in minors. The present section provides additional remarks directed to specific evidentiary or logical defects in the opinions offered in the declaration of Dr. Stephanie Budge, which I have also reviewed.

106. Although she did not include them in her declaration, Dr. Budge has submitted expert witness declarations for the plaintiffs in *Bridge v Oklahoma Board of Education* and in *Doe v Horne* (Arizona). I submitted expert witness declarations for the defense in those cases.

107. Dr. Budge's opinions are not the product of principles and methods accepted as reliable by the fields of medical science, behavioral science, or psychology. As outlined in the body of the present report, the standard in these fields is to apply systematic reviews of the research evidence, a formal process which minimizes opportunities for bias, such as the cherry-picking of studies from only one side of an issue (see Section II.B *Systematic Reviews*) and holding different studies up to different levels of scrutiny according to which side of an issue they support. Dr. Budge's report excluded all mention of the relevant systematic reviews, instead engaging in exactly the biased analyses that the systematic review process was designed to prevent.

108. Very many of the sources Dr. Budge cited as the basis of her opinions represent surveys of convenience samples (including Barr et al., 2021;[4] Durwood et al., 2017; Fox et al., 2020; Galupo et al., 2020; Price-Feeney et al., 2020; Puckett et al., 2020; Olson et al., 2016; and

[4] Dr. Budge's citation referring to this study is outdated. The current (now permanent) citation is:
Barr, S. M., Snyder, K. E., Adelson, J. L., & Budge, S. L. (2022). Posttraumatic stress in the trans community: The roles of anti-transgender bias, non-affirmation, and internalized transphobia. *Psychology of Sexual Orientation and Gender Diversity, 9*, 410–421.

Turban et al., 2021, among others). As outlined in the present report, surveys which record the replies of anyone who wants to respond are not systematic, do not yield reliable facts or data, and do not appear at all on the standard pyramid of evidence in clinical science. (See section II.A *Pyramid of Evidence.*)

109. Dr. Budge expressed opinions outside her expertise. Dr. Budge indicated no educational background or training in neuroscience or sexually related offenses and their prevention, but expressed (misinformed) opinions on the neuroanatomic basis of gender dysphoria (Budge decl ¶20); the associations of gender identity with the propensity to commit sex offenses (Budge decl ¶67), a field of forensic psychology called *risk assessment;* and the association of gender identity with paraphilic behavior (Budge decl ¶68), identified in the DSM-5-TR as *Exhibitionistic Disorder* and *Voyeuristic Disorder.*

110. Dr. Budge claimed gender identity to be an "internal or psychological sense" (Budge ¶19). Such a claim is scientifically invalid. To be scientifically valid, a construct must be each of objective, testable, and falsifiable. (See Section III.A *Subjective feelings.*)

111. Dr. Budge referred to gender identity as "a well-established concept in psychology and medicine" (Budge ¶19). The claim does not reflect the status of the field. Indeed, the DSM-5-TR indicates the very opposite: "The area of sex and gender is highly controversial and has led to a proliferation of terms who meanings vary over time and within and between disciplines" (APA, 2022 at 511).

112. Consistent with the scientific method, sex is defined in science solely in terms of its objective, verifiable, biological features. Dr. Budge, however, adds *gender identity* to those biological features that define sex:

> Every individual's sex is multifaceted and composed of many distinct biologically influenced characteristics, including, but not limited to, chromosomal makeup,

> hormones, internal and external reproductive organs, secondary sex characteristics, *and gender identity.* (Budge decl ¶22, italics added)

Section IV.A of the present report quotes the definitions of sex from the Endocrine Society, the American Academy of Pediatrics, and the American Psychiatric Association, all of which explicitly define sex solely in terms of biological features, excluding gender identity. Dr. Budge's report repeatedly cites these same sources regarding other issues, but Dr. Budge provides no source or other documentation supporting her addition of gender identity to the definition of sex. The definition of sex as a purely biological feature without gender identity is what appears in the DSM-5-TR:[5]

> Sex refers to factors attributable to an individual's reproductive organs and XX or XY chromosomal complement" (American Psychiatric Association, 2022, p. 19).
>
> This chapter employs constructs and terms as they are widely used by clinicians from various disciplines with specialization in treating gender dysphoria. In this chapter, *sex* and *sexual* refer to the biological indicators of male and female (understood in the context of reproductive capacity), such as in sex chromosomes, gonads, sex hormones, and nonambiguous internal and external genitalia" (American Psychiatric Association, 2022, p. 511, italics in original).

The same is true of the definition from the World Health Organization:

> Sex refers to the biological characteristics that define humans as female or male (WHO, undated, available from https://www.who.int/health-topics/sexual-health#tab=tab_2)

and the Institute of Medicine:

> *Sex* is understood here as a biological construct, referring to the genetic, hormonal, anatomical, and physiological characteristics on whose basis one is labeled at birth as either male or female (Institute of Medicine, 2011 at 25, italics in original)
>
> Generally understood as a biological construct, referring to the genetic, hormonal, anatomical, and physiological characteristics of males or females. Sex is typically assigned at birth based on the appearance of the external genitalia. Only when this appearance is ambiguous are other indicators of sex assessed to determine the most appropriate sex assignment. (2) All phenomena associated with erotic arousal or

[5] Dr. Budge report cites the DSM-5-TR, but the reference section of her report includes only the DSM-5.

> sensual stimulation of the genitalia or other erogenous zones, usually (but not always) leading to orgasm (Institute of Medicine, 2011, at 319)

as well as the Endocrine Society Clinical Practice Guideline for gender dysphoric/gender incongruent persons:

> *Sex:* This refers to attributes that characterize biological maleness or femaleness. The best known attributes include the sex-determining genes, the sex chromosomes, the H-Y antigen, the gonads, sex hormones, internal and external genitalia, and secondary sex characteristics (Hembree, 2017).

113. Dr. Budge also adds the dramatic claim that:

> Where there is a divergence between these characteristics, gender identity is the most important and determinative factor (Budge decl ¶ 22).

Her report provides no citation to justify that claim nor the criteria by which such a claim might be distinguished from mere rhetoric.

114. Dr. Budge's definitions and descriptions of gender identity are mutually inconsistent and contradictory. Her report claims on the one hand that gender dysphoria "*is* the psychiatric diagnosis for the distress associated with gender incongruence" (Budge decl ¶25), and yet that gender "incongruence can *cause* serious emotional distress" (Budge decl ¶24). It is not possible in science for something to be its own cause.

115. The process of diagnosing Gender Dysphoria provided by Dr. Budge (¶29) is sorely incomplete, leaving out one of its most pivotal components, called *differential diagnosis.* That is, Dr. Budge described only part of the diagnostic process: She included the search for symptoms of gender dysphoria, but omitted entirely any search for any other symptoms that would better explain the complete clinical profile. This error in clinical assessment is called the *confirmation bias.* For example, as already outlined in the present report, unstable identity is a symptom of Borderline Personality Disorder (section VII.C). A clinical assessment including only gender identity issues, such as Dr. Budge describes, would mistakenly identify Gender

Dysphoria, whereas a proper assessment must simultaneously rule-out all other possible explanations of the client/patient's distress, of which gender dysphoria represents only one possibility.

116. In ¶20, Dr. Budge claimed that "Neuroimaging data demonstrate strong evidence to indicate biological factors related to transgender identity." As noted above, Dr. Budge is not an expert in neuroscience, and she misinterprets the neuroimaging evidence. As detailed in the present report (section VII.D. *Neuroimaging*), the neuroimaging data demonstrate that brain features are associated with sexual orientation rather than with gender identity; studies that seemed to associate brain structure with gender identity did so because they confounded gender identity with sexual orientation; and other neuroscientists studying this topic have indicated my publishing exactly this observation to be correct. All four of the studies cited by Dr. Budge presenting neuroimaging data repeat the same error, confounding gender identity with sexual orientation:

- Carrillo et al. (2010) compared *homosexual* transsexuals (also called "early-onset" transsexuals) with *heterosexual* cissexuals.
- Nota et al. (2017) compared children and adolescents with early onset gender dysphoria (who mostly grow up into either *homosexual* transsexuals or *homosexual* cissexuals) with non-dysphoric youth (who mostly grow up into *heterosexual* cissexuals).
- Spizzirri et al. (2018) compared *homosexual* transsexuals with *heterosexual* cissexuals. The differences found between them are better attributable to sexual orientation than to gender identity (as per the 'principle of parsimony' in science).
- Berglund et al. (2008) did compare *heterosexual* transsexuals with *heterosexual* cissexuals. In theory, such a design could be consistent with a difference attributable to gender identity distinct from sexual orientation; however, because only male-to-female transsexuals were tested (and not female-to-male transsexuals), and because these same researchers have also showed cissexual lesbians to have the corresponding neurological feature,[6] the results are necessarily ambiguous.

[6] Berglund et al., 2006.

117. Dr. Budge provided the unsourced claim that the WPATH standards are "based on systematic review of the evidence-based research on transgender health" (¶30). The falsity of her assertion is readily documented. That review was published as Baker (2021), and its contents are included in the table below, together with the reviews provided by the other organizations doing so. As is apparent, WPATH did not include, nor did it attempt to include, any studies regarding safety at all.

Table 1. Cohort studies of effectiveness and safety of puberty-blockers and cross-sex hormones in minors.

	Finland (2019)	NICE (2020a,b)	Sweden (2022)	E.S. (2017)	AAP (2018)	Baker (2021) (WPATH)
Effectiveness GnRHa	Costa et al, 2015 de Vries et al, 2011	Costa et al, 2015 de Vries et al, 2011	Becker-Hebly et al, 2020 Carmichael et al, 2021 Costa et al, 2015 *** Hisle-Gorman et al, 2021			de Vries et al, 2011
Effectiveness Sex Hormones	de Vries et al, 2014*	Achille et al, 2020 Allen et al, 2019 Kaltiala et al, 2020 Lopez de Lara et al, 2020	*** *** Cantu et al, 2020* de Vries et al, 2014* ***			Achille et al, 2020 de Vries et al, 2014* López de Lara et al, 2020
Safety (Bones) GnRHa		Brik et al, 2020 Joseph et al, 2019 Khatchadourian et al, 2014 Klink et al, 2015 Vlot et al, 2017	Joseph et al, 2019 Klink et al, 2015 Navabi et al, 2021 Schagen et al, 2020 Stoffers et al, 2019 Vlot et al, 2017 Lee et al, 2020 van der Loos et al, 2021			
Safety (Bloods) GnRHa		Klaver et al, 2020 Schagen et al, 2016	Klaver et al, 2018 Klaver et al, 2020 Nokoff et al, 2020 Perl et al, 2020 Schagen et al, 2016 Schulmeister et al, 2021			
Safety (Bones) Sex Hormones	****	Khatchadourian et al, 2014 Klaver et al, 2020 Klink et al, 2015 Kuper et al, 2020 Stoffers et al, 2019 Vlot et al, 2017		Klink et al, 2015		
Safety (Bloods) Sex Hormones			Jarin, 2017 Mullins et al, 2021 Tack et al, 2016			

*Included both puberty-blockers and cross-sex hormones.
**The Endocrine Society review included bone/skeletal health, but did not explicate whether the scope included minors.
***Sweden explicitly excluded due to high risk of bias: Achille, *et al.,* (2020), Allen, *et al.* (2019), de Vries, *et al.,* (2011), and López de Lara, *et al.,* (2020).
****The Finnish review adopted the Endocrine Society review, but did not indicate whether minors were included.

118. Dr. Budge repeatedly claimed, without evidence, that the WPATH Standards of Care are widely accepted protocols for the treatment of gender dysphoria" (Budge decl ¶¶15, 30) and noted that "WPATH has published several iterations of the SOC since 1979" (Budge decl ¶31). Missing from Dr. Budge's declaration was that the WPATH standards have been dramatically lowered with each successive version and that findings suggesting success when using the prior versions do not pertain to the current version.

119. For reference, WPATH released version 6 of its "Standards of Care" in 2001, version 7 in 2012, and version 8 in 2022. The criteria of WPATH version 6 included: a DSM diagnosis, indications that hormones will be used responsibly, three months of either psychotherapy or a "real life test" of living as the new sex, increasing consolidation of gender identity during that period, progress in solving life problems, and (for genital surgery) two clinical approval letters, one of which must be a comprehensive psychosocial assessment. These criteria of version 6 were the subject of a systematic assessment, comparing them against the research evidence, in preparation for the development of version 7 of WPATH's standards (De Cuypere & Vercrusse, 2009). The review included an exhaustive search of the research evidence:

> For follow-up studies between 1991 and the present we searched Medline and Embase using the following keywords: "transsexual, gender identity disorder, sex reassignment surgery, follow-up study, regret, standards of care, eligibility criteria." We made a selection of these follow-up studies, retaining only those papers that contained information "on whom and under what circumstances SRS is effective." (De Cuypere & Vercrusse, 2009, p. 195)

The results were peer-reviewed, published in the *International Journal of Transgenderism*, included the conclusion that "inadequate diagnosis and major psychiatric co-morbidity are the major indicators for regret" (De Cuypere & Vercrusse, 2009, p. 197), and reiterated the consensus that "Most authors agree that a careful differential diagnosis and screening for co-morbidity is imperative for good clinical practice" (De Cuypere & Vercrusse, 2009, p. 200).

120. In contrast with that assessment, WPATH version 7 did the opposite. Rather than follow the evidence base in the research literature, version 7 *lowered* the criteria that had been preventing regretful cases and instead adopted the "informed consent model." Comprehensive psychosocial assessment was reduced to an assessment demonstrating only the capacity to provide informed consent. The requirement for psychotherapy or real life test time was reduced to the requirement that any significant mental health concerns (left undefined) be reasonably well-controlled (left undefined).

121. The lowering of criteria with version 7 was not based on any research findings indicating methods yielding superior outcomes, but justified with changes in ideology. The ideological shift departed from evidence-based care focused on medical safety to what was described as a rights-based, informed-consent model. Instead of assessing patients' needs and directing them towards the corresponding treatment(s), the patients' requests were assumed to be correct and fulfilled whenever medically possible.

122. Importantly, whereas version 6 included:

> The SOC are intended to provide flexible direction for the treatment of persons with gender identity disorders. When eligibility requirements are stated they are meant to be *minimum requirements.* (WPATH, 2002, pp. 1–2, italics added)

version 7 instead included:

> As for all previous versions of the SOC, the criteria put forth in this document for hormone therapy and surgical treatments for gender dysphoria are clinical guidelines; individual health professionals and programs may modify them. (Coleman, 2012, p. 2)

This contrast is remarkable for two reasons. First, whereas version 6 permitted clinicians only to move criteria up, version 7 removed the words "minimum requirements," thus permitting clinicians to move criteria up *or down.* Second, version 7 added the words "As for all previous versions," which is a demonstrable falsehood. The change to this single passage, embedded in

introductory text, allowing clinicians to change any criterion, removes any claim the document might have to being called "standards" at all.

123. A systematic assessment of version 7 was conducted in the lead-up to WPATH's release of version 8 (Dahlen et al., 2021). The evaluation followed a standardized assessment method, called the Appraisal of Guidelines for Research and Evaluation ("AGREE II") method. Utilizing community stakeholders to set domain priorities for the evaluation, the assessment concluded that the guidelines regarding HIV and its prevention were of high quality, but that "[t]ransition-related CPGs tended to lack methodological rigour and rely on patchier, lower-quality primary research" (Dahlen et al., 2021, p. 6). The WPATH guidelines received unanimous ratings of *"Do not recommend"* (Dahlen et al., 2021, p. 7).

124. WPATH's version 8 also included the language again allowing clinicians to change any criterion up or down:

> The SOC-8 guidelines are intended to be flexible to meet the diverse health care needs of TGD people globally….As in all previous versions of the SOC, the criteria put forth in this document for gender-affirming interventions are clinical guidelines; individual health care professionals and programs may modify them in consultation with the TGD person. (Coleman, 2022, p. S6)

125. Even before the removal of safeguards from the WPATH SOCs, clinics providing medical transition services were already indicating that WPATH guidelines provided insufficient protection. A 1995 survey of such centers found 74% of clinics did not adhere to WPATH standards, instead applying *more conservative* standards (Petersen & Dickey, 1995).

126. In her list naming professional associations expressing support for WPATH or Endocrine Society guidelines, Dr. Budge included that these were "organizations *within the United States"* (Budge decl ¶31). Dr. Budge did not include, however, that these same guidelines are repeatedly rejected *outside* the United States, or that the public health care systems outside the United States have conducted systematic reviews of the safety and effectiveness

research, whereas the American professional associations have not. By relating the situation only within the United States, Dr. Budge falsely suggests a consensus instead of the complete situation wherein the United States increasingly represents an outlier. Notably, the stark contrast between the public health care systems internationally and the medical professional associations in the United States correspond to their political purposes: The mandate of public health care systems is to protect the public, whereas the role of medical professional associations is to protect the medical professionals.

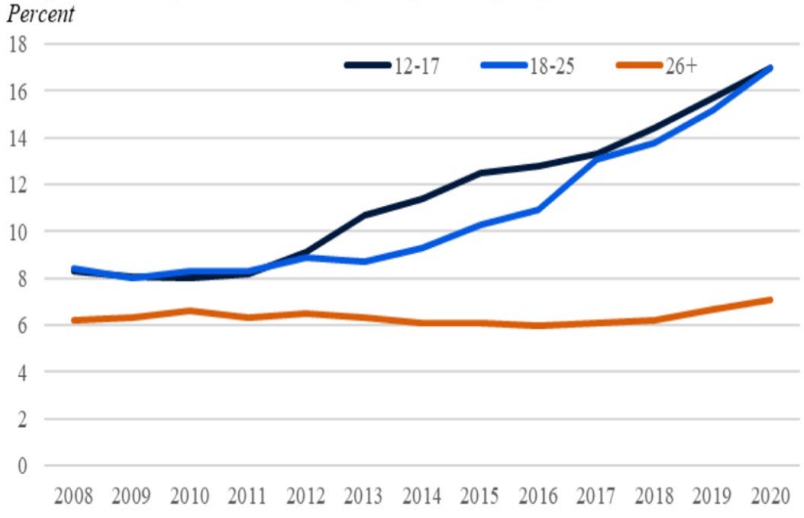
127. The remainder of Dr. Budge's declaration consists of her providing one of the several possible interpretations of (some of the) correlations reported in in the research literature. Specifically, Dr. Budge cites correlations between gender dysphoria and mental health issues, repeatedly inferring the causal conclusion that the mental health issues are caused by transphobia and failures to support transition. As noted already in the present report, correlations are ambiguous and open to interpretation: They can be explained in more than one way. Dr. Budge does not consider, mention, or provide any evidence to rule out any of the other potential explanations of the correlations among these constructs.

128. Missing entirely from Dr Budge's interpretation of the correlations is that high rates of mental distress are not unique to gender dysphoric minors. Signs of distress are increasing throughout the current generation of youth, especially adolescent females, and these indicators all began their exponential increases at the same time—upon the introduction of social media. The great increases in each of gender dysphoria, mental illness, and suicide and suicidality, all are primarily affecting the same demographic group—adolescent females, the same demographic most vulnerable to negative social influence on body image and self-perception.

129. U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) data

show the rapid rise in depressive episodes, more than doubling, accompanying the social media age, and mostly affecting youth under 25.

Figure 1. Percent of the population with a major depressive episode in the past year by age, 2008-2020



Source: Substance Abuse and Mental Healthh Services Administration

Available from https://www.whitehouse.gov/cea/written-materials/2022/05/31/reducing-the-economic-burden-of-unmet-mental-health-needs/

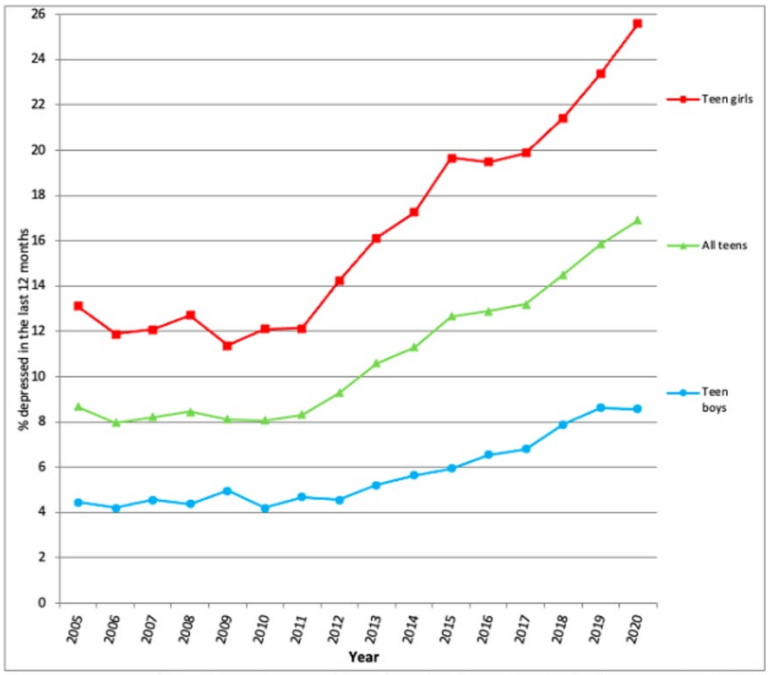
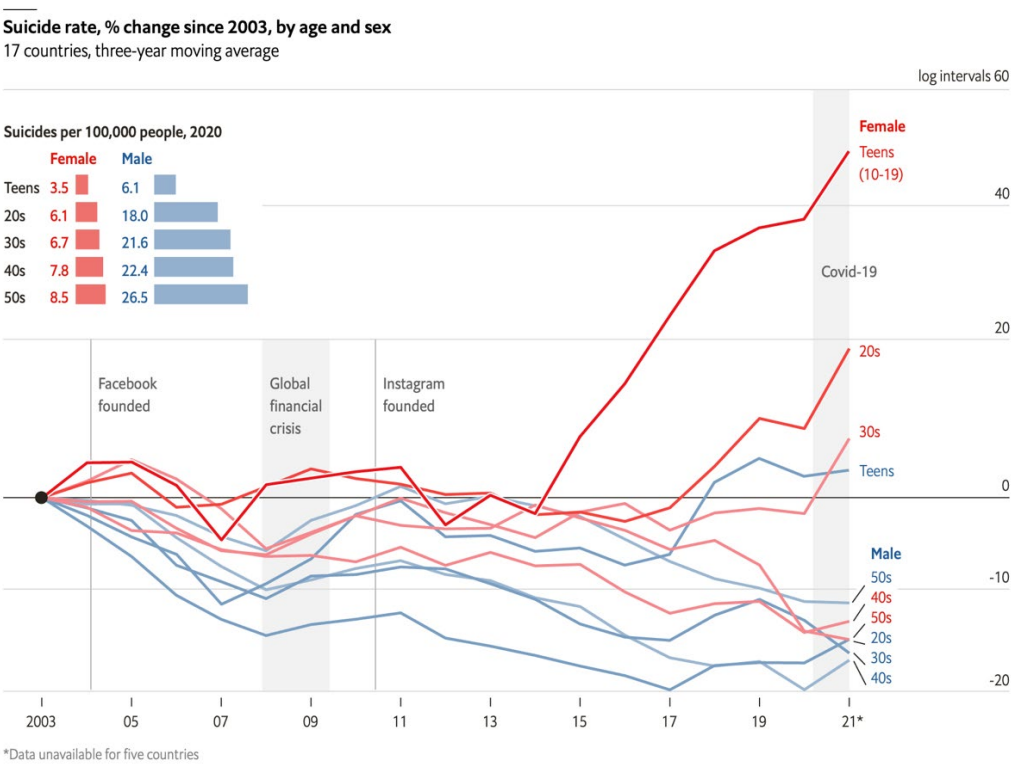


Figure 2: Percent of U.S. 12- to 17-year-olds with major depression in the last year, 2005-2020
Source: National Study of Drug Use and Health. NOTE: Depression assessed using DSM criteria.

Twenge, J. Institute for Family Studies. Available from https://ifstudies.org/blog/how-much-is-social-media-to-blame-for-teens-declining-mental-health

The indicators of increasing distress include also suicide and suicidality: In 2020, the U.S. Centers for Disease Control (CDC) reported "[A]pproximately 18.8 percent of high school students reported suicidal ideation in the past year, and 8.9 percent of high school students reported a suicide attempt in the past year" (Ivey-Stephenson et al., 2020). The increases include rates of suicide and suicidality with the greatest increases among adolescent females.

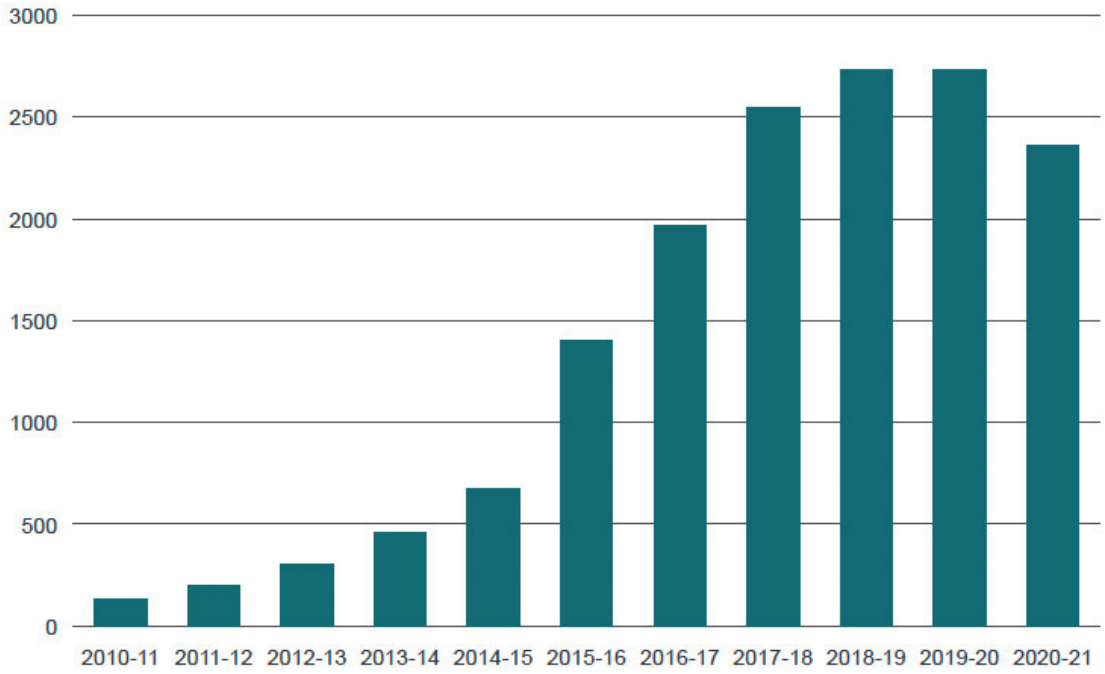


Available from https://www.economist.com/graphic-detail/2023/05/03/suicide-rates-for-girls-are-rising-are-smartphones-to-blame

SAMHSA reported "[F]rom 1999 through 2018, the suicide death rate doubled for females aged 15 to 19 and 20 to 24. For youth aged 10 to 14, the suicide death rate more than tripled from 2001 to 2018" (SAMHSA, 2020). Peer reviewed research published in the *American Journal of Public Health* reported rates of high school students reporting purposefully hurting themselves without wanting to die over the past 12 months ranged from 6.4 to 14.8 percent for males and 17.7 to 30.8 percent for females in 2015 (Monto et al., 2018).

130. The timeline of these large, sudden increases in multiple indicators of psychological distress coincides with the large, sudden increase in cases of youth expressing gender dysphoria, again, primarily among adolescent females:

Figure 2: Referrals to GIDS, 2010-11 to 2020-21



Available from Cass (2022).

The correlations among mental health, sex, gender dysphoria, and treatment are potentially explained as individual facets of mental health brought on by social media. The treatments associated with improvement are those that include psychotherapy. Dr. Budge's explanation for these correlations is not an explanation at all: It leaves the conspicuous simultaneity of these phenomena, the consistent demographic repeatedly the most affected, and the ubiquity of social perception and attachment needs across them all as merely coincidental.

131. Adolescents use social media for social comparison and feedback, and social media use is associated with decreased mental health (Nesi & Prinstein, 2015). Social media exposure to ideals of beauty and appearance reduces body image, especially in adolescent females (Kleeman et al., 2018). The demographic most vulnerable to social comparison use social media as the basis of their self-image (Fioravanti et al., 2022), especially those with co-morbid mental illnesses that interfere with social functioning. They are disproportionately influenced negatively

by social media (Maheux et al., 2022). The mental illness profiles shown by this group are unlike those shown by better- and longer-established types of gender dysphoria by their overrepresentation of disorders such as Autism Spectrum Disorder, which reflects problems in social functioning. The mental illness profile associated with sexual minority stress is anxiety and depression: Sexual minority stress does not cause Autism Spectrum Disorder, but it can increase vulnerability to social identity development. Although these data are still only correlational, they potentially suggest that supporting the belief of these youth is to reinforce their belief that they are not real women and men because they do fit the exaggerated and perfected social images of femaleness and maleness now flooding their virtual social environments.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 20 Aug 2023.

James M. Cantor, Ph.D.

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List of Appendices

Appendix 1

Curriculum Vita

Appendix 2

Cantor, J. M. (2020). Transgender and gender diverse children and adolescents: Fact-checking of AAP policy. *Journal of Sex & Marital Therapy, 46,* 307–313. doi: 10.1080/0092623X.2019.1698481

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EDUCATION

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Psychology • McGill University • Montréal, Canada

Master of Arts Sep., 1990–Jan., 1992
Psychology • Boston University • Boston, MA

Bachelor of Science Sep. 1984–Aug., 1988
Interdisciplinary Science • Rensselaer Polytechnic Institute • Troy, NY
Concentrations: Computer science, mathematics, physics

EMPLOYMENT HISTORY

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Centre for Addiction and Mental Health • Toronto, Canada

Senior Scientist Jan., 2012–May, 2018
Complex Mental Illness Program
Centre for Addiction and Mental Health • Toronto, Canada

Head of Research Nov., 2010–Apr. 2014
Sexual Behaviours Clinic
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Psychologist May, 2004–Dec., 2011
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ACADEMIC APPOINTMENTS

Associate Professor Jul., 2010–May, 2019
Department of Psychiatry
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Associate Faculty (Hon) Oct., 2017–Dec., 2017
School of Behavioural, Cognitive & Social Science
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Assistant Professor Jun., 2005–Jun., 2010
Department of Psychiatry
University of Toronto Faculty of Medicine • Toronto, Canada

Adjunct Faculty Sep., 2004–Jun., 2010
Clinical Psychology Residency Program
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PUBLICATIONS

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PUBLICATIONS

LETTERS AND COMMENTARIES

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4. Barbaree, H. E., & Cantor, J. M. (2009). *Sexual Abuse: A Journal of Research and Treatment* performance indicators for 2007 [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 21,* 3–5.
5. Zucker, K. J., & Cantor, J. M. (2009). Cruising: Impact factor data [Editorial]. *Archives of Sexual Research, 38,* 878–882.
6. Barbaree, H. E., & Cantor, J. M. (2008). Performance indicators for *Sexual Abuse: A Journal of Research and Treatment* [Editorial]. *Sexual Abuse: A Journal of Research and Treatment, 20,* 3–4.
7. Zucker, K. J., & Cantor, J. M. (2008). The *Archives* in the era of online first ahead of print[Editorial]. *Archives of Sexual Behavior, 37,* 512–516.
8. Zucker, K. J., & Cantor, J. M. (2006). The impact factor: The *Archives* breaks from the pack [Editorial]. *Archives of Sexual Behavior, 35,* 7–9.
9. Zucker, K. J., & Cantor, J. M. (2005). The impact factor: “Goin’ up” [Editorial]. *Archives of Sexual Behavior, 34,* 7–9.
10. Zucker, K., & Cantor, J. M. (2003). The numbers game: The impact factor and all that jazz [Editorial]. *Archives of Sexual Behavior, 32,* 3–5.

FUNDING HISTORY

Principal Investigators:	Doug VanderLaan, Meng-Chuan Lai
Co-Investigators:	James M. Cantor, Megha Mallar Chakravarty, Nancy Lobaugh, M. Palmert, M. Skorska
Title:	*Brain function and connectomics following sex hormone treatment in adolescents experience gender dysphoria*
Agency:	Canadian Institutes of Health Research (CIHR), Behavioural Sciences-B-2
Funds:	$650,250 / 5 years (July, 2018)
Principal Investigator:	Michael C. Seto
Co-Investigators:	Martin Lalumière , James M. Cantor
Title:	*Are connectivity differences unique to pedophilia?*
Agency:	University Medical Research Fund, Royal Ottawa Hospital
Funds:	$50,000 / 1 year (January, 2018)
Principal Investigator:	Lori Brotto
Co-Investigators:	Anthony Bogaert, James M. Cantor, Gerulf Rieger
Title:	*Investigations into the neural underpinnings and biological correlates of asexuality*
Agency:	Natural Sciences and Engineering Research Council (NSERC), Discovery Grants Program
Funds:	$195,000 / 5 years (April, 2017)
Principal Investigator:	Doug VanderLaan
Co-Investigators:	Jerald Bain, James M. Cantor, Megha Mallar Chakravarty, Sofia Chavez, Nancy Lobaugh, and Kenneth J. Zucker
Title:	*Effects of sex hormone treatment on brain development: A magnetic resonance imaging study of adolescents with gender dysphoria*
Agency:	Canadian Institutes of Health Research (CIHR), Transitional Open Grant Program
Funds:	$952,955 / 5 years (September, 2015)
Principal Investigator:	James M. Cantor
Co-Investigators:	Howard E. Barbaree, Ray Blanchard, Robert Dickey, Todd A. Girard, Phillip E. Klassen, and David J. Mikulis
Title:	*Neuroanatomic features specific to pedophilia*
Agency:	Canadian Institutes of Health Research (CIHR)
Funds:	$1,071,920 / 5 years (October, 2008)
Principal Investigator:	James M. Cantor
Title:	*A preliminary study of fMRI as a diagnostic test of pedophilia*
Agency:	Dean of Medicine New Faculty Grant Competition, Univ. of Toronto
Funds:	$10,000 (July, 2008)

Principal Investigator:	James M. Cantor
Co-Investigator:	Ray Blanchard
Title:	*Morphological and neuropsychological correlates of pedophilia*
Agency:	Canadian Institutes of Health Research (CIHR)
Funds:	$196,902 / 3 years (April, 2006)

KEYNOTE AND INVITED ADDRESSES

1. Cantor, J. M. (2022, December 5). The science of gender dysphoria and transgenderism. Lund University, Latvia. https://files.fm/f/4bzznufvb
2. Cantor, J. M. (2021, September 28). *No topic too tough for this expert panel: A year in review.* Plenary Session for the 40th Annual Research and Treatment Conference, Association for the Treatment of Sexual Abusers.
3. Cantor, J. M. (2019, May 1). *Introduction and Q&A for 'I, Pedophile.'* StopSO 2nd Annual Conference, London, UK.
4. Cantor, J. M. (2018, August 29). *Neurobiology of pedophilia or paraphilia? Towards a 'Grand Unified Theory' of sexual interests.* Keynote address to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.
5. Cantor, J. M. (2018, August 29). *Pedophilia and the brain: Three questions asked and answered.* Preconference training presented to the International Association for the Treatment of Sexual Offenders, Vilnius, Lithuania.
6. Cantor, J. M. (2018, April 13). *The responses to* I, Pedophile *from We, the people.* Keynote address to the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.
7. Cantor, J. M. (2018, April 11). *Studying atypical sexualities: From vanilla to* I, Pedophile. Full day workshop at the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, Minnesota.
8. Cantor, J. M. (2018, January 20). *How much sex is enough for a happy life?* Invited lecture to the University of Toronto Division of Urology Men's Health Summit, Toronto, Canada.
9. Cantor, J. M. (2017, November 2). Pedophilia as a phenomenon of the brain: Update of evidence and the public response. Invited presentation to the 7th annual SBC education event, Centre for Addiction and Mental Health, Toronto, Canada.
10. Cantor, J. M. (2017, June 9). Pedophilia being in the brain: The evidence and the public's reaction. Invited presentation to *SEXposium at the ROM: The science of love and sex,* Toronto, Canada.
11. Cantor, J. M., & Campea, M. (2017, April 20). *"I, Pedophile" showing and discussion.* Invited presentation to the 42nd annual meeting of the Society for Sex Therapy and Research, Montréal, Canada.
12. Cantor, J. M. (2017, March 1). *Functional and structural neuroimaging of pedophilia: Consistencies across methods and modalities.* Invited lecture to the Brain Imaging Centre, Royal Ottawa Hospital, Ottawa, Canada.
13. Cantor, J. M. (2017, January 26). *Pedophilia being in the brain: The evidence and the public reaction.* Inaugural keynote address to the University of Toronto Sexuality Interest Network, Toronto, Ontario, Canada.
14. Cantor, J. M. (2016, October 14). *Discussion of CBC's "I, Pedophile."* Office of the Children's Lawyer Educational Session, Toronto, Ontario, Canada.
15. Cantor, J. M. (2016, September 15). *Evaluating the risk to reoffend: What we know and what we don't.* Invited lecture to the Association of Ontario Judges, Ontario Court of Justice Annual Family Law Program, Blue Mountains, Ontario, Canada. [Private link only: https://vimeo.com/239131108/3387c80652]
16. Cantor, J. M. (2016, April 8). *Pedophilia and the brain: Conclusions from the second*

generation of research. Invited lecture at the 10th annual Risk and Recovery Forensic Conference, Hamilton, Ontario.

17. Cantor, J. M. (2016, April 7). *Hypersexuality without the hyperbole.* Keynote address to the 10th annual Risk and Recovery Forensic Conference, Hamilton, Ontario.
18. Cantor, J. M. (2015, November). *No one asks to be sexually attracted to children: Living in Daniel's World.* Grand Rounds, Centre for Addiction and Mental Health. Toronto, Canada.
19. Cantor, J. M. (2015, August). *Hypersexuality: Getting past whether "it" is or "it" isn't.* Invited address at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
20. Cantor, J. M. (2015, July). *A unified theory of typical and atypical sexual interest in men: Paraphilia, hypersexuality, asexuality, and vanilla as outcomes of a single, dual opponent process.* Invited presentation to the 2015 Puzzles of Sexual Orientation conference, Lethbridge, AL, Canada.
21. Cantor, J. M. (2015, June). *Hypersexuality.* Keynote Address to the Ontario Problem Gambling Provincial Forum. Toronto, Canada.
22. Cantor, J. M. (2015, May). *Assessment of pedophilia: Past, present, future.* Keynote Address to the International Symposium on Neural Mechanisms Underlying Pedophilia and Child Sexual Abuse (NeMUP). Berlin, Germany.
23. Cantor, J. M. (2015, March). *Prevention of sexual abuse by tackling the biggest stigma of them all: Making sex therapy available to pedophiles.* Keynote address to the 40th annual meeting of the Society for Sex Therapy and Research, Boston, MA.
24. Cantor, J. M. (2015, March. *Pedophilia: Predisposition or perversion?* Panel discussion at Columbia University School of Journalism. New York, NY.
25. Cantor, J. M. (2015, February). *Hypersexuality.* Research Day Grand Rounds presentation to Ontario Shores Centre for Mental Health Sciences, Whitby, Ontario, Canada.
26. Cantor, J. M. (2015, January). *Brain research and pedophilia: What it means for assessment, research, and policy.* Keynote address to the inaugural meeting of the Netherlands Association for the Treatment of Sexual Abusers, Utrecht, Netherlands.
27. Cantor, J. M. (2014, December). *Understanding pedophilia and the brain: Implications for safety and society.* Keynote address for The Jewish Community Confronts Violence and Abuse: Crisis Centre for Religious Women, Jerusalem, Israel.
28. Cantor, J. M. (2014, October). *Understanding pedophilia & the brain.* Invited full-day workshop for the Sex Offender Assessment Board of Pennsylvania, Harrisburg, PA.
29. Cantor, J. M. (2014, September). *Understanding neuroimaging of pedophilia: Current status and implications.* Invited lecture presented to the Mental Health and Addition Rounds, St. Joseph's Healthcare, Hamilton, Ontario, Canada.
30. Cantor, J. M. (2014, June). *An evening with Dr. James Cantor.* Invited lecture presented to the Ontario Medical Association, District 11 Doctors' Lounge Program, Toronto, Ontario, Canada.
31. Cantor, J. M. (2014, April). *Pedophilia and the brain.* Invited lecture presented to the University of Toronto Medical Students lunchtime lecture. Toronto, Ontario, Canada.
32. Cantor, J. M. (2014, February). *Pedophilia and the brain: Recap and update.* Workshop presented at the 2014 annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Cle Elum, WA.

33. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, February). *Functional connectivity in pedophilia.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario, Canada.
34. Cantor, J. M. (2013, November). *Understanding pedophilia and the brain: The basics, the current status, and their implications.* Invited lecture to the Forensic Psychology Research Centre, Carleton University, Ottawa, Canada.
35. Cantor, J. M. (2013, November). *Mistaking puberty, mistaking hebephilia.* Keynote address presented to the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
36. Cantor, J. M. (2013, October). *Understanding pedophilia and the brain: A recap and update.* Invited workshop presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
37. Cantor, J. M. (2013, October). *Compulsive-hyper-sex-addiction: I don't care what we all it, what can we* do*?* Invited address presented to the Board of Examiners of Sex Therapists and Counselors of Ontario, Toronto, Ontario, Canada.
38. Cantor, J. M. (2013, September). *Neuroimaging of pedophilia: Current status and implications.* McGill University Health Centre, Department of Psychiatry Grand Rounds presentation, Montréal, Québec, Canada.
39. Cantor, J. M. (2013, April). *Understanding pedophilia and the brain.* Invited workshop presented at the 2013 meeting of the Minnesota Association for the Treatment of Sexual Abusers, Minneapolis, MN.
40. Cantor, J. M. (2013, April). *The neurobiology of pedophilia and its implications for assessment, treatment, and public policy.* Invited lecture at the 38th annual meeting of the Society for Sex Therapy and Research, Baltimore, MD.
41. Cantor, J. M. (2013, April). *Sex offenders: Relating research to policy.* Invited roundtable presentation at the annual meeting of the Academy of Criminal Justice Sciences, Dallas, TX.
42. Cantor, J. M. (2013, March). *Pedophilia and brain research: From the basics to the state-of-the-art.* Invited workshop presented to the annual meeting of the Forensic Mental Health Association of California, Monterey, CA.
43. Cantor, J. M. (2013, January). *Pedophilia and child molestation.* Invited lecture presented to the Canadian Border Services Agency, Toronto, Ontario, Canada.
44. Cantor, J. M. (2012, November). *Understanding pedophilia and sexual offenders against children: Neuroimaging and its implications for public safety.* Invited guest lecture to University of New Mexico School of Medicine Health Sciences Center, Albuquerque, NM.
45. Cantor, J. M. (2012, November). *Pedophilia and brain research.* Invited guest lecture to the annual meeting of the Circles of Support and Accountability, Toronto, Ontario, Canada.
46. Cantor, J. M. (2012, January). *Current findings on pedophilia brain research.* Invited workshop at the San Diego International Conference on Child and Family Maltreatment, San Diego, CA.
47. Cantor, J. M. (2012, January). *Pedophilia and the risk to re-offend.* Invited lecture to the Ontario Court of Justice Judicial Development Institute, Toronto, Ontario, Canada.
48. Cantor, J. M. (2011, November). *Pedophilia and the brain: What it means for assessment, treatment, and policy.* Plenary Lecture presented at the Association for the Treatment of Sexual Abusers, Toronto, Ontario, Canada.

49. Cantor, J. M. (2011, July). *Towards understanding contradictory findings in the neuroimaging of pedophilic men.* Keynote address to 7th annual conference on Research in Forensic Psychiatry, Regensberg, Germany.
50. Cantor, J. M. (2011, March). *Understanding sexual offending and the brain: Brain basics to the state of the art.* Workshop presented at the winter conference of the Oregon Association for the Treatment of Sexual Abusers, Oregon City, OR.
51. Cantor, J. M. (2010, October). *Manuscript publishing for students.* Workshop presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.
52. Cantor, J. M. (2010, August). *Is sexual orientation a paraphilia?* Invited lecture at the International Behavioral Development Symposium, Lethbridge, Alberta, Canada.
53. Cantor, J. M. (2010, March). *Understanding sexual offending and the brain: From the basics to the state of the art.* Workshop presented at the annual meeting of the Washington State Association for the Treatment of Sexual Abusers, Blaine, WA.
54. Cantor, J. M. (2009, January). *Brain structure and function of pedophilia men.* Neuropsychiatry Rounds, Toronto Western Hospital, Toronto, Ontario.
55. Cantor, J. M. (2008, April). *Is pedophilia caused by brain dysfunction?* Invited address to the University-wide Science Day Lecture Series, SUNY Oswego, Oswego, NY.
56. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, September). *MRIs of pedophilic men.* Invited presentation at the 25th annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
57. Cantor, J. M., Blanchard, R., & Christensen, B. K. (2003, March). *Findings in and implications of neuropsychology and epidemiology of pedophilia.* Invited lecture at the 28th annual meeting of the Society for Sex Therapy and Research, Miami.
58. Cantor, J. M., Christensen, B. K., Klassen, P. E., Dickey, R., & Blanchard, R. (2001, July). *Neuropsychological functioning in pedophiles.* Invited lecture presented at the 27th annual meeting of the International Academy of Sex Research, Bromont, Canada.
59. Cantor, J. M., Blanchard, R., Christensen, B., Klassen, P., & Dickey, R. (2001, February). *First glance at IQ, memory functioning and handedness in sex offenders.* Lecture presented at the Forensic Lecture Series, Centre for Addiction and Mental Health, Toronto, Ontario, Canada.
60. Cantor, J. M. (1999, November). *Reversal of SSRI-induced male sexual dysfunction: Suggestions from an animal model.* Grand Rounds presentation at the Allan Memorial Institute, Royal Victoria Hospital, Montréal, Canada.

PAPER PRESENTATIONS AND SYMPOSIA

1. Cantor, J. M. (2020, April). "I'd rather have a trans kid than a dead kid": Critical assessment of reported rates of suicidality in trans kids. *Paper presented at the annual meeting of the Society for the Sex Therapy and Research.* Online in lieu of in person meeting.
2. Stephens, S., Lalumière, M., Seto, M. C., & Cantor, J. M. (2017, October). *The relationship between sexual responsiveness and sexual exclusivity in phallometric profiles.* Paper presented at the annual meeting of the Canadian Sex Research Forum, Fredericton, New Brunswick, Canada.
3. Stephens, S., Cantor, J. M., & Seto, M. C. (2017, March). *Can the SSPI-2 detect hebephilic sexual interest?* Paper presented at the annual meeting of the American-Psychology Law Society Annual Meeting, Seattle, WA.
4. Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Victim choice polymorphism and recidivism.* Symposium Presentation. Paper presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
5. McPhail, I. V., Hermann, C. A., Fernane, S. Fernandez, Y., Cantor, J. M., & Nunes, K. L. (2014, October). *Sexual deviance in sexual offenders against children: A meta-analytic review of phallometric research.* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
6. Stephens, S., Seto, M. C., Cantor, J. M., & Goodwill, A. M. (2014, October). *Is hebephilic sexual interest a criminogenic need?: A large scale recidivism study.* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
7. Stephens, S., Seto, M. C., Cantor, J. M., & Lalumière, M. (2014, October). *Development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI–2).* Paper presented at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
8. Cantor, J. M., Lafaille, S., Hannah, J., Kucyi, A., Soh, D., Girard, T. A., & Mikulis, D. M. (2014, September). *Pedophilia and the brain: White matter differences detected with DTI.* Paper presented at the 13th annual meeting of the International Association for the Treatment of Sexual Abusers, Porto, Portugal.
9. Stephens, S., Seto, M., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2014, March). *The role of hebephilic sexual interests in sexual victim choice.* Paper presented at the annual meeting of the American Psychology and Law Society, New Orleans, LA.
10. McPhail, I. V., Fernane, S. A., Hermann, C. A., Fernandez, Y. M., Nunes, K. L., & Cantor, J. M. (2013, November). *Sexual deviance and sexual recidivism in sexual offenders against children: A meta-analysis.* Paper presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago, IL.
11. Cantor, J. M. (2013, September). *Pedophilia and the brain: Current MRI research and its implications.* Paper presented at the 21st annual World Congress for Sexual Health, Porto Alegre, Brazil. [Featured among Best Abstracts, top 10 of 500.]
12. Cantor, J. M. (Chair). (2012, March). *Innovations in sex research.* Symposium conducted at the 37th annual meeting of the Society for Sex Therapy and Research, Chicago.
13. Cantor, J. M., & Blanchard, R. (2011, August). fMRI versus phallometry in the diagnosis of pedophilia and hebephilia. In J. M. Cantor (Chair), *Neuroimaging of men's object*

preferences. Symposium presented at the 37th annual meeting of the International Academy of Sex Research, Los Angeles, USA.

14. Cantor, J. M. (Chair). (2011, August). *Neuroimaging of men's object preferences.* Symposium conducted at the 37th annual meeting of the International Academy of Sex Research, Los Angeles.
15. Cantor, J. M. (2010, October). A meta-analysis of neuroimaging studies of male sexual arousal. In S. Stolerú (Chair), *Brain processing of sexual stimuli in pedophilia: An application of functional neuroimaging.* Symposium presented at the 29th annual meeting of the Association for the Treatment of Sexual Abusers, Phoenix, AZ.
16. Chivers, M. L., Seto, M. C., Cantor, J. C., Grimbos, T., & Roy, C. (April, 2010). *Psychophysiological assessment of sexual activity preferences in women.* Paper presented at the 35th annual meeting of the Society for Sex Therapy and Research, Boston, USA.
17. Cantor, J. M., Girard, T. A., & Lovett-Barron, M. (2008, November). *The brain regions that respond to erotica: Sexual neuroscience for dummies.* Paper presented at the 51st annual meeting of the Society for the Scientific Study of Sexuality, San Juan, Puerto Rico.
18. Barbaree, H., Langton, C., Blanchard, R., & Cantor, J. M. (2007, October). *The role of age-at-release in the evaluation of recidivism risk of sexual offenders.* Paper presented at the 26th annual meetingof the Association for the Treatment of Sexual Abusers, San Diego.
19. Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., Klassen, P. E., Mikulis, D. J., Kuban, M. E., Blak, T., Richards, B. A., Hanratty, M. K., & Blanchard, R. (2006, July). *Pedophilia and brain morphology.* Abstract and paper presented at the 32nd annual meeting of the International Academy of Sex Research, Amsterdam, Netherlands.
20. Seto, M. C., Cantor, J. M., & Blanchard, R. (2006, March). *Child pornography offending is a diagnostic indicator of pedophilia*. Paper presented at the 2006 annual meeting of the American Psychology-Law Society Conference, St. Petersburg, Florida.
21. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove, S. M., & Ellis, L. (2005, August). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and paper presented at the International Behavioral Development Symposium, Minot, North Dakota.
22. Cantor, J. M., & Blanchard, R. (2005, July). *Quantitative reanalysis of aggregate data on IQ in sexual offenders.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.
23. Cantor, J. M. (2003, August). *Sex reassignment on demand: The clinician's dilemma.* Paper presented at the 111th annual meeting of the American Psychological Association, Toronto, Canada.
24. Cantor, J. M. (2003, June). *Meta-analysis of VIQ–PIQ differences in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.
25. Cantor, J. M. (2002, August). *Gender role in autogynephilic transsexuals: The more things change…* Paper presented at the 110th annual meeting of the American Psychological Association, Chicago.

26. Cantor, J. M., Christensen, B. K., Klassen, P. E., Dickey, R., & Blanchard, R. (2001, June). *IQ, memory functioning, and handedness in male sex offenders.* Paper presented at the Harvey Stancer Research Day, Toronto, Ontario, Canada.
27. Cantor, J. M. (1998, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 106th annual meeting of the American Psychological Association.
28. Cantor, J. M. (1997, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 105th annual meeting of the American Psychological Association.
29. Cantor, J. M. (1997, August). *Convention orientation for lesbian, gay, and bisexual students*. Paper presented at the 105th annual meeting of the American Psychological Association.
30. Cantor, J. M. (1996, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 104th annual meeting of the American Psychological Association.
31. Cantor, J. M. (1996, August). *Symposium: Question of inclusion: Lesbian and gay psychologists and accreditation*. Paper presented at the 104th annual meeting of the American Psychological Association, Toronto.
32. Cantor, J. M. (1996, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 104th annual meeting of the American Psychological Association.
33. Cantor, J. M. (1995, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 103rd annual meeting of the American Psychological Association.
34. Cantor, J. M. (1995, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 103rd annual meeting of the American Psychological Association.
35. Cantor, J. M. (1994, August). *Discussion hour for lesbian, gay, and bisexual students*. Presented at the 102nd annual meeting of the American Psychological Association.
36. Cantor, J. M. (1994, August). *Convention orientation for lesbian, gay, and bisexual students*. Papers presented at the 102nd annual meeting of the American Psychological Association.
37. Cantor, J. M., & Pilkington, N. W. (1992, August). *Homophobia in psychology programs: A survey of graduate students.* Paper presented at the Centennial Convention of the American Psychological Association, Washington, DC. (ERIC Document Reproduction Service No. ED 351 618)
38. Cantor, J. M. (1991, August). *Being gay and being a graduate student: Double the memberships, four times the problems*. Paper presented at the 99th annual meeting of the American Psychological Association, San Francisco.

POSTER PRESENTATIONS

1. Klein, L., Stephens, S., Goodwill, A. M., Cantor, J. M., & Seto, M. C. (2015, October). *The psychological propensities of risk in undetected sexual offenders.* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
2. Pullman, L. E., Stephens, S., Seto, M. C., Goodwill, A. M., & Cantor, J. M. (2015, October). *Why are incest offenders less likely to recidivate?* Poster presented at the 34th annual meeting of the Association for the Treatment of Sexual Abusers, Montréal, Canada.
3. Seto, M. C., Stephens, S. M., Cantor, J. M., Lalumiere, M. L., Sandler, J. C., & Freeman, N. A. (2015, August). *The development and validation of the Revised Screening Scale for Pedophilic Interests (SSPI-2).* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
4. Soh, D. W., & Cantor, J. M. (2015, August). *A peek inside a furry convention.* Poster presentation at the 41st annual meeting of the International Academy of Sex Research. Toronto, Canada.
5. VanderLaan, D. P., Lobaugh, N. J., Chakravarty, M. M., Patel, R., Chavez, S. Stojanovski, S. O., Takagi, A., Hughes, S. K., Wasserman, L., Bain, J., Cantor, J. M., & Zucker, K. J. (2015, August). *The neurohormonal hypothesis of gender dysphoria: Preliminary evidence of cortical surface area differences in adolescent natal females.* Poster presentation at the 31st annual meeting of the International Academy of Sex Research. Toronto, Canada.
6. Cantor, J. M., Lafaille, S. J., Moayedi, M., Mikulis, D. M., & Girard, T. A. (2015, June). *Diffusion tensor imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Harvey Stancer Research Day, Toronto, Ontario Canada.
7. Newman, J. E., Stephens, S., Seto, M. C., & Cantor, J. M. (2014, October). *The validity of the Static-99 in sexual offenders with low intellectual abilities.* Poster presentation at the 33rd annual meeting of the Association for the Treatment of Sexual Abusers, San Diego, CA.
8. Lykins, A. D., Walton, M. T., & Cantor, J. M. (2014, June). *An online assessment of personality, psychological, and sexuality trait variables associated with self-reported hypersexual behavior.* Poster presentation at the 30th annual meeting of the International Academy of Sex Research, Dubrovnik, Croatia.
9. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, November). *The utility of phallometry in the assessment of hebephilia.* Poster presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
10. Stephens, S., Seto, M. C., Cantor, J. M., Goodwill, A. M., & Kuban, M. (2013, October). *The role of hebephilic sexual interests in sexual victim choice.* Poster presented at the 32nd annual meeting of the Association for the Treatment of Sexual Abusers, Chicago.
11. Fazio, R. L., & Cantor, J. M. (2013, October). *Analysis of the Fazio Laterality Inventory (FLI) in a population with established atypical handedness.* Poster presented at the 33rd annual meeting of the National Academy of Neuropsychology, San Diego.
12. Lafaille, S., Hannah, J., Soh, D., Kucyi, A., Girard, T. A., Mikulis, D. M., & Cantor, J. M. (2013, August). *Investigating resting state networks in pedohebephiles.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.

13. McPhail, I. V., Lykins, A. D., Robinson, J. J., LeBlanc, S., & Cantor, J. M. (2013, August). *Effects of prescription medication on volumetric phallometry output.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.
14. Murray, M. E., Dyshniku, F., Fazio, R. L., & Cantor, J. M. (2013, August). *Minor physical anomalies as a window into the prenatal origins of pedophilia.* Poster presented at the 29th annual meeting of the International Academy of Sex Research, Chicago.
15. Sutton, K. S., Stephens, S., Dyshniku, F., Tulloch, T., & Cantor, J. M. (2013, August). *Pilot group treatment for "procrasturbation."* Poster presented at 39th annual meeting of the International Academy of Sex Research, Chicago.
16. Sutton, K. S., Pytyck, J., Stratton, N., Sylva, D., Kolla, N., & Cantor, J. M. (2013, August). *Client characteristics by type of hypersexuality referral: A quantitative chart review.* Poster presented at the 39th annual meeting of the International Academy of Sex Research, Chicago.
17. Fazio, R. L., & Cantor, J. M. (2013, June). *A replication and extension of the psychometric properties of the Digit Vigilance Test.* Poster presented at the 11th annual meeting of the American Academy of Clinical Neuropsychology, Chicago.
18. Lafaille, S., Moayedi, M., Mikulis, D. M., Girard, T. A., Kuban, M., Blak, T., & Cantor, J. M. (2012, July). *Diffusion Tensor Imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Lisbon, Portugal.
19. Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010, July). *Sexual arousal to female children in gynephilic men.* Poster presented at the 38th annual meeting of the International Academy of Sex Research, Prague, Czech Republic.
20. Cantor, J. M., Girard, T. A., Lovett-Barron, M., & Blak, T. (2008, July). *Brain regions responding to visual sexual stimuli: Meta-analysis of PET and fMRI studies.* Abstract and poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.
21. Lykins, A. D., Blanchard, R., Cantor, J. M., Blak, T., & Kuban, M. E. (2008, July). *Diagnosing sexual attraction to children: Considerations for DSM-V.* Poster presented at the 34th annual meeting of the International Academy of Sex Research, Leuven, Belgium.
22. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, October). *Physical height in pedophilia and hebephilia.* Poster presented at the 26th annual meeting of the Association for the Treatment of Sexual Abusers, San Diego.
23. Cantor, J. M., Blak, T., Kuban, M. E., Klassen, P. E., Dickey, R. and Blanchard, R. (2007, August). *Physical height in pedophilia and hebephilia.* Abstract and poster presented at the 33rd annual meeting of the International Academy of Sex Research, Vancouver, Canada.
24. Puts, D. A., Blanchard, R., Cardenas, R., Cantor, J., Jordan, C. L., & Breedlove, S. M. (2007, August). *Earlier puberty predicts superior performance on male-biased visuospatial tasks in men but not women.* Abstract and poster presented at the 33rd annual meeting of the International Academy of Sex Research, Vancouver, Canada.
25. Seto, M. C., Cantor, J. M., & Blanchard, R. (2005, November). *Possession of child pornography is a diagnostic indicator of pedophilia.* Poster presented at the 24th annual meeting of the Association for the Treatment of Sexual Abusers, New Orleans.

26. Blanchard, R., Cantor, J. M., Bogaert, A. F., Breedlove. S. M., & Ellis, L. (2005, July). *Interaction of fraternal birth order and handedness in the development of male homosexuality.* Abstract and poster presented at the 31st annual meeting of the International Academy of Sex Research, Ottawa, Canada.
27. Cantor, J. M., & Blanchard, R. (2003, July). *The reported VIQ–PIQ differences in male sex offenders are artifactual?* Abstract and poster presented at the 29th annual meeting of the International Academy of Sex Research, Bloomington, Indiana.
28. Christensen, B. K., Cantor, J. M., Millikin, C., & Blanchard, R. (2002, February). *Factor analysis of two brief memory tests: Preliminary evidence for modality-specific measurement.* Poster presented at the 30th annual meeting of the International Neuropsychological Society, Toronto, Ontario, Canada.
29. Cantor, J. M., Blanchard, R., Paterson, A., Bogaert, A. (2000, June). *How many gay men owe their sexual orientation to fraternal birth order?* Abstract and poster presented at the International Behavioral Development Symposium, Minot, North Dakota.
30. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, November). *Fluoxetine inhibition of male rat sexual behavior: Reversal by oxytocin*. Poster presented at the 26th annual meeting of the Society for Neurosciences, Washington, DC.
31. Cantor, J. M., Binik, Y., & Pfaus, J. G. (1996, June). *An animal model of fluoxetine-induced sexual dysfunction: Dose dependence and time course*. Poster presented at the 28th annual Conference on Reproductive Behavior, Montréal, Canada.
32. Cantor, J. M., O'Connor, M. G., Kaplan, B., & Cermak, L. S. (1993, June). *Transient events test of retrograde memory: Performance of amnestic and unimpaired populations*. Poster presented at the 2nd annual science symposium of the Massachusetts Neuropsychological Society, Cambridge, MA.

EDITORIAL AND PEER-REVIEWING ACTIVITIES

Editor-in-Chief

Sexual Abuse: A Journal of Research and Treatment Jan., 2010–Dec., 2014

Editorial Board Memberships

Journal of Sexual Aggression Jan., 2010–Dec., 2021
Journal of Sex Research, The Jan., 2008–Aug., 2020
Sexual Abuse: A Journal of Research and Treatment Jan., 2006–Dec., 2019
Archives of Sexual Behavior Jan., 2004–Present
The Clinical Psychologist Jan., 2004–Dec., 2005

Ad hoc Journal Reviewer Activity

American Journal of Psychiatry
Annual Review of Sex Research
Archives of General Psychiatry
Assessment
Biological Psychiatry
BMC Psychiatry
Brain Structure and Function
British Journal of Psychiatry
British Medical Journal
Canadian Journal of Behavioural Science
Canadian Journal of Psychiatry
Cerebral Cortex
Clinical Case Studies
Comprehensive Psychiatry
Developmental Psychology
European Psychologist
Frontiers in Human Neuroscience
Human Brain Mapping
International Journal of Epidemiology
International Journal of Impotence Research
International Journal of Sexual Health
International Journal of Transgenderism
Journal of Abnormal Psychology
Journal of Clinical Psychology
Journal of Consulting and Clinical Psychology
Journal of Forensic Psychology Practice
Journal for the Scientific Study of Religion
Journal of Sexual Aggression
Journal of Sexual Medicine
Journal of Psychiatric Research
Nature Neuroscience
Neurobiology Reviews
Neuroscience & Biobehavioral Reviews
Neuroscience Letters
Proceedings of the Royal Society B (Biological Sciences)
Psychological Assessment
Psychological Medicine
Psychological Science
Psychology of Men & Masculinity
Sex Roles
Sexual and Marital Therapy
Sexual and Relationship Therapy
Sexuality & Culture
Sexuality Research and Social Policy
The Clinical Psychologist
Traumatology
World Journal of Biological Psychiatry

GRANT REVIEW PANELS

2017–2021 Member, College of Reviewers, *Canadian Institutes of Health Research,* Canada.

2017 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2017 Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence. *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

2016 Reviewer. National Science Center [*Narodowe Centrum Nauki*], Poland.

2016 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2015 Assessor (Peer Reviewer). Discovery Grants Program. *Australian Research Council,* Australia.

2015 Reviewer. *Czech Science Foundation,* Czech Republic.

2015 Reviewer, "Off the beaten track" grant scheme. *Volkswagen Foundation,* Germany.

2015 External Reviewer, Discovery Grants program—Biological Systems and Functions. *National Sciences and Engineering Research Council of Canada*, Canada

2015 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2014 Assessor (Peer Reviewer). Discovery Grants Program. *Australian Research Council,* Australia.

2014 External Reviewer, Discovery Grants program—Biological Systems and Functions. *National Sciences and Engineering Research Council of Canada*, Canada.

2014 Panel Member, Dean's Fund—Clinical Science Panel. *University of Toronto Faculty of Medicine*, Canada.

2014 Committee Member, Peer Review Committee—Doctoral Research Awards A. *Canadian Institutes of Health Research*, Canada.

2013 Panel Member, Grant Miller Cancer Research Grant Panel. *University of Toronto Faculty of Medicine*, Canada.

2013 Panel Member, Dean of Medicine Fund New Faculty Grant Clinical Science Panel. *University of Toronto Faculty of Medicine,* Canada.

2012 Board Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence (2nd round). *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

2012 External Reviewer, University of Ottawa Medical Research Fund. *University of Ottawa Department of Psychiatry*, Canada.

2012 External Reviewer, Behavioural Sciences—B. *Canadian Institutes of Health Research*, Canada.

2011 Board Member, International Review Board, Research collaborations on behavioural disorders related to violence, neglect, maltreatment and abuse in childhood and adolescence. *Bundesministerium für Bildung und Forschung [Ministry of Education and Research],* Germany.

TEACHING AND TRAINING

PostDoctoral Research Supervision
Law & Mental Health Program, Centre for Addiction and Mental Health, Toronto, Canada

Dr. Katherine S. Sutton	Sept., 2012–Dec., 2013
Dr. Rachel Fazio	Sept., 2012–Aug., 2013
Dr. Amy Lykins	Sept., 2008–Nov., 2009

Doctoral Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Michael Walton • University of New England, Australia	Sept., 2017–Aug., 2018
Debra Soh • York University	May, 2013–Aug, 2017
Skye Stephens • Ryerson University	April, 2012–June, 2016

Masters Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Nicole Cormier • Ryerson University	June, 2012–present
Debra Soh • Ryerson University	May, 2009–April, 2010

Undergraduate Research Supervision
Centre for Addiction and Mental Health, Toronto, Canada

Kylie Reale • Ryerson University	Spring, 2014
Jarrett Hannah • University of Rochester	Summer, 2013
Michael Humeniuk • University of Toronto	Summer, 2012

Clinical Supervision (Doctoral Internship)
Clinical Internship Program, Centre for Addiction and Mental Health, Toronto, Canada

Katherine S. Sutton • Queen's University	2011–2012
David Sylva • Northwestern University	2011–2012
Jordan Rullo • University of Utah	2010–2011
Lea Thaler • University of Nevada, Las Vegas	2010–2011
Carolin Klein • University of British Columbia	2009–2010
Bobby R. Walling • University of Manitoba	2009–2010

TEACHING AND TRAINING

Clinical Supervision (Doctoral- and Masters- level practica)
Centre for Addiction and Mental Health, Toronto, Canada

Tyler Tulloch • Ryerson University	2013–2014
Natalie Stratton • Ryerson University	Summer, 2013
Fiona Dyshniku • University of Windsor	Summer, 2013
Mackenzie Becker • McMaster University	Summer, 2013
Skye Stephens • Ryerson University	2012–2013
Vivian Nyantakyi • Capella University	2010–2011
Cailey Hartwick • University of Guelph	Fall, 2010
Tricia Teeft • Humber College	Summer, 2010
Allison Reeves • Ontario Institute for Studies in Education/Univ. of Toronto	2009–2010
Helen Bailey • Ryerson University	Summer, 2009
Edna Aryee • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Iryna Ivanova • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Jennifer Robinson • Ontario Institute for Studies in Education/Univ. of Toronto	2008–2009
Zoë Laksman • Adler School of Professional Psychology	2005–2006
Diana Mandelew • Adler School of Professional Psychology	2005–2006
Susan Wnuk • York University	2004–2005
Hiten Lad • Adler School of Professional Psychology	2004–2005
Natasha Williams • Adler School of Professional Psychology	2003–2004
Lisa Couperthwaite • Ontario Institute for Studies in Education/Univ. of Toronto	2003–2004
Lori Gray, née Robichaud • University of Windsor	Summer, 2003
Sandra Belfry • Ontario Institute for Studies in Education/Univ. of Toronto	2002–2003
Althea Monteiro • York University	Summer, 2002
Samantha Dworsky • York University	2001–2002
Kerry Collins • University of Windsor	Summer, 2001
Jennifer Fogarty • Waterloo University	2000–2001
Emily Cripps • Waterloo University	Summer, 2000
Lee Beckstead • University of Utah	2000

PROFESSIONAL SOCIETY ACTIVITIES

OFFICES HELD

2018–2019	Local Host. Society for Sex Therapy and Research.
2015	Member, International Scientific Committee, World Association for Sexual Health.
2015	Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers
2012–2013	Chair, Student Research Awards Committee, Society for Sex Therapy & Research
2012–2013	Member, Program Planning and Conference Committee, Association for the Treatment of Sexual Abusers
2011–2012	Chair, Student Research Awards Committee, Society for Sex Therapy & Research
2010–2011	Scientific Program Committee, International Academy of Sex Research
2002–2004	Membership Committee • APA Division 12 (Clinical Psychology)
2002–2003	Chair, Committee on Science Issues, APA Division 44
2002	Observer, Grant Review Committee • Canadian Institutes of Health Research Behavioural Sciences (B)
2001–2009	Reviewer • APA Division 44 Convention Program Committee
2001, 2002	Reviewer • APA Malyon-Smith Scholarship Committee
2000–2005	Task Force on Transgender Issues, APA Division 44
1998–1999	Consultant, APA Board of Directors Working Group on Psychology Marketplace
1997	Student Representative • APA Board of Professional Affairs' Institute on TeleHealth
1997–1998	Founder and Chair • APA/APAGS Task Force on New Psychologists' Concerns
1997–1999	Student Representative • APA/CAPP Sub-Committee for a National Strategy for Prescription Privileges
1997–1999	Liaison • APA Committee for the Advancement of Professional Practice
1997–1998	Liaison • APA Board of Professional Affairs
1993–1997	Founder and Chair • APA/APAGS Committee on LGB Concerns

PROFESSIONAL SOCIETY ACTIVITIES

MEMBERSHIPS

2017–2021 Member • *Canadian Sex Research Forum*

2009–Present Member • *Society for Sex Therapy and Research*

2007–Present Fellow • *Association for the Treatment and Prevention of Sexual Abuse*

2006–Present Full Member (elected) • *International Academy of Sex Research*

2006–Present Research and Clinical Member • *Association for the Treatment and Prevention of Sexual Abuse*

2003–2006 Associate Member (elected) • *International Academy of Sex Research*

2002 Founding Member • CPA Section on Sexual Orientation and Gender Identity

2001–2013 Member • *Canadian Psychological Association* (CPA)

2000–2015 Member • *American Association for the Advancement of Science*

2000–2015 Member • *American Psychological Association* (APA)

APA Division 12 (Clinical Psychology)

APA Division 44 (Society for the Psychological Study of LGB Issues)

2000–2020 Member • *Society for the Scientific Study of Sexuality*

1995–2000 Student Member • *Society for the Scientific Study of Sexuality*

1993–2000 Student Affiliate • *American Psychological Association*

1990–1999 Member, American Psychological Association of Graduate Students (APAGS)

CLINICAL LICENSURE/REGISTRATION

Certificate of Registration, Number 3793
College of Psychologists of Ontario, Ontario, Canada

AWARDS AND HONORS

2022 Distinguished Contribution Award
Association for the Treatment and Prevention of Sexual Abuse (ATSA)

2011 Howard E. Barbaree Award for Excellence in Research
Centre for Addiction and Mental Health, Law and Mental Health Program

2004 fMRI Visiting Fellowship Program at Massachusetts General Hospital
American Psychological Association Advanced Training Institute and NIH

1999–2001 CAMH Post-Doctoral Research Fellowship
Centre for Addiction and Mental Health Foundation and Ontario Ministry of Health

1998 Award for Distinguished Contribution by a Student
American Psychological Association, Division 44

1995 Dissertation Research Grant
Society for the Scientific Study of Sexuality

1994–1996 McGill University Doctoral Scholarship

1994 Award for Outstanding Contribution to Undergraduate Teaching
"TA of the Year Award," from the McGill Psychology Undergraduate Student Association

MAJOR MEDIA

(Complete list available upon request.)

Feature-length Documentaries

Vice Canada Reports. *Age of Consent.* 14 Jan 2017.
Canadian Broadcasting Company. *I, Pedophile.* Firsthand documentaries. 10 Mar 2016.

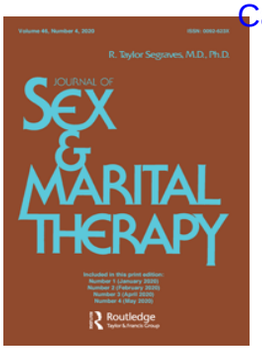
Appearances and Interviews

11 Mar 2020. Ibbitson, John. It is crucial that Parliament gets the conversion-therapy ban right. *The Globe & Mail.*
25 Jan 2020. Ook de hulpvaardige buurman kan verzamelaar van kinderporno zin. *De Morgen.*
3 Nov 2019. Village of the damned. *60 Minutes Australia.*
1 Nov 2019. HÅKON F. HØYDAL. Norsk nettovergriper: – Jeg hater meg selv: Nordmannen laster ned overgrepsmateriale fra nettet – og oppfordrer politiet til å gi amnesti for slike som ham.
10 Oct 2019. Smith, T. Growing efforts are looking at how—or if—#MeToo offenders can be reformed. *National Public Radio.*
29 Sep 2019. Carey, B. Preying on Children: The Emerging Psychology of Pedophiles. *New York Times.*
29 Apr 2019. Mathieu, Isabelle. La poupée qui a troublé les Terre-Neuviens. *La Tribune.*
21 Mar 2019. Pope Francis wants psychological testing to prevent problem priests. But can it really do that? *The Washington Post.*
12 Dec 2018. Child sex dolls: Illegal in Canada, and dozens seized at the border. Ontario Today with Rita Celli. *CBC.*
12 Dec 2018. Celli, R. & Harris, K. Dozens of child sex dolls seized by Canadian border agents. *CBC News.*
27 Apr 2018. Rogers, Brook A. The online 'incel' culture is real–and dangerous. *New York Post.*
25 Apr 2018. Yang, J. Number cited in cryptic Facebook post matches Alek Minassian's military ID: Source. *Toronto Star.*
24 Ap 2018 Understanding 'incel'. *CTV News.*
27 Nov 2017. Carey, B. Therapy for Sexual Misconduct? It's Mostly Unproven. *New York Times.*
14 Nov 2017. Tremonti, A. M. The Current. *CBC.*
9 Nov2017. Christensen, J. Why men use masturbation to harass women. *CNN.* http://www.cnn.com/2017/11/09/health/masturbation-sexual-harassment/index.html
7 Nov 2017. Nazaryan, A. Why is the alt-right obsessed with pedophilia? *Newsweek.*
15 Oct 2017. Ouatik, B. Déscouvre. Pédophilie et science. *CBC Radio Canada.*
12 Oct 2017. Ouatik, B. Peut-on guérir la pédophilie? *CBC Radio Canada.*
11 Sep 2017. Burns, C. The young paedophiles who say they don't abuse children. *BBC News.*
18 Aug 2017. Interview. *National Post Radio.* Sirius XM Canada.
16 Aug 2017. Blackwell, Tom. Man says he was cured of pedophilia at Ottawa clinic: 'It's like a weight that's been lifted': But skeptics worry about the impact of sending pedophiles into the world convinced their curse has been vanquished. *National Post.*
26 Apr 2017. Zalkind, S. Prep schools hid sex abuse just like the catholic church. *VICE.*
24 Apr 2017. Sastre, P. Pédophilie: une panique morale jamais n'abolira un crime. *Slate France.*
12 Feb 2017. Payette, G. Child sex doll trial opens Pandora's box of questions. *CBC News.*
26 Nov 2016. Det morke uvettet ["The unknown darkness]". *Fedrelandsvennen.*
13 July 2016. Paedophilia: Shedding light on the dark field. *The Economist.*

1 Jul 2016. Debusschere, B. Niet iedereen die kinderporno kijkt, is een pedofiel: De mythes rond pedofilie ontkracht. *De Morgen.*
12 Apr 2016. O'Connor, R. Terence Martin: The Tasmanian MP whose medication 'turned him into a paedophile'. *The Independent.*
8 Mar 2016. Bielski, Z. 'The most viscerally hated group on earth': Documentary explores how intervention can stop pedophiles. *The Globe and Mail.*
1 Mar 2016. Elmhirst, S. What should we do about paedophiles? *The Guardian.*
24 Feb 2016. The man whose brain tumour 'turned him into a paedophile'. *The Independent.*
24 Nov 2015. Byron, T. The truth about child sex abuse. *BBC Two.*
20 Aug 2015. The Jared Fogle case: Why we understand so little about abuse. *Washington Post.*
19 Aug 2015. Blackwell, T. Treat sex offenders for impotence—to keep them out of trouble, Canadian psychiatrist says. *National Post.*
2 Aug 2015. Menendez, J. BBC News Hour. *BBC World Service.*
13 Jul 2015. The nature of pedophilia. *BBC Radio 4.*
9 Jul 2015. The sex-offender test: How a computerized assessment can help determine the fate of men who've been accused of sexually abusing children. *The Atlantic.*
10 Apr 2015. NWT failed to prevent sex offender from abusing stepdaughter again. *CBC News.*
10 Feb 2015. Savage, D. "The ethical sadist." In Savage Love. *The Stranger.*
31 Jan 2015. Begrip voor/van pedofilie [Understanding pedophilia]. *de Volkskrant.*
9 Dec 2014. Carey, B. When a rapist's weapon is a pill. *New York Times*.
1 Dec 2014. Singal, J. Can virtual reality help pedophiles? *New York Magazine.*
17 Nov2014. Say pedófile, busco aydua. *El Pais.*
4 Sep 2014. Born that way? *Ideas, with Paul Kennedy.* CBC Radio One.
27 Aug 2014. Interrogating the statistics for the prevalence of paedophilia. BBC.
25 Jul 2014. Stephenson, W. The prevalence of paedophilia. *BBC World Service.*
21 Jul 2014. Hildebrandt, A. Virtuous Pedophiles group gives support therapy cannot. *CBC.*
26 Jan 2014. Paedophilia a result of faulty wiring, scientists suggest. *Daily Mail.*
22 Dec 2013. Kane, L. Is pedophilia a sexual orientation? *Toronto Star.*
21 Jul 2013. Miller, L. The turn-on switch: Fetish theory, post-Freud. *New York Magazine.*
1 Jul 2013. Morin, H. Pédophilie: la difficile quête d'une origine biologique. *Le Monde.*
2 Jun 2013. Malcolm, L. The psychology of paedophilia. *Australian National Radio.*
1 Mar 2013. Kay, J. The mobbing of Tom Flanagan is unwarranted and cruel. *National Post.*
6 Feb 2013. Boy Scouts board delays vote on lifting ban on gays. *L.A. Times.*
31 Aug 2012. CNN Newsroom interview with Ashleigh Banfield. *CNN.*
24 Jun 2012. CNN Newsroom interview with Don Lemon. *CNN.*

EXPERT WITNESS TESTIMONY

1.	2023	Van Garderen v Montana	Missoula County, MT
2.	2023	Noe v Parson	Cole County, MO
3.	2023	Loe v Texas	Travis County, TX
4.	2023	Roe v Critchfield	Southern Division, ID
5.	2023	Poe v Labrador	Southern Division, ID
6.	2023	Koe v Noggle	Northern District, GA
7.	2023	Doe v Medical Licensing Board of Kentucky	Western District, KY
8.	2023	Poe v Drummond	Northern District, OK
9.	2023	L.W. v Skrmetti	Middle District, TN
10.	2023	K.C. v Medical Licensing Board of Indiana	Southern District, IN
11.	2023	Doe v Horne	District of Arizona, AZ
12.	2022	Bridge v Oklahoma State Dept of Education	Western District, OK
13.	2022	Dekker, et al. v Florida Agency for Health Care Admin	Tallahassee, FL
14.	2022	Roe v Utah High School Activities Assn.	Salt Lake County, UT
15.	2022	A.M. v Indiana Public Schools	Southern District, IN
16.	2022	Ricard v Kansas	Geery County, KS
17.	2022	Re Commitment of Baunee	Syracuse, NY
18.	2022	Hersom & Doe v WVa Health & Human Services	Southern District, WV
19.	2022	Boe, Eknes-Tucker v Alabama	Montgomery Cnty, AL
20.	2022	Lopez v Texas	TX
21.	2022	PFLAG, et al. v Texas	Travis County, TX
22.	2022	Doe v Texas	Travis County, TX
23.	2022	BPJ v West Virginia Board of Education	Southern District, WV
24.	2021	Cross et al. v Loudoun School Board	Loudoun, VA
25.	2021	Cox v Indiana Child Services	Child Services, IN
26.	2021	Josephson v University of Kentucky	Western District, KY
27.	2021	Re Commitment of Michael Hughes (Frye Hearing)	Cook County, IL
28.	2021	Arizona v Arnett Clifton	Maricopa County, AZ
29.	2019	US v Peter Bright	Southern District, NY
30.	2019	Spiegel-Savoie v Savoie-Sexten (Custody Hearing)	Boston, MA
31.	2019	Re Commitment of Steven Casper (Frye Hearing)	Kendall County, IL
32.	2019	Re Commitment of Inger (Frye Hearing)	Poughkeepsie, NY
33.	2019	Canada vs John Fitzpatrick (Sentencing Hearing)	Toronto, ON, Canada
34.	2018	Re Commitment of Little (Frye Hearing)	Utica, NY
35.	2017	Re Commitment of Nicholas Bauer (Frye Hearing)	Lee County, IL
36.	2017	US vs William Leford (Presentencing Hearing)	Warnock, GA
37.	2015	Florida v Jon Herb	Naples, FL
38.	2010	Re Detention of William Dutcher	Seattle, WA



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Transgender and Gender Diverse Children and Adolescents: Fact-Checking of AAP Policy

James M. Cantor

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ABSTRACT

The American Academy of Pediatrics (AAP) recently published a policy statement: *Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents*. Although almost all clinics and professional associations in the world use what's called the *watchful waiting* approach to helping gender diverse (GD) children, the AAP statement instead rejected that consensus, endorsing *gender affirmation* as the only acceptable approach. Remarkably, not only did the AAP statement fail to include any of the actual outcomes literature on such cases, but it also misrepresented the contents of its citations, which repeatedly said the very opposite of what AAP attributed to them.

The American Academy of Pediatrics (AAP) recently published a policy statement entitled, *Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents* (Rafferty, AAP Committee on Psychosocial Aspects of Child and Family Health, AAP Committee on Adolescence, AAP Section on Lesbian, Gay, Bisexual, and Transgender Health and Wellness, 2018). These are children who manifest discontent with the sex they were born as and desire to live as the other sex (or as some alternative gender role). The policy was quite a remarkable document: Although almost all clinics and professional associations in the world use what's called the *watchful waiting* approach to helping transgender and gender diverse (GD) children, the AAP statement rejected that consensus, endorsing only *gender affirmation*. That is, where the consensus is to delay any transitions after the onset of puberty, AAP instead rejected waiting before transition. With AAP taking such a dramatic departure from other professional associations, I was immediately curious about what evidence led them to that conclusion. As I read the works on which they based their policy, however, I was pretty surprised—rather alarmed, actually: These documents simply did not say what AAP claimed they did. In fact, the references that AAP cited as the basis of their policy instead outright contradicted that policy, repeatedly endorsing *watchful waiting*.

The AAP statement was also remarkable in what it left out—namely, the actual outcomes research on GD children. In total, there have been 11 follow-up studies of GD children, of which AAP cited one (Wallien & Cohen-Kettenis, 2008), doing so without actually mentioning the outcome data it contained. The literature on outcomes was neither reviewed, summarized, nor subjected to meta-analysis to be considered in the aggregate—It was merely disappeared. (The list of all existing studies appears in the appendix.) As they make clear, *every* follow-up study of GD children, without exception, found the same thing: Over puberty, the majority of GD children cease to want to transition. AAP is, of course, free to establish whatever policy it likes on

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whatever basis it likes. But any assertion that their policy is based on evidence is demonstrably false, as detailed below.

AAP divided clinical approaches into three types—conversion therapy, watchful waiting, and gender affirmation. It rejected the first two and endorsed *gender affirmation* as the only acceptable alternative. Most readers will likely be familiar already with attempts to use conversion therapy to change sexual orientation. With regard to gender identity, AAP wrote:

> "[C]onversion" or "reparative" treatment models are used to prevent children and adolescents from identifying as transgender or to dissuade them from exhibiting gender diverse expressions. … Reparative approaches have been proven to be not only unsuccessful[38] but also deleterious and are considered outside the mainstream of traditional medical practice.[29,39 42]

The citations were:

38. Haldeman DC. The practice and ethics of sexual orientation conversion therapy. *J Consult Clin Psychol.* 1994;62(2):221 227.

29. Adelson SL; American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI). Practice parameter on gay, lesbian, or bisexual sexual orientation, gender nonconformity, and gender discordance in children and adolescents. *J Am Acad Child Adolesc Psychiatry.* 2012;51(9):957 974.

39. Byne W. Regulations restrict practice of conversion therapy. *LGBT Health.* 2016;3(2):97 99.

40. Cohen Kettenis PT, Delemarrevan de Waal HA, Gooren LJ. The treatment of adolescent transsexuals: changing insights. *J Sex Med.* 2008;5(8):1892 1897.

41. Bryant K. Making gender identity disorder of childhood: historical lessons for contemporary debates. *Sex Res Soc Policy.* 2006;3(3):23 39.

42. World Professional Association for Transgender Health. *WPATH De Psychopathologisation Statement.* Minneapolis, MN: World Professional Association for Transgender Health; 2010.

AAP's claims struck me as odd because *there are no studies of conversion therapy for gender identity.* Studies of conversion therapy have been limited to *sexual orientation,* and, moreover, to the sexual orientation *of adults,* not to gender identity and not of children in any case. The article AAP cited to support their claim (reference number 38) is indeed a classic and well-known review, but it is a review of sexual orientation research *only.* Neither gender identity, nor even children, received a single mention in it. Indeed, the narrower scope of that article should be clear to anyone reading even just its title: "The practice and ethics of *sexual orientation* conversion therapy" [italics added].

AAP continued, saying that conversion approaches for GD children have already been rejected by medical consensus, citing five sources. This claim struck me as just as odd, however—I recalled associations banning conversion therapy for sexual orientation, but not for gender identity, exactly because there is no evidence for generalizing from adult sexual orientation to childhood gender identity. So, I started checking AAP's citations for that, and these sources too pertained only to sexual orientation, not gender identity (specifics below). What AAP's sources *did* repeatedly emphasize was that:

A. Sexual orientation of adults is unaffected by conversion therapy and any other [known] intervention;
B. Gender dysphoria in childhood before puberty desists in the majority of cases, becoming (cis-gendered) homosexuality in adulthood, again regardless of any [known] intervention; and
C. Gender dysphoria in childhood persisting after puberty tends to persist entirely.

That is, in the context of GD children, it simply makes no sense to refer to externally induced "conversion": The majority of children "convert" to cisgender or "desist" from transgender

regardless of any attempt to change them. "Conversion" only makes sense with regard to adult sexual orientation because (unlike childhood gender identity), adult homosexuality never or nearly never spontaneously changes to heterosexuality. Although gender identity and sexual orientation may often be analogous and discussed together with regard to social or political values and to civil rights, they are nonetheless distinct—with distinct origins, needs, and responses to medical and mental health care choices. Although AAP emphasized to the reader that "gender identity is not synonymous with 'sexual orientation'" (Rafferty et al., 2018, p. 3), they went ahead to treat them as such nonetheless.

To return to checking AAP's fidelity to its sources: Reference 29 was a practice guideline from the Committee on Quality Issues of the American Academy of Child and Adolescent Psychiatry (AACAP). Despite AAP applying this source to *gender identity,* AACAP was quite unambiguous regarding their intent to speak to sexual orientation and *only* to sexual orientation: "Principle 6. Clinicians should be aware that there is no evidence that *sexual orientation* can be altered through therapy, and that attempts to do so may be harmful. There is no established evidence that change in a predominant, enduring *homosexual* pattern of development is possible. Although sexual fantasies can, to some degree, be suppressed or repressed by those who are ashamed of or in conflict about them, sexual desire is not a choice. However, behavior, social role, and—to a degree—identity and self-acceptance are. Although operant conditioning modifies sexual fetishes, it does not alter *homosexuality*. Psychiatric efforts to alter *sexual orientation* through 'reparative therapy' *in adults* have found little or no change in *sexual orientation,* while causing significant risk of harm to self-esteem" (AACAP, 2012, p. 967, italics added).

Whereas AAP cites AACAP to support gender affirmation as the only alternative for treating GD children, AACAP's actual view was decidedly neutral, noting the lack of evidence: "Given the lack of empirical evidence from randomized, controlled trials of the efficacy of treatment aimed at eliminating gender discordance, the potential risks of treatment, and longitudinal evidence that gender discordance persists in only a small minority of untreated cases arising in childhood, further research is needed on predictors of persistence and desistence of childhood gender discordance as well as the long-term risks and benefits of intervention before any treatment to eliminate gender discordance can be endorsed" (AACAP, 2012, p. 969). Moreover, whereas AAP rejected watchful waiting, what AACAP recommended was: "In general, it is desirable to help adolescents who may be experiencing gender distress and dysphoria to defer sex reassignment until adulthood" (AACAP, 2012, p. 969). So, not only did AAP attribute to AACAP something AACAP never said, but also AAP withheld from readers AACAP's actual view.

Next, in reference 39, Byne (2016) also addressed only sexual orientation, doing so very clearly: "Reparative therapy is a subset of conversion therapies based on the premise that *same-sex attraction* are reparations for childhood trauma. Thus, practitioners of reparative therapy believe that exploring, isolating, and repairing these childhood emotional wounds will often result in reducing *same-sex attractions*" (Byne, 2016, p. 97). Byne does not say this of gender identity, as the AAP statement misrepresents.

In AAP reference 40, Cohen-Kettenis et al. (2008) did finally pertain to gender identity; however, this article never mentions conversion therapy. (!) Rather, in this study, the authors presented that clinic's lowering of their minimum age for cross-sex hormone treatment from age 18 to 16, which they did on the basis of a series of studies showing the high rates of success with this age group. Although it did strike me as odd that AAP picked as support against conversion therapy an article that did not mention conversion therapy, I could imagine AAP cited the article as an example of what the "mainstream of traditional medical practice" consists of (the logic being that conversion therapy falls outside what an 'ideal' clinic like this one provides). However, what this clinic provides is the very *watchful waiting* approach that AAP rejected. The approach

espoused by Cohen-Kettenis (and the other clinics mentioned in the source—Gent, Boston, Oslo, and now formerly, Toronto) is to make puberty-halting interventions available at age 12 because: "[P]ubertal suppression may give adolescents, together with the attending health professional, more time to explore their gender identity, without the distress of the developing secondary sex characteristics. The precision of the diagnosis may thus be improved" (Cohen-Kettenis et al., 2008, p. 1894).

Reference 41 presented a very interesting history spanning the 1960s–1990s about how feminine boys and tomboyish girls came to be recognized as mostly pre-homosexual, and how that status came to be entered into the DSM at the same time as homosexuality was being *removed* from the DSM. Conversion therapy is never mentioned. Indeed, to the extent that Bryant mentions treatment at all, it is to say that treatment is entirely irrelevant to his analysis: "An important omission from the *DSM* is a discussion of the kinds of treatment that GIDC children should receive. (This omission is a general orientation of the DSM and not unique to GIDC)" (Bryant, 2006, p. 35). How this article supports AAP's claim is a mystery. Moreover, how AAP could cite a 2006 history discussing events of the 1990s and earlier to support a claim about the *current* consensus in this quickly evolving discussion remains all the more unfathomable.

Cited last in this section was a one-paragraph press release from the World Professional Association for Transgender Health. Written during the early stages of the American Psychiatric Association's (APA's) update of the DSM, the statement asserted simply that "The WPATH Board of Directors strongly urges the de-psychopathologisation of gender variance worldwide." Very reasonable debate can (and should) be had regarding whether gender dysphoria should be removed from the DSM as homosexuality was, and WPATH was well within its purview to assert that it should. Now that the DSM revision process is years completed however, history has seen that APA ultimately retained the diagnostic categories, rejecting WPATH's urging. This makes AAP's logic entirely backwards: That WPATH's request to depathologize gender dysphoria was *rejected* suggests that it is *WPATH's* view—and therefore the AAP policy—which fall "outside the mainstream of traditional medical practice." (!)

AAP based this entire line of reasoning on their belief that conversion therapy is being used "to prevent children and adolescents from identifying as transgender" (Rafferty et al., 2018, p. 4). That claim is left without citation or support. In contrast, what is said by AAP's sources is "delaying affirmation should *not* be construed as conversion therapy or an attempt to change gender identity" in the first place (Byne, 2016, p. 2). Nonetheless, AAP seems to be doing exactly that: simply relabeling any alternative approach as equivalent to conversion therapy.

Although AAP (and anyone else) may reject (what they label to be) conversion therapy purely on the basis of political or personal values, there is no evidence to back the AAP's stated claim about the existing science on gender identity at all, never mind gender identity of children.

AAP also dismissed the watchful waiting approach out of hand, not citing any evidence, but repeatedly calling it "outdated." The criticisms AAP provided, however, again defied the existing evidence, with even its own sources repeatedly calling watchful waiting the current standard. According to AAP:

> [G]ender affirmation is in contrast to the outdated approach in which a child's gender diverse assertions are held as "possibly true" until an arbitrary age (often after pubertal onset) when they can be considered valid, an approach that authors of the literature have termed "watchful waiting." This outdated approach does not serve the child because critical support is withheld. Watchful waiting is based on binary notions of gender in which gender diversity and fluidity is pathologized; in watchful waiting, it is also assumed that notions of gender identity become fixed at a certain age. The approach is also influenced by a group of early studies with validity concerns, methodologic flaws, and limited follow up on children who identified as TGD and, by adolescence, did not seek further treatment ("desisters").[45,47]

The citations from AAP's reference list are:

45. Ehrensaft D, Giammattei SV, Storck K, Tishelman AC, Keo Meier C. Prepubertal social gender transitions: what we know; what we can learn a view from a gender affirmative lens. *Int J Transgend.* 2018;19(2):251 268

47. Olson KR. Prepubescent transgender children: what we do and do not know. *J Am Acad Child Adolesc Psychiatry.* 2016;55(3):155 156.e3

I was surprised first by the AAP's claim that watchful waiting's delay to puberty was somehow "arbitrary." The literature, including AAP's sources, repeatedly indicated the pivotal importance of puberty, noting that outcomes strongly diverge at that point. According to AAP reference 29, in "*prepubertal* boys with gender discordance—including many without any mental health treatment—the cross gender wishes usually fade over time and do not persist into adulthood, with only 2.2% to 11.9% continuing to experience gender discordance" (Adelson & AACAP, 2012, p. 963, italics added), whereas "when gender variance with the desire to be the other sex is present *in adolescence,* this desire usually does persist through adulthood" (Adelson & AACAP, 2012, p. 964, italics added). Similarly, according to AAP reference 40, "Symptoms of GID *at prepubertal ages* decrease or even disappear in a considerable percentage of children (estimates range from 80–95%). Therefore, any intervention in childhood would seem premature and inappropriate. However, GID persisting *into early puberty* appears to be highly persistent" (Cohen-Kettenis et al., 2008, p. 1895, italics added). That follow-up studies of prepubertal transition differ from postpubertal transition is the very meaning of non-arbitrary. AAP gave readers exactly the reverse of what was contained in its own sources. If AAP were correct in saying that puberty is an arbitrarily selected age, then AAP will be able to offer another point to wait for with as much empirical backing as puberty has.

Next, it was not clear on what basis AAP could say that watchful waiting withholds support—AAP cited no support for its claim. The people in such programs often receive substantial support during this period. Also unclear is on what basis AAP could already know exactly which treatments are "critical" and which are not—Answering that question is the very purpose of this entire endeavor. Indeed, the logic of AAP's claim appears entirely circular: It is only if one were already pre-convinced that gender affirmation is the only acceptable alternative that would make watchful waiting seem to withhold critical support—What it delays is gender affirmation, the method one has already decided to be critical.

Although AAP's next claim did not have a citation appearing at the end of its sentence, binary notions of gender were mentioned both in references 45 and 47. Specifically, both pointed out that existing outcome studies have been about people transitioning from one sex to the other, rather than from one sex to an in-between status or a combination of masculine/feminine features. Neither reference presented this as a reason to reject the results from the existing studies of complete transition however (which is how AAP cast it). Although it is indeed true that the outcome data have been about complete transition, some future study showing that partial transition shows a different outcome would not invalidate what is known about complete transition. Indeed, data showing that partial transition gives better outcomes than complete transition would, once again, support the watchful waiting approach which AAP rejected.

Next was a vague reference alleging concerns and criticisms about early studies. Had AAP indicated what those alleged concerns and flaws were (or which studies they were), then it would be possible to evaluate or address them. Nonetheless, the argument is a red herring: Because all of the later studies showed the same result as did the early studies, any such allegation is necessarily moot.

Reference 47 was a one-and-a-half page commentary in which the author off-handedly mentions criticisms previously made of three of the eleven outcome studies of GD children, but does not provide any analysis or discussion. The only specific claim was that studies (whether early or late) had limited follow-up periods—the logic being that had outcome researchers lengthened the follow-up period, then people who seemed to have desisted might have returned to the clinic as

cases of "persistence-after-interruption." Although one could debate the merits of that prediction, AAP instead simply withheld from the reader the result from the original researchers having tested that very prediction directly: Steensma and Cohen-Kettenis (2015) conducted another analysis of their cohort, by then ages 19–28 (mean age 25.9 years), and found that 3.3% (5 people of the sample of 150) later returned. That is, in long-term follow-up, the childhood sample showed 66.7% desistence instead of 70.0% desistance.

Reference 45 did not support the claim that watchful-waiting is "outdated" either. Indeed, that source said the very opposite, explicitly referring to watchful waiting as the *current* approach: "Put another way, if clinicians are straying from SOC 7 guidelines for social transitions, not abiding by the watchful waiting model *favored by the standards,* we will have adolescents who have been consistently living in their affirmed gender since age 3, 4, or 5" (Ehrensaft et al., 2018, p. 255). Moreover, Ehrensaft et al. said there are cases in which they too would still use watchful waiting: "When a child's gender identity is unclear, the watchful waiting approach can give the child and their family time to develop a clearer understanding and is not necessarily in contrast to the needs of the child" (p. 259). Ehrensaft et al. are indeed critical of the watchful waiting model (which they feel is applied too conservatively), but they do not come close to the position the AAP policy espouses. Where Ehrensaft summaries the potential benefits and potential risks both to transitioning and not transitioning, the AAP presents an ironically binary narrative.

In its policy statement, AAP told neither the truth nor the whole truth, committing sins both of commission and of omission, asserting claims easily falsified by anyone caring to do any fact-checking at all. AAP claimed, "This policy statement is focused specifically on children and youth that identify as TGD rather than the larger LGBTQ population"; however, much of that evidence was about sexual orientation, not gender identity. AAP claimed, "Current available research and expert opinion from clinical and research leaders … will serve as the basis for recommendations" (pp. 1–2); however, they provided recommendations entirely unsupported and even in direct opposition to that research and opinion.

AAP is advocating for something far in excess of mainstream practice and medical consensus. In the presence of compelling evidence, that is just what is called for. The problems with Rafferty, however, do not constitute merely a misquote, a misinterpretation of an ambiguous statement, or a missing reference or two. Rather, AAP's statement is a systematic exclusion and misrepresentation of entire literatures. Not only did AAP fail to provide compelling evidence, it failed to provide the evidence at all. Indeed, AAP's recommendations are *despite* the existing evidence.

Disclosure statement

No potential conflict of interest was reported by the author.

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Steensma, T. D., & Cohen Kettenis, P. T. (2015). More than two developmental pathways in children with gender dysphoria? *Journal of the American Academy of Child and Adolescent Psychiatry, 52*, 147 148. doi:10.1016/j.jaac.2014.10.016

Wallien, M. S. C., & Cohen Kettenis, P. T. (2008). Psychosexual outcome of gender dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*, 1413 1423. doi:10.1097/CHI.0b013e31818956b9

Appendix

Count	Group	Study
2/16 4/16 10/16	gay* trans /crossdress straight*/uncertain	Lebovitz, P. S. (1972). Feminine behavior in boys: Aspects of its outcome. *American Journal of Psychiatry, 128,* 1283 1289.
2/16 2/16 12/16	trans uncertain gay	Zuger, B. (1978). Effeminate behavior present in boys from childhood: Ten additional years of follow up. *Comprehensive Psychiatry, 19,* 363 369.
0/9 9/9	trans gay	Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow up. *Journal of Pediatric Psychology, 4,* 29 41.
2/45 10/45 33/45	trans /crossdress uncertain gay	Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease, 172,* 90 97.
1/10 2/10 3/10 4/10	trans gay uncertain straight	Davenport, C. W. (1986). A follow up study of 10 feminine boys. *Archives of Sexual Behavior, 15,* 511 517.
1/44 43/44	trans cis	Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality.* New Haven, CT: Yale University Press.
0/8 8/8	trans cis	Kosky, R. J. (1987). Gender disordered children: Does inpatient treatment help? *Medical Journal of Australia, 146,* 565 569.
21/54 33/54	trans cis	Wallien, M. S. C., & Cohen Kettenis, P. T. (2008). Psychosexual outcome of gender dysphoric children. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 1413 1423.
3/25 6/25 16/25	trans lesbian/bi straight	Drummond, K. D., Bradley, S. J., Badali Peterson, M., & Zucker, K. J. (2008). A follow up study of girls with gender identity disorder. *Developmental Psychology, 44,* 34 45.
17/139 122/139	trans cis	Singh, D. (2012). *A follow up study of boys with gender identity disorder.* Unpublished doctoral dissertation, University of Toronto.
47/127 80/127	trans cis	Steensma, T. D., McGuire, J. K., Kreukels, B. P. C., Beekman, A. J., & Cohen Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: A quantitative follow up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 52,* 582 590.

*For brevity, the list uses "gay" for "gay and cis ", "straight" for "straight and cis ", etc.