COMMENTARY

Toward a broader conceptualization of trans women's sexual health

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Research on the sexual health of trans women (male-to-female spectrum transgender people), has focused primarily on sexual response and satisfaction after initiating hormone treatment or undergoing genital surgery, or on HIV-related sexual risk among trans women sexually active with cisgender (cis, i.e., non-trans) men. Given that these situations are not representative of the majority of trans women at most points in the lifecourse, a broader discussion is needed to provide sex educators, therapists, clinicians, and researchers, as well as trans women and their partners, with information needed to promote sexual health. Drawing on the theoretical constructs of cisnormativity and cissexism, as well as previously published and new data from Trans PULSE, a community-based study of trans health in Ontario, we discuss the social context and sexual realities of trans women's lives.

KEY WORDS: Trans women, health, sexual health, cisnormativity, cissexism, Trans PULSE

INTRODUCTION

Research on the sexual health of transgender and transsexual (trans) women has focused almost exclusively within three areas of inquiry: postoperative orgasmic potential and sexual satisfaction among trans women who have undergone vaginoplasty (surgical construction of a vagina) as part of a medical transition (e.g., Klein & Gorzalka, 2009), sexual desire and function among those on feminizing hormone regimens (e.g., Wierckx, Elaut, Van Hoorde, et al., 2014), and HIV-related risk among trans women who are sexually involved with cisgender (cis or non-trans) men sex partners, either through commercial sex or personal relationships (e.g., Baral et al., 2013). While important, this limited focus ignores the sexual health needs of the majority of trans women at most points in their lives. It also reinforces conceptualizations that all trans women medically transition through hormones and/or surgeries, and are heterosexual with cis man partners.

In response to this limited research, our own work with the Ontario-based Trans PULSE Project uses communitybased research to orient to trans women as a community with unique experiences. We showed that only 15% of trans women have undergone vaginoplasty; among those who indicated they had completed a medical transition, this rose to only 59% (Scheim & Bauer, 2014). Moreover, only 23% reported having a cis man sex partner in the year before data collection (Bauer, Travers, Scanlon, & Coleman, 2012). In fact, half had not had partner sex that year, reinforcing what we had heard in our earlier community soundings: that it can be very difficult to find a good lover and relationship for trans women.

What do we know then about sexual health and satisfaction for trans women who have not yet had (or do not intend to have) a vaginoplasty? Those not on feminizing hormones? Those who have not (yet) socially transitioned to live fulltime in their felt gender? What about lesbian trans women? Those with trans partners? Those whose recent sexual experiences are exclusively solo ones? These questions are rhetorical, as research has not yet been undertaken on most of these themes. In this paper we draw on our data, existing research, and our community knowledge to explore a broader range of issues regarding trans women's sexualities.

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UNDERSTANDING TRANS WOMEN'S SEXUALITY: THEORETICAL FRAMEWORK

Many sexual health issues for trans women will be already familiar to sexual educators and therapists: body image and self-esteem, prior trauma, sexual negotiation and disclosure, reproduction and contraception, preventing infection, identifying personal desires, coming to terms with sexuality, or the need for partners to change sexual activities to accommodate changing bodies. To understand what is unique for trans women's sexual health we must start by understanding the social contexts of trans women's lives. Barriers to healthy sexuality can be complicated by a range of trans-specific factors, including beauty and body standards that favour cis bodies, structural barriers to transition, traumatic interpersonal experiences, and the internalization of all these by trans women over the lifecourse. Underlying these barriers to healthy sexuality are systemic beliefs that trans women must always be different than cis women and the related historical (by some sexologists, psychiatrists and feminists) and ongoing (potentially by family, providers, partners, or potential partners) belief that trans women are actually "men," a notion that can cause great harm.

To this end, a central component of this article will be in understanding how the emerging concepts of cisnormativity and cissexism function to shape and constrain the sexual experiences of trans women and their current or potential partners. Cisnormativity, a term we first introduced with regard to trans people's participation in health care systems (Bauer et al., 2009), can also have a profound impact in more intimate contexts. It is the rarely voiced assumption that all domains of sex and gender are consistent within individuals and across the lifecourse: that a person who currently lives as a woman will identify as one and be feminine; that she was raised as a girl and will grow old as a woman; that she has a vagina and ovaries, is penetrated during sex, and has given birth to any children she has. Thus, in a cisnormative society, there is but one way to be (and become) a woman, which begins with being labelled "girl" at birth based on genital appearance. Cisnormative expectations are so pervasive that they lead to the common conflation of sex and gender. While cis women can bump up against cisnormative assumptions (e.g., that they have a uterus, though they may not), for trans women it is a continual occurrence. Related to cisnormativity is the concept of cissexism, developed and explicated by Serano (2007). It comprises the set of beliefs and resulting actions that privilege, validate, and essentialize cis identities to the exclusion of trans identities; cissexism formulates trans identities and trans bodies as less real, valid, and desirable than cis identities or bodies.

ON THE TRANS PULSE PROJECT

We have worked together on Trans PULSE, a broad communitybased study of the health of trans people in the province of Ontario. In its published work to date, Trans PULSE explored sexual health in a limited way, with a focus on HIV-related sexual risk. However, we also included survey items created from community experience to reflect concerns trans people had in sexual situations. For this commentary we have conducted additional data analysis on sexual orientation, sexrelated body worries and, among those who had socially transitioned, whether one's sex life had improved, gotten worse or stayed the same since transition. We offer these as a contribution toward broadening the discussion. We also draw on prior work by our team and others, integrated with discussion of processes affecting sexual health. We explore how cisnormativity and cissexism take shape in the sexual (experienced or desired) lives of trans women, and how they create challenges to developing a positive body image, avoiding sexual anxieties, having good sex, and forming stable healthy relationships.

We draw on findings from the first two phases of Trans PULSE. The first involved a series of community soundings (n = 85) in three cities. Grounded theory was used to develop a model of how erasure functions to render trans people and communities invisible (Bauer et al., 2009). Methods for the second phase are described in detail elsewhere (Bauer et al., 2012). Briefly, in 2009 and 2010 we conducted a survey of 433 trans participants age 16 and older, including 205 on the trans woman spectrum. We used a network-based sampling method, respondent-driven sampling, to systematically sample through social networks, (Heckathorn, 1997; Heckathorn 2002), and used data on network size to weight by the probability of recruitment (Volz & Heckathorn, 2008). Thus, our results can be interpreted to apply to the population of trans people in Ontario who know at least one other trans person. New results are displayed in Table 1 and Table 2. As we used RDS II weights for this analysis, a few results may vary slightly from our earlier result that used RDS I weights (Wejnert, 2009). We present results for trans women overall, also broken down by whether they were on feminizing hormone regimens (i.e., estrogens and/or anti-androgens). Hormone treatment is often (but not always) concurrent with social transition and can affect libido, produce changes to secondary sex characteristics (e.g., breasts), and have positive effects on mental health.

WHO ARE TRANS WOMEN?

The trans women spectrum group in Trans PULSE is diverse with regard to gender and sex. While all were assigned a male sex at birth, 7% indicated they had been diagnosed with a "medically recognized intersex condition" (Scheim & Bauer, 2014). Although 73% identified as "women" or primarily feminine, 27% did not, and may hold traditional (e.g., Aboriginal) identities or identify as bigender, agender, or genderqueer (Scheim & Bauer, 2014). Among trans women, 70% had socially transitioned to live full- or part-time in their felt gender. Hormone therapy was used by 46%. Only 25% had "completed" a self-defined medical transition which could

			By current hormone use				
	All trans woman spectrum ^a (n = 205)		on feminizing hormone therapy (n = 114)		no hormone therapy (n = 81)		
	%	95% Cl ^b	%	95% Cl ^b	%	95% Cl ^b	
Sexual orientation identity ^c							
Bisexual/pansexual	40	29, 51	41	27, 56	39	21, 56	
Gay	2	0, 4	1	0, 3	4	0, 9	
Lesbian	23	15, 31	35	22, 47	13	2, 24	
Asexual	8	2, 14	9	0, 18	7	0, 17	
Queer	14	7, 20	20	9, 31	6	1, 11	
Straight/heterosexual	26	16, 36	22	11, 32	27	10, 45	
Two-spirit	15	5, 25	8	0, 17	21	5, 36	
Not sure or questioning	15	8, 23	18	6, 30	11	1, 22	
Sexual attraction ^c							
Trans men	37	27, 47	44	30, 58	30	14, 46	
Cis men	48	37, 59	58	45, 72	41	22, 59	
Trans women	46	36, 57	60	46, 74	32	16, 48	
Cis women	57	46, 67	70	58, 82	46	29, 64	
Genderqueer persons	31	21, 41	38	24, 51	25	10, 41	
None of the above	14	5, 23	8	1, 16	16	1, 30	
Sex partners, past year ^c							
Trans men	4	0, 7	3	0, 6	4	0, 10	
Cis men	23	14, 32	19	8, 30	28	13, 44	
Trans women	14	6, 22	18	7, 30	10	0, 21	
Cis women	24	15, 32	18	9, 27	31	16, 46	
Genderqueer persons	3	1, 5	4	1, 7	2	0, 4	

Table 1. Sexual orientation of trans women in Ontario, Canada

Bold = p < 0.05 (Rao-Scott chi-square test)

a "trans woman spectrum" includes those labelled male at birth who do not identify as men, but identify as women or as another gender

 $^{b}95\% \ CI = 95\% \ CI$

^c Survey items were check-all-that-apply. Responses will sum to more than 100%.

involve different combinations of hormones and/or surgeries, while 32% indicated they were in process and 15% were planning to, but had not begun. Not all indicated a need to transition; 11% reported that the concept of "transitioning" did not apply to them.

In our study, trans women as a whole were younger than the broader Ontario population (Bauer et al., 2012). A trend that has been widely noted, but not yet quantitatively confirmed, is that trans women are transitioning younger. Today many socially transition as children or youth. In Canada, referrals of trans youth to endocrine clinics have increased dramatically over the past decade (unpublished data), and puberty-delaying drugs are being used to prevent unwanted secondary sex characteristics (e.g., voice change, growth spurt, facial hair) from developing in these young women before initiating hormone therapy (Khatchadourian, Amed, & Metzger, 2014). We do not yet know how the earlier reinforcement of their gender identities nor how different social, medical or family experiences of these younger transitioners might shape their later sexual lives in ways that are different than the current generation of trans women, many of whom transitioned at later ages or have not transitioned.

Within the world of sexual health, trans women may be sexual education participants and sex educators, counsellors and counselling clients, researchers and research participants, sexual beings and partners to sexual beings. Trans women can be lesbian, bi, or straight, members of religious groups, racialized, experience disability, or be survivors of trauma or sexual assault. Together these may give rise to experiences that shape their sexual lives just as much as being trans does. While trans identities have historically been pathologized (e.g., gender identity disorder (APA, 2000) and to perhaps a lesser extent now with gender dysphoria in the DSM-V (APA, 2013)), in this article we orient to trans women as a diverse community of women, not as a diagnostic category.

SEX, GENDER, AND SEXUAL ORIENTATION

To some degree, the routine use of the acronym "LGBT" to refer to sexual minorities perpetuates the misconception that trans people constitute a sexual orientation. While "LGB" (lesbian, gay, bisexual) persons constitute minority sexual orientations, "T" (trans) refers instead to a *gender* minority.

Table 2. Sexual activities and concerns of trans women in Ontario, Canada

			By current hormone use			
	All trans woman spectrum ^a (n = 205)		on feminizing hormone therapy (n = 114)		no hormone therapy (n = 81)	
	%	95% Cl ^b	%	95% Cl ^b	%	95% Cl ^t
0	51	40, 62	50	36, 64	50	32, 68
1	25	16, 34	33	20, 47	17	6, 27
2–4	13	6, 19	12	5, 18	14	2, 26
5+	12	4, 19	5	1, 9	19	5, 34
Sexual activities, past year ^c		.,		_, -		-,
Received oral sex	36	26, 47	32	20, 44	43	26, 61
Gave oral sex	45	34, 57	45	30, 59	48	30, 67
Receptive partner in anal sex	30	20, 40	22	11, 33	39	22, 57
Insertive partner in anal sex	15	8, 23	10	4, 17	22	7, 37
Receptive partner in vaginal sex	16	8, 24	22	10, 34	9	0, 20
Insertive partner in vaginal sex	29	20, 39	26	14, 38	35	17, 52
Worry about physical safety in sexual situations ^d	25	20, 00	20	14, 00	00	17, 52
Not at all	30	19, 42	31	17, 44	30	12, 48
Slightly or somewhat	30	27, 51	45	30, 60	30	12, 48
Moderately or very much	39	19, 42	43 24	30, 00 13, 36	32	13, 50 19, 59
Worry that when naked, partner will not see as true gender ^d	31	19, 42	24	13, 30	39	19, 59
	20	10.00	14	C 01	07	0 47
Not at all	20	10, 30	14	6, 21	27	8, 47
Slightly or somewhat	23	13, 32	32	18, 46	12	2, 21
Moderately or very much	57	46, 69	54	40, 69	61	42, 80
Worry that few will want to have sex because transd	45	7 00		0.00	4.0	4 00
Not at all	15	7, 23	14	6, 22	16	1,30
Slightly or somewhat	29	18, 40	27	14, 40	31	13, 50
Moderately or very much	56	45, 68	59	45, 73	53	33, 73
Worry that people only want to have sex because trans ^d						
Not at all	34	21, 46	21	11, 32	50	28, 71
Slightly or somewhat	41	29, 53	49	34, 63	32	13, 51
Moderately or very much	25	15, 35	30	17, 43	18	3, 34
Worry cannot have sex desired until a(nother) surgery ^d						
Not at all	43	30, 56	38	24, 53	49	27, 70
Slightly or somewhat	16	7, 24	16	5, 27	15	5, 26
Moderately or very much	41	29, 54	46	31, 61	36	15, 56
Change in quality of sex life with transition or coming out ^e						
Improved	37	24, 49	38	24, 52	36	11, 61
Worsened	29	17, 42	33	18, 48	22	0, 46
No change	22	12, 33	21	8, 35	25	7, 43
Not applicable	12	5, 19	8	1, 15	17	3, 31

Bold = p < 0.05 (Rao-Scott chi-square test)

a "trans woman spectrum" includes those labelled male at birth who do not identify as men, but identify as women or as another gender

 b 95% CI = 95% CI

° Survey items were check-all-that-apply. Responses will sum to more than 100%.

 $^{\rm d}\,\text{Limited}$ to those who have ever had sex (n = 174)

^e Limited to those who have ever had sex <u>and</u> who socially transitioned to live part- or full-time in felt gender (n = 147)

Physical sex and social gender are not necessarily neatly aligned. Everyone has, in addition to a *sex assigned at birth* (male or female or intersex), a *hormonal sex* (based on a preponderance of estrogen or testosterone), *genital sex* (based on morphology of genitalia), *chromosomal sex* (XX, XY, XXY, XO), *lived gender* (male; female; sometimes male, sometimes female; or something else), *gender identity* (their internal sense of being a woman, man, both, neither, or something in between), and a *gender vector* (their gender identity's relationship to sex assigned at birth: i.e., being cis or trans). Moreover, everyone (cis or trans) has a sexual orientation based on attraction, behaviour, or identity, domains which are not

necessarily concordant (Laumann, 1994). Just as cis people's sexual orientation varies along a spectrum but is typically cleaved off into separate categories, so does the sexual orientation of trans people. Trans women's sexuality is understood in relation to their gender identity. Thus, if they are attracted predominately to other women (cis or trans), trans women typically self-identify as "lesbian," "queer," or a related identity. Conversely, trans women who are attracted primarily to cis or trans men will identify as "straight" or "heterosexual."

We had previously found that most trans men were not straight (Bauer, Redman, Bradley & Scheim, 2013). Our data bear out that most trans women also do not identify as straight, nor report attraction exclusively to cis or trans men; 48% indicated attraction to cis men and 37% to trans men (it was possible to select both). Among trans women in our analysis, the most common identity was bisexual or pansexual, reported by 40%. Lesbian identity was reported by 23%, straight by 26%, and asexual by 8%. The frequency of asexual identity may be higher than population estimates (Bogaert, 2004; Poston & Baumle, 2010). An asexual orientation for trans women may indicate a lack of sexual attraction, or it may result from, as one of our participants said, the feeling that "as a trans person, sex wasn't a realm I was allowed to exist in" (Bauer, 2013). We do not know what proportion of asexual-identified trans women are aromantic. Trans women reported attraction to multiple genders of partners, ranging from 31% attracted to genderqueer persons to 57% attracted to cis women.

Sexual orientation identity and attraction differed by hormone status, though genders of sex partners did not. Trans women on feminizing hormone treatments were more likely to identify as lesbian or queer, and report attraction to trans and cis women. While not always statistically significant, we note that for all partner genders the proportions of trans women with attraction appeared higher among those on hormones. It is possible that, as hormone therapy allows for greater comfort in one's own body, it increases self-esteem and opens up feelings of attraction to others.

While stereotypes and clinic-based or HIV research convey expectations of cis men sex partners, only 23% had a cis man sex partner in the past year. Half (51%) had no partners while 24% had a cis woman sex partner, 14% a trans woman, 4% a trans man, and 3% a genderqueer person. Much sexual research on trans women, however, implicitly assumes heterosexuality (and a cis male partner), whether it is research on vaginal depth post-vaginoplasty, research on libido that assumes lack of erectile function is desirable, or research on HIV-related risk that assumes a trans woman having anal sex without a condom is the receptive partner in a semen-exposed activity. As such, identities and experiences of trans lesbians and bi women, asexuals, and trans women with trans partners are often rendered invisible in academic literature.

SEXUAL BEHAVIOURS AND EXPERIENCES OF TRANS WOMEN

We have produced data on HIV-related risk (Bauer et al., 2012; Bauer, Redman, et al., 2013), some of which relates more broadly to sexual health. For example, among trans women, 15% had engaged in commercial sex work, with 2% indicating current sex work employment (Bauer et al., 2012). While we previously examined past-year sex partner numbers, we can now see that they differ based on hormone treatment status as those on hormones had fewer past-year sex partners.

We asked about specific sexual behaviours, which could involve flesh genitals, toys, prosthetics (in the case of trans men partners), or hands/fingers. While individual trans women may have specific sexual activities they are not interested in or do not find pleasurable, trans women as a group engaged in the full range of activities. The most common were oral sex (36% had received, 45% had given). While there were no statistically significant differences in sexual behaviours related to hormone therapy status, 41% worried moderately or very much that they could not have the kind of sex they wanted until they had a (or another) surgery.

Some trans women feel an aversion to the genitals they were born with, not involving them in any way in sexual situations; one US study found that 11.5% of trans women with a partner did not allow them to touch their genitals (Iantaffi & Bockting, 2011). Others are either content with this anatomic configuration, or do not experience enough genital-specific dysphoria to undergo a painful and potentially risky surgical process. Some trans women choose to have an orchiectomy as an intermediary step before vaginoplasty or as the sole gender-confirming surgery. Many may experience genital dysphoria, but be unable to access surgical treatment due to age, contraindications to surgery, or access barriers.

Even for those who choose not to have surgery, some level of disconnect may need to be addressed in sexual situations. While specific sexual behaviours may be familiar activities (e.g., insertive "penis" in vagina sex), with trans women these activities can take on a different meaning as a type of queer or lesbian sex (akin to cis lesbians using strap-ons). Trans women often will use gender-affirming words rather than "penis," such as "clit," or "strapless" and may experience orgasms differently after hormone therapy, both physiologically (absence of, or change to, ejaculate) and subjectively (e.g., multiple orgasms). For trans women post-vaginoplasty, most but not all may be interested in having receptive sex either involvinig flesh penises (with cis men or trans women), fingers, or sex toys. Some trans women may prefer wearing dildos with strap-on harnesses themselves, including some who have not had vaginoplasty. Actual sexual activities can be more creative than those captured in survey data, and may be better understood through qualitative research.

TRANSITION AND SEXUALITY

There is often a prolonged delay between recognition of one's felt gender and social and/or medical transition. While 60% of trans women are aware that their bodies did not match their gender before the age of 10 (83% by age 14), even today most do not transition until significantly later. In addition to unwanted physical changes, messages about one's gender identity, expression and gendered self-worth may be internalized. Moreover, many trans children (pre-transition) learn that it is unacceptable to voice their identities and an extended period of secret-keeping has the potential to affect mental health and self-image, reinforcing shame. Moreover, potential future sex partners (whether trans or cis) internalize these same societal norms, which may require unlearning later in life. "Identity actualization," as it relates to trans people, involves this work of figuring out that one's gender is distinct from their sex and from externally imposed expectations, subsequently deciding what modifications to one's physical body one needs, and figuring out one's sexuality (Hammond, 2010). This introspective consideration and crystallization of trans women's sexuality and sexual identity is similar in many respects to queer cis women's formation of identity and gender expression, but there are some unique challenges that trans women must confront to achieve healthy sexualities; these challenges relate to gender dysphoria, pervasive cisnormative expectations, and internalized and external cissexism.

An approach to addressing sexual health for trans women would need to consider different issues over the lifecourse, including for youth and elders, and (for those who transition) over the course of social and medical transition at different ages. We have shown that those who were planning to medically transition but who had not begun the process were at elevated risk for psychological distress, including suicide attempts (Bauer, Pyne, Francino & Hammond, 2013). Such distress has implications for relationships, sexual partnering and sex-related worries. Moreover, because cross-sex hormones and genital surgeries are contingent on accessing medical care, barriers to access can prolong this precarious period. Assessment of the effects of transition or coming out on quality of one's sex life were mixed in our results, with 37% indicating that their sex lives had improved, and 29% worsened.

Anecdotally, transition may open up a new period of sexual exploration, including changes in sexual orientation, which may be related to hormone treatment, increasing bodily comfort, constriction or relaxation of homophobia around partner choice, or other factors. Our results showing that attraction differed by hormonal treatment status support this. Moreover, transitioning while maintaining a relationship will, in many cases, change the public representation of the sexual orientation of the couple. While it is possible that bisexual partners may adapt more readily in this regard, going from a relationship perceived as straight to gay, or gay to straight, can be a challenge for both partners. Thus, periods of social or medical transition should also be considered as transitional periods for sexuality, and may be aided with an open attitude, patience, and exploration of sexual desires and response.

REPRESENTATIONS OF TRANS WOMEN'S SEXUALITY

Further complicating issues of sexuality for trans women are the often conflicting expectations and stereotypes about what trans women are "supposed" to do and not do sexually, and what sex "means" with regard to one's gender. These issues overlap with broader expectations placed on cis women, but there are also some aspects specific to trans women. Because certain theories and representations (e.g., autogynephilia, "shemale" porn) have been culturally pervasive, and because trans women are likely to come across them, we have to question how they might impact one's sense of sexual normalcy and well-being, and to what extent these ideas, and the continued pathologizing of trans identities more broadly, may promote internalization of a negative self-image and complication of sexuality.

Sexuality for trans women can be complicated by a history of research and theory that ties sexual orientation to the etiology of transsexualism. In particular, largely discredited psychopathological theories tie male or female sexual partner choice to two pathways in the development of transsexualism (Blanchard, 1989). Under autogynephilia theory (Bailey, 2003), trans women attracted to men are so gay they become women to attract straight men, and trans women attracted to women are so fetishistic that they become women in response to their own attraction to the idea of themselves as women. Within trans communities, these theories are considered extremely problematic and pathologizing as they reinforce cisnormative and heteronormative understandings of sexuality, and resonate with very few trans women (Serano, 2007). They have been critiqued for positioning all trans lesbians or bi women as fetishists, and for sexualizing a not-necessarily-sexual part of one's identity (gender). Moreover, the theory of autogynephilia has been critiqued for ignoring that behaviours such as dressing up for sex or masturbation are also common among cis women (Moser, 2009), and for ignoring that most people imagine themselves based on internal identity or understanding when fantasizing about sex (Serano, 2007). Thus, for trans women who have not medically transitioned, sexual fantasies will often involve imagining themselves with breasts or a vagina, and such fantasies are consistent with sexual fantasy more broadly.

In an age in which accessible internet porn increasingly shapes sexual expectations for all women, confronting the "shemale" stereotype can also be a challenging process for trans women. Ubiquitous in porn made by and for cis men, shemale stereotypes project a monolithic eroticized image of trans women as having large (often enhanced) breasts but no vagina, using their flesh penises to penetrate partners, and ejaculating. This same anatomic and physiologic combination is what is marketable to cis male clients in sex work and strip bars. Related is the prevailing stereotype that many trans women are themselves sex workers. While we found a significant number in our study had done sex work (15%), it was a minority. While it is possible for sex work to be a validating and empowering experience for trans women, the linking of trans women with sex work can contribute to perceptions that trans women are suitable for occasional sex, but not long-term intimate partnerships.

When one sees representations of trans women who are valued primarily for their flesh penises and has to juxtapose them with theories that asserts that "real" trans women must abhor this very same body part, it can be difficult to figure out how to relate to one's genitals, let alone the totality of one's sexuality. What makes this work additionally challenging is the way that one's seeming validity as a "proper" trans woman (and thus as a "real" woman) gets wrapped up in sexuality, and also the internalization of sexist ideals regarding female sexuality more broadly (e.g., passivity, receptivity, femininity). Particularly in the absence of exposure to alternative resources (e.g., trans-positive theory, trans erotica, feminist porn), it can be difficult and time-consuming for trans women to parse apart their own interests and desires from these representations and ideals.

TRANS WOMEN AND POTENTIAL PARTNERS

There are likely multiple factors affecting the high proportion of trans women (51%) who have not had a sex partner within the past year. While researchers note a prevalence of hypoactive sexual desire disorder in trans women post-hormone treatment (Wierckx, et al., 2014) or genital surgery (Klein & Gorzalka, 2009), this is similar to cis women (20-30%). Other factors are likely related to difficulties in finding good partnerships, short or long-term. Portrayals in research, porn and popular culture of trans women as fetishists or sex workers can reinforce dynamics wherein potential partners (cis men, in particular) may be interested in sex with trans women as a fetish or in an attempt to have sex they believe is adventurous or kinky. Among trans women, 66% worried that people might only want to have sex with them because they are trans. Conversely, 85% also worried that few people would want to have sex with them because they are trans. These twin concerns represent flip sides of a cissexist coin. While it is easy to see how fear of, or aversion to, trans women as partners is a direct product of cissexism, the fetishization of trans women is also a function of the way cissexism makes sense of trans bodies as different, and therefore "kinky."

Finding sexual partners can be, at times, dangerous. Cisnormativity creates pressures related to disclosure of one's trans status or history in intimate relationships. Cissexism further complicates this and is evidenced, at its extreme, by the "trans panic" that can occur when a cis partner learns that they are attracted to (or may have had sex with) a trans woman. Trans women who have socially transitioned experience the same risks of sexualized violence cis women do as well as the potential backlash that can occur if they do not disclose (and sometimes even when they do). In sexual situations, 31% of trans women worried moderately or very much about their physical safety; another 39% worried slightly or somewhat.

While many cis people may accept trans women to be women in many contexts, for example as co-workers, when it comes to sex and sexuality they may not. This is evident in our data, wherein the majority of trans women worried that, when naked, their partners would not see them in their true gender. While trans advocates have helped make visible the exclusion of trans women as desirable partners and the stigma that partners of trans women may experience (e.g., Deveaux, 2012), some responses to such advocacy efforts have been vitriolic, in particular by trans-exclusionary radical feminists who equate trans women with men, and sex with rape (e.g., Jeffreys, 2014). While Jeffreys and others actively oppose trans equality, for most, cissexist schemas are reflexively incorporated into their own understanding of who they consider to be desirable, akin to how other normative schemas shape desire and beauty standards. The impact of this is that trans women in the process of seeking out potential partners have to continually risk experiencing invalidation and rejection. Trans people themselves are not immune from the impacts of cissexist standards of desirability. We found that trans women were more likely to be attracted to cis men or women than to trans men or women by a difference of approximately 10%. While analogous research on sexual attraction has not yet been undertaken with an exclusively cis population, it is likely that a preference for cis partners (as opposed to trans partners) would be even greater in the broader cis population.

CURRENT PARTNERS OF TRANS WOMEN

An under-studied and little-understood population are the partners of trans women. They may be lesbian women or straight men who make a choice (either before or after having met a particular trans woman) to include trans women within their broader attraction to women. Others may identify as bi or pansexual, and simply not care whether their partner is cis or trans. Others still may be attracted to gender nonnormative people, and yet others were partnered with a trans woman pre-transition, maintaining the relationship through changes in lived gender. While we draw on the experience of trans researchers, partners, and community, the fact remains that very little knowledge exists about partners of trans women, why they choose to enter into or remain in sexual relationships with trans women, and what factors impact the quality of their sexual partnerships.

It is reasonable to assume that trans women's partners internalize some of the same messages as trans women and are confronted with some of the same challenges regarding the views of others. For example, cis men or women partnered with trans women may be labelled by others as fetishists. Others may find the legitimacy of their own sexual orientation identities called into question, with cis male partners questioned as to whether they are really gay, and cis lesbian partners viewed as illegitimate lesbians. Long-term partners who choose to stay with trans women as they transition from male to female (or to genderqueer) may have to confront assumptions that they will end their relationship, or questions as to why they did not. While it does not explicitly address sex, a recent study of trans women and their cis male partners found that relationship stigma impacted the mental health of both partners as well as relationship quality (Gamarel, Reisner, Laurenceau, Nemoto, & Operario, 2014), and additional research is needed to understand the effects of cissexism and relationship stigma on trans women and their partners of all genders.

SEXUAL HEALTH BASICS: INFECTIONS, SCREENING, FERTILITY, AND CONTRACEPTION

Sexually transmitted infections, bacterial vaginosis (BV), cancer screening, fertility, and contraception are common considerations within sex education and clinical care for all women, including trans women. Hormones change the volume and composition of sex fluids, yet it is not known how these may or may not impact viral loads for fluid-borne infections (e.g., HIV). Cases of human papillomavirus-associated lesions (Weyers et al., 2010) as well as bacterial infections (e.g., gonorrhea) (Bodsworth, Price, & Davies, 1994) have been documented in the neovaginas of trans women. BV may be common in trans women and can have symptoms that affect one's sexual well-being (e.g., odour, discharge). One study (Weyers et al., 2009; n = 50) found that nearly all participants lacked neovaginal lactobacilli and most evidenced a complex microflora similar to BV. A recent trial suggests that supplementation with oral probiotics may help trans women achieve a more balanced microflora and reduce BVlike symptoms (Kaufmann et al., 2014). While trans women who have had vaginoplasty will generally not have a cervix, and may have a lower risk than cis women for gynecological and breast cancers, general screening guidelines can be applied to trans women (Canadian Cancer Society, 2014; Sherbourne Health Centre, 2014). This includes vaginal vault Pap smears, and breast and prostate cancer screening, although risk for the latter is likely low if on hormone treatment.

Fertility can be a concern; 24% of trans people are parents while 32% want (additional) future children (Pyne, Bauer, & Bradley, 2015). Alternatively, some trans women may be trying to avoid an unintended pregnancy. It should not be assumed that hormone treatment provides contraception for trans women partnered with fertile cis women or trans men (for whom testosterone is also not a reliable contraceptive). Discussion of sperm banking should always precede hormone treatment to permit the future possibility of biological children with a cis woman or trans man, or via surrogate (T'Sjoen, Van Caenegem, & Wierckx, 2013).

MOVING FORWARD: FROM TRANSEXUALITY TO TRANS SEXUALITIES

To begin to understand trans women's sexuality, we need to recognize that sexual orientation and gender identity are separate and distinct and dispatch the notion that sexuality is linked to the etiology of transgenderism. We must shift our focus from using sex to try to understand transsexuality to making sense of trans sexualities.

Sexuality educators and counsellors can draw on their skills and knowledge of cisgender sexual health, aided by consideration of how the cisnormative context of our social world and cissexist experiences may impact the intimate lives of trans women and their partners. Trans women may need support to unravel internalized ideas of how sex "should be" for women generally, or for trans women specifically, and to explore and embrace a sexuality unencumbered by stereotypes and expectations.

Current resources for counselling trans women and couples rarely address the sexual aspects of relationships in any depth and more sexual health resources are needed. Recent work from the trans community has provided the first realistic representations of how trans women have sex and relate to their bodies. For example, Trans Bodies, Trans Selves includes a chapter on intimate relationships by Sarah E. Belawski and Cary Jean Sojka (2014) and a chapter on sexuality by Tobi Hill-Meyer and Dean Scarborough (2014). Internet-available sexuality and infection-prevention resources include Brazen: Trans Women's Safer Sex Guide (Page, 2013), Trans Women: Trans Health Matters (Terrence Higgins Trust, 2012) and Fucking Trans Women: A Zine about the Sex Lives of Trans Women (Bellwether, 2010). Books of trans erotica including multiple short stories (Taormino, 2011; Blank & Kaldera, 2002) can aid trans people and their partners to explore sexual desire. Trans women's sexuality is also represented in varying forms within the feminist queer porn movement of the past decade. Directors such as Courtney Trouble, Shine Louise Houston, and Tobi Hill-Meyer have actively represented a diversity of women's bodies in their work, including trans women who have, and have not, had vaginoplasty.

New cancer screening materials have been developed for trans women. In particular the Canadian Cancer Society's "Get Screened" campaign provides cancer prevention information for trans women and health providers (Canadian Cancer Society, 2014). Since trans-specific resources such as these generally do not combat the broader systemic erasure of trans women's sexuality, it is also important to consider trans inclusion when developing programs or carrying out research with the broader population so that trans women are actively included. Considerations in identifying and including trans participants in survey research have been published (Bauer, 2012), but trans women are often still not

Table 3. Suggestions for research, practice, a	and supporting trans women's sexual health
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Sector	Information or practice needs
Sexuality Research	 Avoid assumptions that research participants will be cis Avoid making assumptions about sexual activity, preferences, or orientation of trans women or their partners Collect data in a way that permits identification of trans women If talking about cis women, use "cis" rather than "biological," "natal" or "normal" women Involve trans people as researchers, if possible, as well as participants Describe the partners of trans women, including those who partner before, during or after social or medical transition Develop a deeper understanding of the relationship of trans women to their body (including but not limited to their genitals), and how this impacts sex Describe sexual health of trans women and their partners of all genders Identify factors that impact sexual health and relationship quality of trans couples Explore the sexuality and sexual health of trans women who have chosen to not (or not yet) transition, but who identify as female or primarily feminine Explore the sexuality of trans women who have not recently engaged in partner sex, including asexual women Explore impacts of transition on sexuality at different ages, different life-points, and in different eras (rearding roleting to the partners)
	 (regarding relative levels of social acceptance) Explore how young age of transition (before or during puberty) shapes sexual identity and experience Identify trans women in existing HIV and sexually transmitted infection surveillance studies, to more accurately estimate risk and prevalence Quantify the impacts of hormone treatment on fertility
Sex Education	 Quantify cancer risks (i.e., prostate, neovaginal, penile, breast) for trans women Avoid assumptions that clients, participants or their partners are cis Develop sexual health education for trans youth within school curricula Incorporate varied trans bodies into sexually transmitted infection prevention and safer sex information Develop and use sex education materials (video and print) on sexual activities for trans women and their partners of varying sexes/genders, including for those with disabilities or who are aging Avoid making assumptions about sexual activity, preferences, or orientation of trans women or their partners
Clinical Care	 Avoid assumptions that patients or their partners are cis Recognize that not all medical issues relate to a client's gender identity or hormone treatment In primary care, consider using established protocols to provide hormone therapy to trans clients in uncomplicated cases, particularly as not receiving transition care when needed increases distress and suicide risk Provide counselling on fertility preservation options before initiating hormone treatment Provide clear contraceptive information for trans women with fertile cis women or trans men partners Assist with access to reproductive assistance services Provide trans-competent testing and treatment of sexually transmitted infections Provide support and care after vaginoplasty (post-surgical and long-term) Screen for cancer, sexually transmitted infections and bacterial vaginosis as appropriate Screen for sexual or physical violence in relationships Avoid making assumptions about sexual activity, preferences, or orientation of trans women or their partners
Counselling	 Partners Avoid assumptions that clients or their partners are cis Offer couples counselling, including sexual issues, for trans women and their partners of all genders Ensure that counselling on body image and self-esteem considers the impacts of cisnormativity and cissexism Support trans women in exploring and understanding their sexuality, and in developing language to discuss sexuality, sexuality disclosure, and negotiating sexual situations Avoid making assumptions about sexual activity/preferences/orientation of trans women or their partners Provide support for how sexuality may change over the course of social and/or medical transition, and over the lifecourse

identified in research. For example, Ontario's HIV epidemiological tracking is limited to two sex/genders ("male" or "female") but also includes gender-related "risk factors" (i.e., "sex with men" and "sex with women") that base risk on cisnormative assumptions. While "best practices" for trans inclusion in programming are not clear, some good examples exist, such as sexuality retailer and educator Good for Her (2014) in Toronto, which makes explicit "that when women is indicated, this includes trans women" in its advertising of limited-attendance workshops.

Drawing from our research and community knowledge, we offer specific suggestions for research and practice with trans women in the fields of sexuality research, education, health care delivery, and counselling, which we have summarized in Table 3. More generally, they encompass a few key themes. First, avoid cisnormative assumptions and recognize that research participants, clients, patients and program participants may be trans or have trans partners. Second, identify and develop information and resources for trans women, their partners, and professionals. This works to counter the systemic erasure of trans women in research and practice contexts (Bauer et al., 2009). Third, confront cisnormativity and cissexism in research and practice, for example though affirming trans women's gender or recognizing potential need for contraception within a lesbian couple.

Working with trans women is not as daunting as it may seem. Trans women are, fundamentally, women, and those who understand women's health and their experiences will have a good foundation. In addition, beginning to think through the concepts of cisnormativity and cissexism and how these intertwine in the everyday lives of trans women and their partners will help provide a basis from which to empathize with trans women and help them develop healthy sexualities. Including trans women in research and practice is not just a matter of equity and human rights, it can also be a profoundly important and rewarding experience.

REFERENCES

- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR fourth edition* (Text Revision). Arlington, VA: American Psychiatric Association.
- American Psychiatric Association. (2013).*Diagnostic and statistical manual of mental disorders: DSM V.* Arlington, VA: American Psychiatric Association.
- Bailey, J.M. (2003). *The man who would be queen: The science of gender-bending and transsexualism*. Washington, DC: Joseph Henry Press.
- Baral, S.D., Poteat, T., Strömdahl, S., Wirtz, A.L., Guadamuz, T.E., & Beyrer, C. (2013). Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. *The Lancet. Infectious Diseases*, *13*(3), 214–222. http://dx.doi.org/10.1016/ S1473-3099(12)70315-8 Medline:23260128
- Bauer, G. (2013). It's all in the context: Structural and psychosocial challenges to HIV prevention with transgender women. In J.

Gahagan (Ed.), Women and HIV prevention in Canada: Implications for research, policy, and practice (pp. 157–174). Toronto, ON: Women's Press.

- Bauer, G.R. (2012). Making sure everyone counts: Considerations for inclusion, identification and analysis of transgender and transsexual participants in health surveys. In S. Coen & E. Banister (Eds.), What a difference sex and gender make: A gender, sex and health research casebook (pp. 59–67). Vancouver, BC: Canadian Institutes of Health Research, Institute of Gender and Health.
- Bauer, G.R., Hammond, R., Travers, R., Kaay, M., Hohenadel, K.M., & Boyce, M. (2009). "I don't think this is theoretical; this is our lives": how erasure impacts health care for transgender people. *Journal of the Association of Nurses in AIDS Care*, 20(5), 348– 361. http://dx.doi.org/10.1016/j.jana.2009.07.004 Medline:19732694
- Bauer, G.R., Pyne, J., Francino, M.C., & Hammond, R. (2013). Suicidality among trans people in Ontario: Implications for social work and social justice / La suicidabilité parmi les personnes trans en Ontario: Implications en travail social et en justice sociale. *Revue. Service Social*, 59(1), 35–62. http://dx.doi.org/ 10.7202/1017478ar
- Bauer, G.R., Redman, N., Bradley, K., & Scheim, A.I. (2013). Sexual health of trans men who are gay, bisexual, or who have sex with men: Results from Ontario, Canada. *International Journal of Transgenderism*, 14(2), 66–74. http://dx.doi.org/10.1080/ 15532739.2013.791650 Medline:24971043
- Bauer, G.R., Travers, R., Scanlon, K., & Coleman, T.A. (2012). High heterogeneity of HIV-related sexual risk among transgender people in Ontario, Canada: a province-wide respondent-driven sampling survey. *BMC Public Health*, 12(1), 292. http:// dx.doi.org/10.1186/1471-2458-12-292 Medline:22520027
- Belawski, S.E., & Sojka, C.J. (2014). Intimate relationships. In L. Erikson-Schroth (Ed.), *Trans bodies, trans selves* (pp. 335– 354). New York, NY: Oxford University Press.
- Bellwether, M. (2010). Fucking trans women: A zine about the sex lives of trans women. URL: http://fuckingtranswomen.tumblr.com/
- Blanchard, R. (1989). The concept of autogynephilia and the typology of male gender dysphoria. *Journal of Nervous and Mental Disease*, 177(10), 616–623. http://dx.doi.org/10.1097/00005053-198910000-00004 Medline:2794988
- Blank, H. & Kaldera, R. (Eds.). (2002). Best transgender erotica. Cambridge, MA: Circlet Press.
- Bodsworth, N.J., Price, R., & Davies, S.C. (1994). Gonococcal infection of the neovagina in a male-to-female transsexual. *Sexually Transmitted Diseases*, 21(4), 211–212. http://dx.doi.org/10.1097/ 00007435-199407000-00005 Medline:7974071
- Bogaert, A.F. (2004). Asexuality: prevalence and associated factors in a national probability sample. *Journal of Sex Research*, 41(3), 279–287. http://dx.doi.org/10.1080/00224490409552235 Medline:15497056
- Canadian Cancer Society (2014). Get Screened: Trans Women and People on the Spectrum. URL: http://convio.cancer.ca/site/ PageServer?pagename=SSL_ON_TW_Home
- Deveaux, D. (2012). What we're all here for. Keynote address. No more apologies: Queer trans and cis women, coming/cumming together. Toronto, ON. January, 21st, 2012.

Gamarel, K.E., Reisner, S.L., Laurenceau, J.-P., Nemoto, T., & Operario, D. (2014). Gender minority stress, mental health, and relationship quality: a dyadic investigation of transgender women and their cisgender male partners. *Journal of Family Psychology*, *28*(4), 437–447. http://dx.doi.org/10.1037/a0037171 Medline:24932942

Good for Her (2014). Sexuality Workshops. URL: http://www.goodforher.com/catalog/sexuality_workshops

Hammond, R. (2010). *The social organization of health care for trans youth in Ontario*. (Master's Thesis, Dalhousie University).

Heckathorn, D.D. (1997). Respondent-driven sampling: A new approach to the study of hidden populations. *Social Problems*, 44(2), 174–199. http://dx.doi.org/10.2307/3096941

Heckathorn, D.D. (2002). Respondent-driven sampling II: Deriving valid estimates from chain-referral samples of hidden populations. *Social Problems*, 49(1), 11–34. http://dx.doi.org/10.1525/sp.2002.49.1.11

Hill-Meyer, T., & Scarborough, D. (2014). Sexuality. In L. Erikson-Schroth (Ed.), *Trans bodies, trans selves* (pp. 355–389). New York, NY: Oxford University Press.

Iantaffi, A., & Bockting, W.O. (2011). Views from both sides of the bridge? Gender, sexual legitimacy and transgender people's experiences of relationships. *Culture, Health & Sexuality*, 13(3), 355–370. http://dx.doi.org/10.1080/13691058.2010.537770 Medline:21229422

Jeffreys, S. (2014). Gender hurts: A feminist analysis of the politics of transgenderism. New York, NY: Routledge.

Kaufmann, U., Domig, K.J., Lippitsch, C.I., Kraler, M., Marschalek, J., Kneifel, W., ..., & Petricevic, L. (2014). Ability of an orally administered lactobacilli preparation to improve the quality of the neovaginal microflora in male to female transsexual women. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, 172, 102–105. http://dx.doi.org/10.1016/ j.ejogrb.2013.10.019 Medline:24239295

Khatchadourian, K., Amed, S., & Metzger, D.L. (2014). Clinical management of youth with gender dysphoria in Vancouver. *The Journal of Pediatrics*, 164(4), 906–911. http://dx.doi.org/10.1016/ j.jpeds.2013.10.068 Medline:24315505

Klein, C., & Gorzalka, B.B. (2009). Sexual functioning in transsexuals following hormone therapy and genital surgery: a review. *The Journal of Sexual Medicine*, 6(11), 2922–2939, quiz 2940–2941. http://dx.doi.org/10.1111/j.1743-6109.2009.01370.x Medline:20092545

Laumann, E.O. (1994). *The Social organization of sexuality: Sexual practices in the United States.* Chicago, IL: University of Chicago Press.

Moser, C. (2009). Autogynephilia in women. Journal of Homosexuality, 56(5), 539–547. http://dx.doi.org/10.1080/ 00918360903005212 Medline:19591032

Page, M.M. (2013). Brazen: Trans women's safer sex guide. Toronto, ON: The 519 Church Street Community Centre. URL: http://librarypdf.catie.ca/pdf/ATI-20000s/26424.pdf. Poston, D.L., Jr., & Baumle, A.K. (2010). Patterns of asexuality in the United States. *Demographic Research*, 23, 509–530. http:// dx.doi.org/10.4054/DemRes.2010.23.18

Pyne, J., Bauer, G.R., & Bradley, K. (2015). Transphobia and other stressors impacting trans parents in Ontario, Canada. *Journal of GLBT Family Studies*.

Scheim, A.I., & Bauer, G.R. (2014). Sex and gender diversity among transgender persons in Ontario, Canada: Results from a respondent-driven sampling survey. [e-pub ahead of print]. *Journal of Sex Research*, 1–14. http://dx.doi.org/10.1080/ 00224499.2014.893553 Medline:24750105

Serano, J. (2007). Whipping girl: A transsexual woman on sexism and the scapegoating of femininity. Emeryville, CA: Seal Press.

Sherbourne Health Centre (2014). Guidelines and Protocols for Trans Care. Toronto, ON: Sherbourne Health Centre. Accessed online November 17, 2014 http://sherbourne.on.ca/lgbt-health/ guidelines-protocols-for-trans-care/

T'Sjoen, G., Van Caenegem, E., & Wierckx, K. (2013). Transgenderism and reproduction. *Current Opinion in Endocrinology*, *Diabetes, and Obesity*, 20(6), 575–579. http://dx.doi.org/10.1097/ 01.med.0000436184.42554.b7 Medline:24468761

Taormino, T. (Ed.). (2011). *Take me there: Trans and genderqueer erotica*. Berkeley, CA: Cleis Press.

Terrence Higgins Trust (2012). Trans women: Trans health matters. URL: http://www.tht.org.uk/~/media/ 4653AA766E3F4C1286FC515F17146F32.ashx.

Volz, E., & Heckathorn, D.D. (2008). Probability-based estimation theory for respondent driven sampling. *Journal of Official Statistics*, 24(1), 79–97.

Wejnert, C. (2009). An empirical test of respondent-driven sampling: Point estimates, variance, degree measures, and out-of-equilibrium data. *Sociological Methodology*, *39*(1), 73–116. http://dx.doi.org/10.1111/j.1467-9531.2009.01216.x Medline:20161130

Weyers, S., Lambein, K., Sturtewagen, Y., Verstraelen, H., Gerris, J., & Praet, M. (2010). Cytology of the 'penile' neovagina in transsexual women. *Cytopathology*, 21(2), 111–115. http://dx.doi.org/ 10.1111/j.1365-2303.2009.00663.x Medline:19735277

Weyers, S., Verstraelen, H., Gerris, J., Monstrey, S., dos Santos Lopes Santiago, G., Saerens, B., ..., & Verhelst, R. (2009). Microflora of the penile skin-lined neovagina of transsexual women. *BMC Microbiology*, 9(1), 102. http://dx.doi.org/10.1186/1471-2180-9-102 Medline:19457233

Wierckx, K., Elaut, E., Van Hoorde, B., Heylens, G., De Cuypere, G., Monstrey, S., ..., & T'Sjoen, G. (2014). Sexual desire in trans persons: associations with sex reassignment treatment. *The Journal of Sexual Medicine*, 11(1), 107–118. http://dx.doi.org/ 10.1111/jsm.12365 Medline:24165564