# Title

“I Couldn’t Imagine My Life Without It”: Australian Trans Women’s Experiences of Sexuality, Intimacy, and Gender-Affirming Hormone Therapy

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# Abstract

Despite the increased visibility and knowledge in the area of transgender health, the sexual health and experiences of transgender women undergoing Gender-Affirming Hormone Therapy (GAHT) are still under- researched; often, the effects of GAHT on trans women’s sexuality are broadly miscategorised as ‘erectile dysfunction’.This study aimed to provide an exploration of trans women’s negotiation of the psycho- and physiosexual shifts which result from GAHT. Twelve participants (including one pilot) took part in hour-long semi-structured interviews, with two providing a secondary interview for further data triangulation. These interviews were manually transcribed, coded, and final themes were identified and titled from participants’ own words. The interviewer also maintained a journal which they used to provide further depth, reflection, and insight to the emerging themes.The final analysis identified four themes: overall experiences, physiological changes, psychological changes, and shifts in experiences of orgasm. Most participants had positive and/or affirming experiences of sexuality while medically transitioning. One important, and significantly under- researched, experience described by participants was the development of new erogenous zones; for many, their source of sexual pleasure and climax had shifted partially if not entirely away from their genitals and towards nipples, legs, backs, or other body parts. These findings highlight the dearth of medical knowledge in the area of sexual function and pleasure for trans women undergoing GAHT, and provide an impetus for a systematic reimagining of how clinical practitioners might negotiate their treatment of a transgender client.

Keywords: transgender, HRT, girlgasms, hormones, erectile dysfunction

# Introduction

Gender-Affirming Hormone Therapy (GAHT) is a medical treatment used by transgender women as a medical means of improving their wellbeing, primarily by alleviating gender dysphoria, the distress caused by a misalignment between a person’s gender and the sex they were assigned at birth (Knudson et al. 2010; Hwahng & Nuttbrock 2014; White Hughto & Reisner 2016; Coleman, 2017). It typically includes hormonal medication which increases oestrogens and suppresses androgens (Tangpricha et al. 2003; Radix 2016; Coleman 2017), and documented physiological outcomes include breast tissue development, body fat redistribution (i.e. wider hips, more facial fatty tissue), the slowing of testosterone-induced hair loss, muscle mass reduction, and softening of skin (Cohen-Kettenis & Gooren 1999; Weyers et al. 2009; Knezevich et al. 2012; Radix 2016). Current research on GAHT focuses on physiological effects and potential health risks, as well as the psychological benefits of treatment (Wierckx et al. 2012; Fabris et al. 2014; Heylens et al. 2014; Van Caenegem et al. 2014; Dhejne et al. 2016). However, there is little research on GAHT’s interaction with trans women’s sexuality (Nieder et al. 2016). The few studies which do address this area focus on sexual physiology and not sexual experiences themselves (Manieri et al. 2008; Knezevich et al. 2012; Wibowo & Wassersug 2013). Although some peer-based accounts of trans women’s sexuality do exist (Altadonna 2011; Bellwether 2013; Serano 2016; Lester 2017; Roche 2018), trans women’s experiences of GAHT and its impact on intimacy and sexual pleasure remain significantly under-researched in the academic realm (Mendelson 2015). This article will provide a discussion of a qualitative study into transgender women’s experiences with sexuality, and the impact of GAHT on those experiences.

# Background

## Medical Effects of GAHT

GAHT is a low-cost medical intervention for trans women, especially when compared with others (i.e. genital surgery, estimated at around $20,000USD) (Leinung et al. 2013). Therefore, GAHT is a common medical intervention for trans women who experience gender dysphoria (Coleman 2017). GAHT consists of either oestrogen, androgen blockers, or a combination of the two, and produces ‘feminising’ effects (Fisher & Maggi 2015; Radix 2016; Coleman 2017). These include breast tissue development, body fat redistribution (i.e. wider hips, more facial fatty tissue), the slowing of testosterone-induced hair loss, muscle mass reduction, and softening of skin (Cohen-Kettenis & Gooren 1999; Weyers et al. 2009; Knezevich et al. 2012; Radix 2016).

GAHT also positively impacts trans women’s psychological wellbeing. Australian trans women experience significant mental health issues, often due to systematic discrimination and violence (Pitts et al. 2009; Hyde et al. 2013; Riggs et al. 2015; De Cuypere & Winter 2016; Winter et al. 2016; McCann & Brown 2017). Although these can be managed by competent, well-trained staff (Riggs & Bartholomaeus 2016), several studies indicate that GAHT plays a crucial role in reducing trans women’s psychological distress and improving their quality of life (Murad et al. 2010).

Despite these benefits, and GAHT’s relative safety, some health risks remain (Meriggiola & Berra 2012; Feldman et al. 2016). These risks include cardiovascular disease and mortality (CVDM), venous thromboembolisms (VT) and bone density loss-induced osteoporosis (Toorians et al. 2003; T'Sjoen et al. 2009; Asscheman et al. 2011; Wierckx et al. 2012; Fabris et al. 2014; Van Caenegem et al. 2014). However, research outcomes remain contradictory; CVDM is often impacted by factors such as immunosuppressive conditions and substance use (Asscheman et al. 2011; Wierckx et al. 2012); both CVDM and VT are mitigated by supervision and appropriate treatment (Manieri et al. 2008; Weinand & Safer 2015), and bone density loss has either been prevented or delinked from osteoporosis by more recent studies and interventions (Miyajima et al. 2012; Fabris et al. 2014). Furthermore, multiple studies suggest that access to knowledge, informed clinical support and provision of timely prescribed treatment are the most substantial determinants in the success of a person’s GAHT process (Rotondi et al. 2013; de Haan et al. 2015; Bourgeois et al. 2016; Jaffee et al. 2016). One final health consequence of GAHT is its impact on sexuality.

## GAHT and Sexuality

Knezevich, Viereck, and Drincic (2012) highlighted the onset of ‘sexual dysfunction’ around 6 months into GAHT, which is defined as testicular atrophy and a decrease in, or complete loss of, erections (Manieri et al. 2008; Wylie et al. 2009; Radix 2016). Despite some trans women reporting spontaneous arousal and erections past that point (Fabris et al. 2014), most medical literature indicates this ‘dysfunction’ is commonplace. However, positing the impact of GAHT on sexuality as purely suppressive is oversimplifying its effects; in fact, two of the largest studied cohorts of trans women showed significant variation in sexual satisfaction based on factors such as sexuality and relationship status (Weyers et al. 2009; Wierckx et al. 2014). Current medical knowledge of trans women’s sexuality is filled with contradictions, confounding variables, over-pathologisation and inconclusive results, which leaves room for alternative, non-pathologising perspectives on GAHT and trans women’s sexuality (Atienza-macías 2015; Klein & Gorzalka 2009; Winter et al. 2009; Riggs & Bartholomaeus 2017).

Several studies suggest that rather than eliminating arousal, GAHT can instead significantly shift a person’s sexual desires and orientation (Daskalos 1998; Auer et al. 2014; Katz-Wise et al. 2015). Additionally, Serano (2016) described a number of positive sexual experiences as a result of GAHT, including an increase in pleasure; new and more rewarding sexual practices; and a change in orgasms, from simple and short “boygasms” to complex and extended “girlgasms”. Serano (2009) therefore effectively moves the focus away from erectile function as the sole measurement of sexual function and pleasure, to a more holistic view of trans women’s sexuality and experiences. Finally, Bellwether’s (2013) manuscript provides a comprehensive guide to trans women’s sexuality, including alternative anatomical pleasure points for when an erection is not present or desired (i.e. inguinal canals, anus etc.), and the usage of toys and harnessed dildos. Bellwether (2013) highlighted connections between dysfunction and pleasure, posing alternative sexual narratives which see trans women undergoing GAHT navigating and thriving in their modified sexuality. Ultimately, current research on trans women’s experiences with GAHT rarely addresses sexuality (Nieder et al. 2016), leaving a significant knowledge gap which the current study sought to address.

# Methods

## Participants

The participants were 12 trans women, aged 23-54, who had been undergoing GAHT for longer than 12 months and had not undergone genital surgery[[1]](#footnote-2) at the time of the interview. Two participants identified as heterosexual, while the rest used (often multiple) terms such as lesbian, gay, queer, pansexual, bisexual, demisexual, polysexual, or sapiosexual. Four of the participants were single, two were in a monogamous relationship, and the rest were in non-monogamous/multiple relationships. Length of GAHT varied from 16 months to 15 years, and types of GAHT included anti-androgen/oestrogen combination, oestrogen-only, or unspecified.

## Data Collection

All interviews were conducted by the first author. Participants were recruited through advertising at several LGBT+ health services and sex work services, as well as snowball sampling. Once a participant contacted the first author, they were provided with a participant information letter and consent form, and offered the opportunity to discuss the study prior to the interview. All but one of the interviews were conducted via phone or Skype; the single face-to-face interview took place in a private counselling room provided by a sexual health service. On the day, participants were offered the chance to discuss the study further, and informed that they could stop the interview at any time. Once the participant agreed that they were happy to proceed, the interviewer started the recording and followed the approximately 45-minute interview schedule, along with additional prompting when needed. Immediately following the interview, participants were offered a debrief and given the option to avoid having the debrief recorded. All participants agreed to the recording, and the data was included in the final analysis.

In order to gain further data triangulation and quality assurance, the interviewer also conducted a pilot interview which included questions about the quality of the interview schedule; additionally, all participants were sent copies of their transcripts, which they approved, and offered a follow up interview (Morse 2000; Walker 2012). However, only 2 participants accepted this offer. This assisted in the data triangulation and quality assurance . Following each initial interview, participants were provided with a $20 food voucher and a resource list containing numbers for relevant sexual health services. Interviews were manually transcribed and each transcript was approved via email by the participant prior to undergoing a full analysis. Finally, each participant was provided with a pseudonym which they given the option to change if desired.

## Data Analysis

The analysis process focused on achieving greater insight into the life-worlds of the participants, and using their words to guide the language used to document their experiences (Liamputtong 2009; Bourgeault et al. 2010). This was achieved by following Braun and Clarke’s (2006; 2013) guidelines, utilising participants’ own terms to code and define the thematic clusters, thereby ensuring the richness of their data is maintained and not reduced or altered. Full quotes were also retained where possible, to provide ample data within its original context; any notes the researcher made during or after the interviews were used as guiding points for interpreting and ultimately documenting the final themes. A hermeneutic approach to analysis was used, which involves actively engaging in a cycle of reading and interpretation (Gadamer 1975). As Hall (2009) suggested, the interpretation of text is always affected by the researcher, thereby fragmenting the way a narrative is ultimately described. This perspective positions the researcher as an inseparable part of any analysed phenomenon (Eilifsen 2011), therefore requiring the researcher to be reflexive in the process of knowledge production in order to represent it respectfully and authentically (Puurunen 2013). This reflexivity was achieved by the researcher regularly checking in with the second author, about the identified themes and their accuracy/significance; as well as utilising a journal in order to both process and refine the data and its analysis (Clarke,1999).

## Ethical Considerations

Trans women are a vulnerable population, significantly susceptible to a wide array of abuse and discrimination (Liamputtong 2007; Espinoza-Madrigal 2012; Nuttbrock et al. 2014; Jaffee et al. 2016). The researcher utilised the Australian National Health and Medical Research Council (NHMRC)’s (2007) ethical protocols, Liamputtong’s (2009) interview recommendations, Ansara and Hegarty’s (2014) inclusive language approach, and Owen-Smith et al.’s (2016) guidelines to transgender research to ensure this vulnerability was acknowledged and safely navigated. This meant ensuring participants were well-informed, comfortable, aware of their right to withdraw, and anonymised in the analysis and documentation process.

Additionally, as a trans woman, the researcher is positioned as an insider-outsider, being privy to some similar experiences as the participants but ultimately not having a full knowledge of their lives (Hayfield & Huxley 2015). The researcher disclosed their status in the study’s recruitment advertisement. Insider-outsider researchers can be at risk of bias, role confusion, and data miscomprehension (Birch & Miller 2000; Kanuha 2000; Asselin 2003). However, this position can also yield significant rapport-building, bring deeper insight, increase analysis accuracy, and provide impetus for more reflexive and connected research practices (Unluer 2012). The research team overall is also insider-outsider, with the second author being cisgender. This dynamic requires negotiating these differences directly, and addressing the ways in which each researcher’s understanding of their gender might affect data analysis and documentation (Court & Abbas 2013). This included negotiating a balance between the researcher as a ‘relative insider’ on the topic with the perspective of the ‘relative outsider’ second author, and by extension the academic institution as a whole (Pollack & Eldridge 2016).

# Results

## “I’ve come to be more natural within myself” - Experiences of GAHT

Participants expressed a range of both positive and challenging experiences with GAHT. For several participants, undergoing GAHT was an overall positive experience; Lilly who said she is “pretty fucking jazzed about it”; and Ella who stated, “I’ve come to be more natural within myself”, provide voice to this. Others had more mixed opinions; Janey stated that “80% [of being on hormones] is great coz I’m on them but another 20% it would be great if it was natural”, referring to being able to naturally produce a female hormone balance. Zoe also expressed a concern regarding “consistently taking medication every day”; but said that other methods of delivery, in particular Implanon, were an even bigger concern for her, stating “you’re not guaranteed a strict daily dose it’s just […] flooding your system”.

Eight participants also discussed having experienced some fluctuation or inconsistency in their treatment. For several, this was due to changes made by their clinician. Zoe, however, experienced treatment fluctuation due to not seeing an endocrinologist for a significant period of time. She said, “I didn’t realise if you take too much hormone therapy, Progynova oestrogen in particular, it can actually have a reverse effect”, which was not mitigated by the appropriate clinical care. Other participants experienced regime inconsistency due to personal factors. Eva stated:

The last 12 months I’ve been all over the show with money and all over the show with mental health and how I can work and make money, so I’ve been off my meds properly for like 6 weeks to 2 months.

Claire also had to make a choice regarding her treatment, due to sex work. She said “most clients like a bit of rogering these days, they want the real thing, so sometimes I’ll stop the hormones so I can get an erection”. She stated that she is aware of the repercussions, saying “I know its self-medication and it’s dangerous, but its a choice that I make as a sex worker”. For some participants inconsistency was less systematic and more accidental. Abbey stated “I’ve skipped a day or two but I find that the best thing to do is not to be hard on yourself about it. […] My boobs look great so they’re not gonna disappear overnight”. This breast development is one of many physiological changes participants described.

## “So much more sensitive” - Physiological and Appearance Changes

All participants except Holly discussed the effects of GAHT on their bodies. Seven described their breasts becoming larger and “so much more sensitive” (Eva). Abbey said she experienced such an increase in sensitivity that “on a number of occasions I’ve almost came from touching my nipples, which was unheard of before”. Katrina described experiencing substantial breast growth but little increase in sensation, saying “I did well for size not for sensitivity”. For Vivian, this increase in sensitivity was not a positive shift. She said that when she is on her full dose of hormones her breasts were “painful to touch”, and that she did not enjoy them being touched erotically by a partner.

Six participants (Vivian, Katrina, Eva, Ella, Claire, and Abbey) also expressed experiencing an increase in skin softness and sensitivity. Vivian said that her “skin’s softer and clearer”, to the extent that others regularly comment on it. Abbey stated that for her, this increase in sensitivity was highly affirming, saying “my skin is a lot more sensitive, and that’s amazing, it’s like this is how I imagined it always should be”. Eva described this sensitivity as something that’s increased substantially, from nearly nothing before GAHT to now, saying that “my neck’s really sensitive, all my skin’s really sensitive”. Several participants described this sensitivity as them developing new erogenous zones. Ella described the shift as being a nearly all-body experience, saying:

Much more of my body were erogenous zones than there were before. I actually had sexual sensation in my nipples, which was really nice, which I really liked, and my inner thighs started to become […] much more sensitive to sexual touch. […] The hormone treatment made […] it spread out, where I feel sexual when I’m touched.

Lilly expressed feeling confounded but overall positive about these developments, stating that having “weird locations of erogenous zones has been bizarre but also really fucking hot. Beforehand […] my only erogenous zone was my genitals, and now it’s […] my legs, especially inner thighs, my arms, my face, my ears”.

Another major physiological shift which all participants, except Holly, discussed was a shift in their capacity to gain an erection. Lilly stated that she “absolutely got oestrogen dick like a motherfucker”, having very soft erections at best. Despite these erectile issues, she did go on to say “back in the day I would [have felt] very self-conscious about it but I’ve kind of thrown that aside”. Other participants also expressed navigating their shift in erectile capacity positively; Louise stated “I could be enjoying sex but not have an erection, […] which is obviously very radically different to what most cis men experience and what I would’ve felt before [transitioning]”. Similarly, Abbey stated “I don’t see [an erection] as a necessary focal point anymore”.

Katrina experienced a significant shift in erectile capacity which oscillated substantially throughout her treatment. She described going from having ‘normal’ erectile function, down to absolutely no function at all, and now to a comfortable level. She said that as far as erections go, “hormones have not been the problem, more so […] the anti-androgen”. While Katrina changed her GAHT regimen in order to counteract this problem, some participants used other substances to compensate; Claire disclosed that she has used Viagra in the past, and Zoe discussed using a herbal supplement. Along with these physiological shifts, participants discussed experiencing some substantial psychological shifts.

## “I’m not repressing shit anymore” - Psychological Shifts

All participants except Vivian and Claire discussed experiencing significant shifts in their psychology and emotionality due to GAHT. Ella described a sense of liberation, saying “the changes in how I relate and how I understand my own feelings […] have all been positive, completely. I’m not repressing shit anymore”. Eva expressed a similar sentiment, stating “I’m much less afraid to try new things and […] not having that sense of self-monitoring makes me feel more creative and […] like a more critical thinker in some ways”. Holly expressed feeling like her emotions have become the focal point of her reasoning, saying “I’ve become more emotional in my way of thinking”. However, for Lilly, the psychological shift was also a clinically beneficial one; she said “it’s really contributed to my emotional development and […] mitigating problems with depression and anxiety”.

Alongside these broader psychological shifts, several participants expressed experiencing a significant decline in sexual desire and drive. Margaret stated, “my libido’s been pretty low [since transitioning]”. Referring back to her experiences with a shifting GAHT regimen, Katrina stated “when I was on a lower dose of E and T blockers I basically had very little sexual interest and basically no sexual pleasure”. Furthermore, she stated during her secondary interview that this issue had been resolved with her coming off anti-androgens. Claire described feeling a sense of resolve about this reduction in libido, stating “when you’re on the hormones you feel like sex less, I think that’s a female thing”. Lilly, Zoe, Ella, and Abbey also discussed GAHT and transitioning more broadly and significantly shifting their experience of dysphoria. Zoe stated that at a basic level, GAHT means that “[my] gender dysphoria is lessening because [my] body is becoming more what [I] perceive it should be”. Ella’s experience was less of a reduction and more of a refocusing; she said “as I started to transition, and my body started to change, the dysphoria became much more about my genitals and how much they were not changing”. One final experiential shift due to GAHT falls somewhere between psychological, emotional and physiological, and has therefore received its own subtheme.

## “Waves washing over your body” - Psychophysical Shifts in Orgasmic Experiences

All participants, except Ella, described experiencing a significant shift in orgasms and pleasure overall. Claire described experiencing no interest in orgasms or pleasure when she is “really dosed up” on hormones. She said “It’s a hell of a lot more work, and by the end [I just think] ‘pfft I’d rather be eating pudding!” Vivian discussed the more physiological aspects of this shift, saying “the sensation is all there but that’s the end of it, […] you don’t ejaculate, or very very little, and it’s not tadpoles anyway”. Margaret echoed this experience; she said “climax involves no ejaculation. […] That’s odd. That’s changed”. Although for some participants GAHT did result in some type of pleasure reduction, this was not the case across the board.

Lilly provided a more emotional standpoint on the orgasmic shifts associated with GAHT, saying: “I used to described [orgasms] as being hit by a freight train while on testosterone, whereas now it’s [more] of a prolonged feeling of waves washing over your body”. Meanwhile, Holly stated that “looking at how anal sex and penetration felt before transition, it’s completely different now for me, it’s way more intense, way more full-on and a lot more enjoyable”. Abbey simply described it as an “all-body experience”.

## Additional Minor Findings

Half of the participants pinpointed the physiological effects of hormones as being essential to their self-acceptance. This finding echoes Schrock, Reid and Boyd’s (2005) conclusions regarding the significant role of embodied, physiological transformation in trans women’s progression towards authenticity. This process of physicality leading to emotional and self-conceptual completeness is a major aspect of what Lev (2013) conceptualised as “transgender emergence”, an amalgamation of several transgender identity development models. It is also a critical part of Riggle and Mohr’s (2015) multi-factor assessment of positive transgender identity development, which posits an increased sense of identity authenticity and reflective insight as a major part of trans people’s self-congruence. Self-acceptance also forms a significant factor in navigating sexuality and reaching identity formation for queer/gay/bisexual people, labels which most participants used in some capacity (Rosenberg 2017).

# Discussion

Most participants expressed feeling satisfied overall with receiving hormonal treatment. Some expressed issues with their administration method, and discussed the fact that receiving hormones synthetically will never compare to producing them naturally. However, all expressed that it was a crucial aspect of their life, which lines up with previous research in the area (Murad et al. 2010; Hyde et al. 2013; Strauss et al. 2017). An important thing to note is that several participants described experiencing inconsistencies with adherence to their regime; currently there appears to be no data on the impact that this may have on people undergoing GAHT.

Participants provided details regarding the physiological changes they had undergone due to GAHT. These included breast development, skin softening, increased overall sensitivity, and a reduction in capacity to develop and maintain an erection. These findings all line up with previous research on the physical effects of GAHT (Dahl et al. 2006; Idrus & Hymans 2014; Aguayo-Romero et al. 2015; Radix 2016). However, as Serano (2016) noted, these physiological effects are often coupled with emotional responses, and these affect sexuality significantly. Several participants described a significant increase in what they defined as new erogenous zones, places which produced sexual arousal where none had been before. These include, but are not limited to, thighs, backs, necks and breasts; some participants reported that these new erogenous zones overtook their genitals as the focus of their sexual play and pleasure, particularly for participants who were mostly incapable of sustaining an erection, or felt dysphoric about using it sexually.

There were also several psychological effects as a result of GAHT, namely an increased emotionality and a reduction in both sex drive and dysphoria. Coleman et al. (2017) confirmed GAHT’s role in significantly reducing gender dysphoria, and thereby increasing emotional wellbeing, for most transgender people. However, the matter of emotionality seemed more complex than simply a reduction in mental health risk; several participants discussed feeling more connected to their emotions, and utilising emotions as a means of decision-making more frequently. Rather than a simple positive upturn, participants’ emotional landscapes were often radically transformed, sometimes in ways they could have never envisioned.

Similarly, several studies have confirmed trans women’s experiences of a significant reduction in sex drive (Knezevich et al. 2012; Fisher & Maggi 2015; Radix 2016). This reduction was not only in frequency, but a shift in participants’ approach to sexuality, moving from higher quantity to higher quality and satisfaction. One participant noted that their sex drive had paradoxically risen significantly since undergoing GAHT; they attributed this to their increased comfort and confidence in their own body.

Finally, participants discussed their experiences of pleasure and orgasm while undergoing GAHT. Some participants reported a reduction in capacity to achieve climax, which has been noted by previous studies (Radix 2016). However, many described a shift in pleasure, and an increasing complexity in how they experienced and achieved orgasms. These experiences fit well within Serano’s (2016) concept of “girlgasms”, wherein orgasms, and the means of achieving them, become more intense, less immediate, more all-encompassing, and ultimately more enjoyable.

# Limitations

Although the advertising for the study directly stated that the research was open to people who identified as transfeminine in any capacity, including non-binary, genderqueer, sistergirls, male-to-female (MtF) persons, trans women, or people assigned male at birth who identity as gender diverse/non-conforming, all viable respondents identified solely as trans women. Therefore, the narratives of transfeminine people undergoing GAHT who do not identify as trans women were unexplored by the current study, which remains a problem with the majority of contemporary transgender research (Richards et al. 2016). Although some research indicates that online strategies are a valuable tool for recruiting trans women, there is little information on what distinctions there may be between that population and other gender diverse groups, and as a result the effectiveness of this recruitment strategy could be reduced when considering non-trans-women gender-diverse people (Arayasirikul et al. 2015). Additionally, demographic data such as ethnicity and income was not recorded, partly in order to avoid making the study appear pathologising or clinical; further research may benefit from embedding these demographic enquiries into the interview, as they would no doubt yield intricate and important aspects of a person’s narrative.

# Recommendations

Future research would benefit from partnering with communities and individuals who identify as non-binary or otherwise gender diverse, as a means of increasing access through community members and leaders and engaging in this immersion ethically and reflexively (Campbell et al. 2010; Cunliffe & Alcadipani 2016). Additionally, a more intimate and relational approach to recruiting may be appropriate in these contexts. People familiar to the researcher may be useful participants, and future research could benefit from recruiting within the researcher’s social circles despite some of the possible ethical issues (Taylor 2011). Ultimately, as dickey, Hendricks, and Bockting (2016) stated, “it is important for researchers to go to trans people, rather than waiting for trans people to come to them”.

# Conclusion

This paper provides further evidence on the complex interaction between gender transition, sexuality and GAHT. Participants had a large variety of experiences, but most described an increase in quality of life generally, as well as increase in experiences of sexual and intimate pleasure specifically. Most participants who were sexually active found immense pleasure in the psychophysiological shifts caused by GAHT. Even for participants who had experienced a reduction in erectile function, sexual pleasure was not only achievable but more enjoyable than their experiences of sex prior to medically transitioning. Ultimately wider and more intensive research is needed in the area in order to comprehend the sexual and intimate experiences of non-operative trans women who are undergoing GAHT.

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# Compliance with Ethical Standards

Shoshana Rosenberg declares that they have no conflict of interest. P. J. Matt Tilley declares that he has no conflict of interest. Julia Morgan declares that she has no conflict of interest. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

# References

Aguayo-Romero, R. A., Reisen, C. A., Zea, M. C., Bianchi, F. T. & Poppen, P. J. (2015). Gender affirmation and body modification among transgender persons in Bogotá, Colombia. *International Journal of Transgenderism*, 16, 103-115.

Ainsworth, T. A. & Spiegel, J. H. (2010). Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery. *Quality of Life Research,* 19, 1019-1024.

Altadonna, A. (2011). Shifting sexuality or how I learned to stop worrying and be a bisexual tranny dyke. In: M. Diamond (ed.), *Trans/​love: radical sex, love, and relationships beyond the gender binary*. San Francisco, USA: Manic D Press.

Ansara, Y. G. & Hegarty, P. (2014). Methodologies of misgendering: Recommendations for reducing cisgenderism in psychological research. *Feminism & Psychology*, 24, 259-270.

Arayasirikul, S., Chen, Y.-H., Jin, H. & Wilson, E. (2015). A web 2.0 and epidemiology mash-up: Using respondent-driven sampling in combination with social network site recruitment to reach young transwomen. *AIDS and Behavior*, 20, 1265-1274.

Asscheman, H., Giltay, E. J., Megens, J. A. J., De Ronde, W., Van Trotsenburg, M. A. A. & Gooren, L. J. G. (2011). A long-term follow-up study of mortality in transsexuals receiving treatment with cross-sex hormones. *European Journal of Endocrinology*, 164, 635-642.

Asselin, M. E. (2003). Insider Research: Issues to consider when doing qualitative research in your own setting. *Journal for Nurses in Staff Development (JNSD)*, 19, 99-103.

Atienza-macías, E. (2015). Some legal thoughts on transsexuality in the healthcare system after the new edition of the diagnostic and statistical manual of mental disorders (DSM). *Sexuality & Culture*, 19(3), 574-576

Auer, M. K., Fuss, J., Höhne, N., Stalla, G. K. & Sievers, C. (2014). Transgender transitioning and change of self-reported sexual orientation. *PLoS ONE,* 9, e110016.

Bellwether, M. (2013). *Fucking trans women: A Zine about the sex lives of trans women*. CreateSpace Independent Publishing Platform, Mira Bellwether.

Birch, M. & Miller, T. (2000). Inviting intimacy: The interview as therapeutic opportunity. *International Journal of Social Research Methodology*, 3, 189-202.

Bourgeault, I., Dingwall, R. & De Vries, R. 2010. *The SAGE handbook of qualitative methods in health research*. London, UK: SAGE Publications.

Bourgeois, A. L., Auriche, P., Palmaro, A., Montastruc, J. L. & Bagheri, H. (2016). Risk of hormonotherapy in transgender people: Literature review and data from the French Database of Pharmacovigilance. *Annales d'Endocrinologie,* 77, 14-21.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

Braun, V. & Clarke, V. (2013)*. Successful qualitative research: A practical guide for beginners.* London, UK: Sage Publications.

Campbell, L. M., Gray, N. J., Meletis, Z. A., Abbott, J. G. & Silver, J. J. (2010). Gatekeepers and keymasters: Dynamic relationships of access in geographical fieldwork\*. *Geographical Review*, 96, 97-121.

Clarke, J. B. (1999). Hermeneutic analysis: A qualitative decision trail. *International Journal of Nursing Studies*, 36, 363-369.

Cohen-Kettenis, P. T. & Gooren, L. J. G. (1999). Transsexualism: A review of etiology, diagnosis and treatment. *Journal of Psychosomatic Research*, 46, 315-333.

Coleman, E. 2017. Standards of care for the health of transsexual, transgender, and gender-nonconforming people. In M. J. Legato (ed.), *Principles of Gender-Specific Medicine*. Cambridge, Massachusetts: Academic Press.

Court, D. & Abbas, R. (2013). Whose interview is it, anyway? Methodological and ethical challenges of insider–outsider research, multiple languages, and dual-researcher cooperation. *Qualitative Inquiry,* 19, 480-488.

Meriggiola, M. C. & Berra, M. (2012). Long-term cross-sex hormone treatment is safe in transsexual subjects. *Asian Journal of Andrology,* 14, 813-814.

Cunliffe, A. L. & Alcadipani, R. (2016). The politics of access in fieldwork. *Organizational Research Methods*, 19, 535-561.

Dahl, M., Feldman, J. L., Goldberg, J. M. & Jaberi, A. (2006). Physical aspects of transgender endocrine therapy. *International Journal of Transgenderism*, 9, 111-134.

Daskalos, C. T. (1998). Changes in the sexual orientation of six heterosexual male-to-female transsexuals. *Archives of Sexual Behavior,* 27, 605-614.

De Cuypere, G., Tsjoen, G., Beerten, R., Selvaggi, G., De Sutter, P., Hoebeke, P., Monstrey, S., Vansteenwegen, A. & Rubens, R. (2005). Sexual and physical health after sex reassignment surgery. *Archives of Sexual Behavior*, 34, 679-690.

De Cuypere, G. & Winter, S. (2016). A gender incongruence diagnosis: Where to go? *The Lancet Psychiatry*, 3, 796-797.

De Haan, G., Santos, G.-M., Arayasirikul, S. & Raymond, H. F. (2015). Non-prescribed hormone use and barriers to care for transgender women in San Francisco. *LGBT Health,* 2, 313-323.

Denny, D. (2004). Changing models of transsexualism. *Journal of Gay & Lesbian Mental Health*, 8, 25-40.

Dhejne, C., Van Vlerken, R., Heylens, G. & Arcelus, J. (2016.) Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry,* 28, 44-57.

dickey, L. M., Hendricks, M. L. & Bockting, W. O. (2016). Innovations in research with transgender and gender nonconforming people and their communities. *Psychology of Sexual Orientation and Gender Diversity*, 3, 187-194.

Eilifsen, M. (2011). Capture the unexpressed: Anecdote as a device in hermeneutic phenomenological research. *Indo-Pacific Journal of Phenomenology*, 11, 1-9.

Espinoza-Madrigal, I. (2012). Sexual orientation, gender identity, and diversity in the workplace. *Practical Lawyer,* 58, 39-48.

Fabris, B., Bernardi, S. & Trombetta, C. (2014). Cross-sex hormone therapy for gender dysphoria. *Journal of Endocrinological Investigation*, 38, 269-282.

Feldman, J., Brown, G. R., Deutsch, M. B., Hembree, W., Meyer, W., Meyer-Bahlburg, H. F. L., Tangpricha, V., Tʼsjoen, G. & Safer, J. D. (2016). Priorities for transgender medical and healthcare research. *Current Opinion in Endocrinology & Diabetes and Obesity,* 23, 180-187.

Fisher, A. D. & Maggi, M. (2015). Endocrine treatment of transsexual male-to-female persons. In C. Trombetta, G. Liguori, and M. Bertolotto (eds.), *Management of Gender Dysphoria.* Milan: Springer.

Gadamer, H.-G. (1975)*. Truth and method.* New York, USA: Seabury.

Gijs, L. & Brewaeys, A. (2007). Surgical treatment of gender dysphoria in adults and adolescents: Recent developments, effectiveness, and challenges. *Annual Review of Sex Research,* 18, 178-184.

Hall, D. E. 2009. *Reading sexualities: Hermeneutic theory and the future of queer studies.* Portland, Oregon: Ringgold Inc.

Hayfield, N. & Huxley, C. (2015). Insider and outsider perspectives: Reflections on researcher identities in research with lesbian and bisexual women. *Qualitative Research in Psychology*, 12, 91-106.

Heylens, G., Verroken, C., De Cock, S., T'sjoen, G. & De Cuypere, G. (2014). Effects of different steps in gender reassignment therapy on psychopathology: A prospective study of persons with a gender identity disorder. *The Journal of Sexual Medicine,* 11, 119-126.

Hwahng, S. J. & Nuttbrock, L. (2014). Adolescent gender-related abuse, androphilia, and hiv risk among transfeminine people of color in New York City. *Journal of Homosexuality,* 61, 691-713.

Hyde, Z., Doherty, M., Tilley, P. J. M., Mccaul., K., Rooney, R. & Jancey, J. (2013)*. The first Australian national trans mental health study: Summary of results*. Perth, Western Australia: Curtin University.

Idrus, N. I. & Hymans, T. D. (2014). Balancing benefits and harm: Chemical use and bodily transformation among Indonesia's transgender waria. *International Journal of Drug Policy,* 25, 789-797.

Jaffee, K. D., Shires, D. A. & Stroumsa, D. (2016). discrimination and delayed health care among transgender women and men. *Medical Care*, 54, 1010-1016.

Kanuha, V. K. (2000). "Being" native versus "going native": Conducting social work research as an insider. *Social Work*, 45, 439-447.

Katz-Wise, S. L., Reisner, S. L., Hughto, J. W. & Keo-Meier, C. L. (2015). Differences in sexual orientation diversity and sexual fluidity in attractions among gender minority adults in Massachusetts. *The Journal of Sex Research*, 53, 74-84.

Klein, C. & Gorzalka, B. B. (2009). Continuing medical education: Sexual functioning in transsexuals following hormone therapy and genital surgery: A review (CME). *The Journal of Sexual Medicine*, 6, 2922-2939.

Knezevich, E. L., Viereck, L. K. & Drincic, A. T. (2012). Medical management of adult transsexual persons. *Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy*, 32, 54-66.

Knudson, G., De Cuypere, G. & Bockting, W. (2010). Recommendations for revision of the DSM diagnoses of gender identity disorders: Consensus statement of the World Professional Association for Transgender Health. *International Journal of Transgenderism,* 12, 115-118.

Lawrence, A. A. (2003). Factors associated with satisfaction or regret following male-to-female sex reassignment surgery. *Archives of Sexual Behavior*, 32, 299-315.

Lawrence, A. A. (2005). Sexuality before and after male-to-female sex reassignment surgery. *Archives of Sexual Behavior,* 34, 147-166.

Leinung, M., Urizar, M., Patel, N. & Sood, S. (2013). Endocrine treatment of transexual persons: Extensive personal experience. *Endocronological Practice*, 19, 644-650.

Lester, C. N. 2017. *Trans like me: A journey for all of us.* UK: Hachette.

Lev, A. I. 2013. *Transgender emergence*. UK: Routledge.

Liamputtong, P. (2007)*. Researching the vulnerable.* UK: SAGE Publications.

Liamputtong, P. (2009)*. Qualitative research methods* Melbourne: Oxford University Press.

Manieri, C., Godano, A., Lanfranco, F., Di Bisceglie, C., Ghigo, E., Maggi, M., Lenzi, A. & Jannini, E. A. (2008). Hormone treatment in gender dysphoria. *Sexologies*, 17, 265-270.

Mccann, E. & Brown, M. (2017). Discrimination and resilience and the needs of people who identify as Transgender: A narrative review of quantitative research studies. *Journal of Clinical Nursing,* 26, 4080-4093.

Mendelson, G. (2015)*. Sexual satisfaction in transgender women* (PhD dissertation).

Miyajima, T., Kim, Y. T. & Oda, H. (2012). A study of changes in bone metabolism in cases of gender identity disorder. *Journal of Bone and Mineral Metabolism*, 30, 468-473.

Morse, J. M. (2000)*. Determining sample size.* Thousand Oaks, USA: Sage Publications.

Murad, M. H., Elamin, M. B., Garcia, M. Z., Mullan, R. J., Murad, A., Erwin, P. J. & Montori, V. M. (2010). Hormonal therapy and sex reassignment: a systematic review and meta-analysis of quality of life and psychosocial outcomes. *Clinical Endocrinology*, 72, 214-231.

National Health and Medical Research Council (2007)*. National statement on ethical conduct in human research.* Australian: National Health and Medical Research Council.

Nieder, T. O., Elaut, E., Richards, C. & Dekker, A. (2016). Sexual orientation of trans adults is not linked to outcome of transition-related health care, but worth asking. *International Review of Psychiatry,* 28, 103-111.

Nuttbrock, L., Bockting, W., Rosenblum, A., Hwahng, S., Mason, M., Macri, M. & Becker, J. (2014). Gender abuse and major depression among transgender women: A prospective study of vulnerability and resilience. *American Journal of Public Health,* 104, 2191-2198.

Owen-Smith, A. A., Woodyatt, C., Sineath, R. C., Hunkeler, E. M., Barnwell, L. T., Graham, A., Stephenson, R. & Goodman, M. (2016). Perceptions of barriers to and facilitators of participation in health research among transgender people. *Transgender Health,* 1, 187-196.

Papadopulos, N. A., Lellé, J.-D., Zavlin, D., Herschbach, P., Henrich, G., Kovacs, L., Ehrenberger, B., Kluger, A.-K., Machens, H.-G. & Schaff, J. (2017). Quality of life and patient satisfaction following male-to-female sex reassignment surgery. *The Journal of Sexual Medicine*, 14, 721-730.

Pitts, M. K., Couch, M., Mulcare, H., Croy, S. & Mitchell, A. (2009). Transgender people in Australia and New Zealand: Health, well-being and access to health services. *Feminism & Psychology*, 19, 475-495.

Pollack, S. & Eldridge, T. (2016). Complicity and redemption: Beyond the insider/outsider research dichotomy. *Social Justice,* 42, 132-145.

Puurunen, P. (2013). Approaching the historical other through hermeneutics. *Nordic Social Work Research*, 3, 168-175.

Radix, A. E. (2016)*. Medical transition for transgender individuals. lesbian, gay, bisexual, and transgender healthcare.* Springer International Publishing.

Richards, C., Bouman, W. P., Seal, L., Barker, M. J., Nieder, T. O. & T’sjoen, G. (2016). Non-binary or genderqueer genders. *International Review of Psychiatry*, 28, 95-102.

Riggle, E. D. B. & Mohr, J. J. (2015). A proposed multi factor measure of positive identity for transgender identified individuals. *Psychology of Sexual Orientation and Gender Diversity,* 2, 78-85.

Riggs, D. W., Ansara, G. Y. & Treharne, G. J. (2015). An evidence-based model for understanding the mental health experiences of transgender Australians. *Australian Psychologist,* 50, 32-39.

Riggs, D. W. & Bartholomaeus, C. (2016). Australian mental health nurses and transgender clients: Attitudes and knowledge. *Journal of Research in Nursing,* 21, 212-222.

Riggs, D. W. & Bartholomaeus, C. (2017). Transgender young people’s narratives of intimacy and sexual health: implications for sexuality education. *Sex Education,* 18, 376-390.

Roche, J. (2018)*. Queer sex: A trans and non-binary guide to intimacy, pleasure and relationships.* UK: Jessica Kingsley Publishers.

Rosenberg, S. 2017. Coming in: Queer narratives of sexual self-discovery. *Journal of Homosexuality*, 65, 1788-1816.

Rotondi, N. K., Bauer, G. R., Scanlon, K., Kaay, M., Travers, R. & Travers, A. (2013). Nonprescribed hormone use and self-performed surgeries: “Do-it-yourself” transitions in transgender communities in Ontario, Canada. *American Journal of Public Health*, 103, 1830-1836.

Schrock, D., Reid, L. & Boyd, E. M. (2005). Transsexuals’ embodiment of womanhood. *Gender & Society*, 19, 317-335.

Serano, J. (2016)*. Whipping girl: A transsexual woman on sexism and the scapegoating of femininity.* Berkley, USA: Hachette.

Strauss, P., Cook, A., Winter, S., Watson, V., Toussaint, D. W. & Lin, A. (2017)*. Trans Pathways: The mental health experiences and care pathways of trans young people: Summary of results*. Perth, Western Australia: Telethon Kids Institute.

T'sjoen, G., Weyers, S., Taes, Y., Lapauw, B., Toye, K., Goemaere, S. & Kaufman, J.-M. (2009). Prevalence of low bone mass in relation to estrogen treatment and body composition in male-to-female transsexual persons. *Journal of Clinical Densitometry*, 12, 306-313.

Tangpricha, M. D. V., Ducharme, P. S. H., Barber, M. D. T. W. & Chipkin, M. D. F. S. R. (2003). Endocrinologic treatment of gender identity disorders. *Endocrine Practice*, 9, 12-21.

Taylor, J. (2011). The intimate insider: Negotiating the ethics of friendship when doing insider research. *Qualitative Research*, 11, 3-22.

Toorians, A. W. F. T., Thomassen, M. C. L. G. D., Zweegman, S., Magdeleyns, E. J. P., Tans, G., Gooren, L. J. G. & Rosing, J. (2003). Venous Thrombosis and changes of hemostatic variables during cross-sex hormone treatment in transsexual people. *The Journal of Clinical Endocrinology & Metabolism*, 88, 5723-5729.

Unluer, S. 2012. Being an insider researcher while conducting case study research. *The Qualitative Report,* 17, 1-14.

Van Caenegem, E., Wierckx, K., Taes, Y., Schreiner, T., Vandewalle, S., Toye, K., Kaufman, J. M. & T’sjoen, G. (2014). Preservation of volumetric bone density and geometry in trans women during cross-sex hormonal therapy: A prospective observational study. *Osteoporosis International*, 26, 35-47.

Walker, J. L. (2012). Research column. The use of saturation in qualitative research. *Canadian Journal of Cardiovascular Nursing*, 22, 37-46.

Weinand, J. D. & Safer, J. D. (2015). Hormone therapy in transgender adults is safe with provider supervision; A review of hormone therapy sequelae for transgender individuals. *Journal of Clinical & Translational Endocrinology,* 2, 55-60.

Weyers, S., Elaut, E., De Sutter, P., Gerris, J., T'sjoen, G., Heylens, G., De Cuypere, G. & Verstraelen, H. (2009). Long-term assessment of the physical, mental, and sexual health among transsexual women. *The Journal of Sexual Medicine,* 6, 752-760.

White Hughto, J. M. & Reisner, S. L. (2016). A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals. *Transgender Health,* 1, 21-31.

Wibowo, E. & Wassersug, R. J. (2013). The effect of estrogen on the sexual interest of castrated males: Implications to prostate cancer patients on androgen-deprivation therapy. *Critical Reviews in Oncology/Hematology,* 87, 224-238.

Wierckx, K., Elaut, E., Van Hoorde, B., Heylens, G., De Cuypere, G., Monstrey, S., Weyers, S., Hoebeke, P. & T'sjoen, G. (2014). Sexual desire in trans persons: Associations with sex reassignment treatment. *The Journal of Sexual Medicine*, 11, 107-118.

Wierckx, K., Mueller, S., Weyers, S., Van Caenegem, E., Roef, G., Heylens, G. & T'sjoen, G. (2012). Long‐term evaluation of cross‐sex hormone treatment in transsexual persons. *The Journal of Sexual Medicine,* 9, 2641-2651.

Wilson, M. 2002. `I am the prince of pain, for I am a princess in the brain': Liminal transgender identities, narratives and the elimination of ambiguities. *Sexualities*, 5, 425-448.

Winter, S., Chalungsooth, P., Teh, Y. K., Rojanalert, N., Maneerat, K., Wong, Y. W., Beaumont, A., Wah Ho, L. M., Gomez, F. C. & Macapagal, R. A. (2009). Transpeople, transprejudice and pathologization: A seven-country factor analytic study. International *Journal of Sexual Health,* 21, 96-118.

Winter, S., Diamond, M., Green, J., Karasic, D., Reed, T., Whittle, S. & Wylie, K. (2016). Transgender people: Health at the margins of society. *The Lancet,* 388, 390-400.

Wylie, K. R., Fung, R., Boshier, C. & Rotchell, M. (2009). Recommendations of endocrine treatment for patients with gender dysphoria. *Sexual and Relationship Therapy,* 24, 175-187.

1. Despite genital surgery having significant impact on trans women’s life quality, and sexual satisfaction particularly, as well as being a marker of a person having access to resources many trans women do not have this surgery (Lawrence 2003; De Cuypere et al. 2005; Lawrence 2005; Gijs & Brewaeys 2007; Ainsworth & Spiegel 2010; Papadopulos et al. 2017), few studies distinguish between those who have undergone, require/desire, or outright reject genital surgery (“pre, post and non-op[erative]” respectively (Wilson 2002; Denny 2004)). In order to rectify this confoundment, “post-op” trans women were defined as a separate population, and excluded from the study. [↑](#footnote-ref-2)