Sexual Education Around the World

Past, Present and Future Issues

Edited by Rogena Sterling

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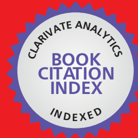

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Meet the editor

Dr. Rogena Sterling is of Stirling, MacEwen, and Hodge (Scottish) descent living on the lands of Waikato-Tainui in Aotearoa New Zealand. Their focus is on human rights and well-being, Indigenous/Māori data rights and sovereignty, biopolitics of data and statistics, customary law, and (inter)sex/gender issues. Dr. Sterling was the first openly intersex person to receive a Ph.D. in New Zealand. Dr. Sterling advocates for rights issues at the community level. They are co-chairs of Intersex Aotearoa and a board member of Pacific Women's Watch. They received a ministerial appointment to the Winston Churchill Memorial Trust. They have served on advisory panels and bodies for government ministries in Aotearoa New Zealand.

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Preface

Human beings predominantly are sexual beings [1]. Our attitudes to sexuality today differ significantly from those of our distant ancestors whose ideas of sexuality and relationships would shock some people today [2]. Though sexuality has been important to human societies over the last few thousand years, how it is understood, its related actions, and its relationships differ greatly.

Understanding sexuality is a fundamental aspect of being human. It is crucial to ensure that individuals are equipped with accurate information and comprehensive sexual knowledge to grow and experience life socially. Sexuality is partly instinctive as well as learned in accordance with social customs. Learning about sexuality as 'sexuality education' has become more structured over the last hundred years or so than it was in the past.

In the modern period, especially since the nineteenth century, sexuality became core to the organisation and social structures of life [3]. In the recent period it has been core to education. As such, sexual education continues to be of great importance and concern in societies worldwide.

Such importance and concern with sexual education intersect with various attitudes, values, and cultural norms that differ both within and between nations around the world. The way sexual education is taught and applied within institutions shapes the way we understand and approach human sexuality. Education plays a vital role in the sexual health and well-being of young people though there is still limited evidence regarding the effectiveness of efforts beyond pregnancy and sexually transmitted disease prevention [4].

Sexual education in Western societies used to focus on abstinence and birth control [5]. However, comprehensive sexuality education should also include health relationships, dating and interpersonal violence, child sex abuse, and the appreciation of sexual diversity [4, 5]. What is taught and how it is taught is dependent upon the religious, moral, and medical influences on the sexual education programme.

Sexual education faces challenges including lack of funding, inadequate teacher training, political resistance, and cultural taboos. It also remains a topic surrounded by controversy and debate. The debate and controversy of these programmes derive from cultural, religious, and political beliefs. These beliefs can impact variations in content, delivery methods, and levels of acceptance across different countries and regions. By understanding these obstacles, we can begin to identify strategies for overcoming them, promoting healthier attitudes, and empowering individuals to make informed decisions about their own bodies and relationships [6]. In addition, there is growing awareness of a rights-based approach to sex education [7].

This book embarks on a journey to explore the diverse landscapes of sexual education around the world. It aims to shed light on these variations and provide insights into the complexities of sexual education globally. By examining diverse perspectives, practices, and challenges, the book seeks to foster a greater understanding of the ways in which societies address and educate about human sexuality. Ultimately, the goal of this book is to contribute to the ongoing effort of empowering individuals to navigate their own sexual health and relationships with confidence and knowledge through education that supports them along the pathway. The authors invite you to embark on this enlightening journey with us, as we explore the intricate web of sexual education around the world.

The first section of the book focuses on issues in sexual education around the world. Chapter 1 discusses sexual education in addressing sexual harassment. Chapter 2 explores a model of sexual education of people with disabilities through peer education. Chapter 3 considers challenges for future sex education, which needs a more balanced, effective, and sensitive approach and that involves education about emotions, the body, and human relationships as well as erotic art and ethics. Chapter 4 discusses sex differences in physical attractiveness, considering male and female ideal preferences. It also examines conditional factors and individual differences influencing preferences for ideal traits.

The second section focuses on sexual health education interventions. Chapter 5 considers sexual health interventions for young people by adopting a rights-based approach to comprehensive sexuality education. Chapter 6 evaluates novel therapeutic and educational approaches such as using technology to improve sexuality intervention. For example, new technologies present a promising solution to help reduce the stigma and shame associated with seeking help for sexual disorders.

The last section focuses on sex education in the curriculum. Chapter 7 highlights the invisibility of intersex people in sex education curriculum and how this impacts intersex people.

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Section 1

Issues in Sexual Education

Chapter 1

Perspective Chapter: Sexual Education in Addressing Sexual Harassment in South Africa

Vijay Hamlall

Abstract

Many countries lack adequate legislation to combat sexual harassment of women. The situation in South Africa however is quite different. Since the collapse of Apartheid, there are numerous legislatures and policies in place to protect women from acts of violence. Yet, South Africa has one of the highest prevalence of sexual violence in the world indicating that these laws are ineffective and not enough to stem the tide of violence against women. Cultural and traditional factors and masculinity construction play a major role in the creation of gender inequalities. Formal sexuality education at schools and universities in South Africa is absent from the curriculum. Sexuality education in South Africa is mainly rendered through community-based training and outreach programmes. This chapter explores this manner of education, the benefits of such education and the impact this education has had both on society at large and on combatting sexual harassment. The sexuality education initiatives discussed in this chapter are those that include men that offer them modes to address their own social dominance and the subordinate position of women.

Keywords: South Africa, sexual harassment, masculinity, sexual education programmes, gender equity and reconciliation (GER)

1. Introduction

South Africa is a relatively new constitutional democracy emerging from 50 years of apartheid, and three centuries of colonialism. Here patriarchy has been shaped in relation to racial inequalities, traditional social structures and economic disparities, all of which have been key features of the gender order. While many countries lack adequate legislation to combat sexual harassment of women the situation in South Africa, however, is quite different. Since the collapse of Apartheid, there are numerous legislature in place to protect women from acts of violence. Among these are The Promotion of Equality and Prevention of Unfair Discrimination Act [1], The Sexual Offences and Related Matters Amendment Act [2], The Protection from Harassment Act [3], South Africa's Domestic Violence Act [4]. These policies were developed to re-address the injustices of the past, with specific reference to women and children. Yet, good policy and legislation do not necessarily translate into good practice. Life on

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paper is extremely different from the reality that African women face. South Africa has one of the highest prevalence of sexual violence in the world (Van Dieman [5] indicating that these laws are ineffective and not enough to stem the tide of violence against women.

In South Africa, gender activists have worked largely in a political culture that espouses gender equity 'talk' and has a strong legislative framework, but where the 'walk' of political leadership has largely countermanded these efforts [6]. Cultural and traditional factors and masculinity construction play a major role in the creation of gender inequalities. Formal sexuality education at schools and universities in South Africa are virtually absent from the curriculum [7–9]. Sexuality education in South Africa is mainly rendered through community based training and outreach programmes. This chapter explores this manner of education and the impact this education has had both on society at large and on combatting sexual harassment.

The sexuality education initiatives discussed in this chapter are those that include men that offer them modes to address their own social dominance and the subordinate position of women. Many gender interventions that focus on men work with issues and constructs of masculinity, probing how men might develop new masculinities that are not vested in the oppression of women and which, in turn, might develop new mentalities and new ways of thinking that is at variance to the enactment of sexual violence and harassment. The challenge of gender equality work with men is to include them in programmes which considers their own challenges in society, offers them views of a world that is better for them as well as those that they interact with and which does not treat them as the sole cause of the oppressed position of women.

2. Defining sexual harassment

In South Africa, the definition of sexual harassment has also evolved from earlier definitions of the concept. Snyman-Van Deventer and De Bruin [10] stated that sexual harassment in South African law is seen as an *animus iniuriandi* (the consciousness of wrongfulness), an infringement of a person's personality and a form of unfair discrimination. The Promotion of Equality and Prevention of Unfair Discrimination Act [1], referred to sexual harassment as prohibited.

Saferspaces [11] indicated that in South Africa there are many different definitions of gender-based violence but it can be broadly defined as the general term used to capture violence that occurs as a result of the normative role expectations associated with each gender, along with the unequal power relationships between genders within the context of a specific society.

While earlier definitions of sexual harassment defined sexual harassment as obnoxious behaviour that involved offensive words or acts to forced sexual activity, more recent definitions include any unwanted and uninvited behaviour, and or attention that is sexual in nature and is intimidating and/or threatening to the victim, irrespective of whether the behaviour was once-off or persistent. The three-part classification of sexual harassment promulgated by Johnson, Widnall and Benya [12] which includes sexual coercion, unwanted sexual attention and gender harassment fits the South African social context. Morrell, et, al. [6] argue that South Africa's patriarchal building of masculinities allows male control over women and encourages an impression of sexual entitlement which stems from socio-cultural constructions of gender and influence.

3. Perceptions of sexual harassment

Girdhar and Rajput [13]; Paquette, et al. [14] and Vanska [15] are in consensus that there are gender differences in the perception of sexual harassment and that women are more likely than men to find certain forms of behaviour as harassing. Men are less likely than women to include social-sexual behaviours like jokes, teasing remarks of a sexual nature and unwanted suggestive looks or gestures as a form of sexual harassment [16]. A better understanding this phenomenon will help to prevent it and hopefully lead to better and safer workplaces, schools, social spaces, etc. where no one has to worry about being sexually harassed. A better understanding of what constitutes sexual harassment can lead to renewed advocacy movements to address sexual harassment, including, as a result of these campaigns, consequences for harassers [17].

Men find themselves physically attractive when they receive the same behaviour from women. Ekore [18] in a study revealed that women see sexual advances as upsetting whilst men see the behaviour as just good fun or even complimentary. Women, it was noted in the study found sexual teasing, jokes, looks and gestures as well as remarks from lecturers and fellow students to be harassing behaviour whilst their male counterparts felt that the women should not be so quick to take offence when a person expresses sexual interest in them. Akpotor [19] added physical contact like grabbing to the list that women find more unpleasant than men.

According to Wikström [20], although individuals of all genders are at risk of sexual harassment, certain marginalised groups are statistically at a greater risk. Boyle and McKinzie [21] substantiated this posit in that there exists a higher rate of sexual harassment, coercion and stalking among lesbian, gay, bisexual, transgender, multiracial, asexual students and women. They further revealed that the LGBTQIA+ community are also more likely to experience a range of forms of sexual harassment. Gawali [22] found in their study that twice as many women were pressurised, lied to and coerced into unwanted sex. Paquette, et al. [14] concurred with their findings, in that single, never married women were more likely to be targeted by stalking, threats, and unwanted messages and or gifts. Cassino and Besen-Cassino [23] added that women of colour and less powerful people - minorities, youth and young adults are vulnerable to harassment. Welsh, et al. [24] included citizenship status and race, whilst Berdahl and Moore [25] added ethnicity to the list.

Men, it seems, see violence as a normal rite and as a means of exerting control [26]. Kayuni [27] surmised that sexual harassment and gender-based violence are much more than the act for men. It is the tone, the feeling and the consequences of the event. Kayuni [27] strongly felt that men and women are not purely objective about sexual harassment and suggested that regarding a particular behaviour as sexual harassment is dependent on the individual's perceptions.

Stats SA [28] reported that in general crime impedes the action of women more than men [29]. This was evident in a four-year study conducted at Rhodes University that highlighted the gendered nature of fear for safety where four times more female than male students indicated feeling unsafe at the university [11].

4. Constructions of masculinity and sexual harassment in South Africa

October [30] posited that among youth in South Africa there was a prevalent need for young men to control women in intimate relationships as this was considered

essential in affirming their masculinity. Barker and Ricardo [31] stated that for young men in sub-Saharan Africa, sexual experience was associated with initiation and attaining socially recognisable manhood. Kabaya [16] revealed that women sometimes construed violence as a sign that a male partner was passionately devoted. According to Barker and Ricardo [31], such aggressive masculinity revealed that women were forced to engage in sex, have no power and were not in a position to negotiate a non-sexual relationship.

Morrel et al. [6] stated that hegemonic masculinity was initially adopted to explain and analyse the gender relationships under colonialism, apartheid and post-apartheid to explain the elevated levels of violence in South Africa. According to Morrel, et al. [6] by using hegemonic masculinity the understanding of gender inequality has been broadened. Hamlall [32] found hegemonic and counter-hegemonic masculinity in a study on conflict among high school boys in South Africa. In this study. Hamlall [32] revealed that boys who resisted violence had a set of masculine values independent from the school's peer hegemony, which stresses dominance, competition and violence. More importantly, this study revealed that identities did not always conform to hegemonic versions of masculinity and offered an alternative (autonomous) version in the configuration of masculinity. Jewkes et al. [33] suggested that to enable change, it was imperative to examine the social construction of hegemonic masculinity. This study supports the view that if masculinity is a result of social processes as opposed to nature, then it can be changed. Interventions can show how the behaviour is transgressed and reveal new possibilities with positive outcomes. Central is whether it is possible to deconstruct gender which will involve addressing the role of gender dynamics to achieve better behavioural and health outcomes for males and females. Deconstructing gender can be categorised along a gender-equality continuum from exploitative to accommodating and ultimately transformative. Jewkes et al. [33] were of the view that the concept of hegemonic masculinity is predicated on the subordination of women. It is women themselves who are needed to create an environment to enable and sustain change. Jewkes et al. [33] revealed that gender interventions in South Africa that addressed the insecurity of women and their gendered subordination have enabled women to protect themselves from intimate partner violence 2 years after the intervention.

In a study by Carlsson [34], male students looked upon themselves as superior to female students and hegemonic masculinity was the theoretical framework used to explain this finding. Swartz, et al. [35] in a longitudinal study of sexual harassment at eight universities in South Africa found that the participants understood gender differences through a lens of patriarchy. The participants saw patriarchy as a social system that perpetuated male dominance and obtaining advantage in every sphere of life both on campus and in society at large. Swartz et al. [35] found that males exploited gender by abusing their power so as to manipulate less powerful females for sexual favours while females indicated that they found it difficult to fight back or empower themselves because gender biases and gender roles are cemented and perpetuated in society. The study concluded that patriarchal practices were learned through culture and perpetuated through a socialisation processes. Suttner [36] argues that the scourge of violence in South Africa, especially violence against women and children is due to patriarchy and violent masculinities.

Most masculinities, according to Morrell, et al. [6] are bound by their domination over women. October [30] believed that assault and rape are regular features in South African township life, adding that this was due to unequal power differentials, between men and women. She further added that the link between toxic masculinity and rape was caused by the male need for power, control, dominance and punishing women for emasculating them.

One cannot adequately explain gender-based violence in African settings by invoking a global construction of masculinity. Understandings of what it is to be a man are local, even if influenced by global media. Other factors shape masculine identities including history, local resources and existing patterns of gender.

Gender work with men and masculinity especially in African countries need to engage specific contexts and acknowledge and respect particular cultures and traditions. This starting point immediately identifies the importance of adapting any initiatives developed elsewhere and turning them into the most effective instruments that they can for local settings. The search for successful interventions is ongoing and is likely to generate new strategies and new approaches. Mfecane [37] proposes a new approach to interventions with African men arguing that one never knows what 'truly' drives an African man to become violent. It is on this basis that he proposes research and intervention approaches that deal with the whole person in order to adequately address these multiple dimensions of masculinity in African settings.

Evaluated interventions directly assessing the impact of including men in such interventions are very limited in South Africa. Discussions of such interventions and impact is important and will considerably increase knowledge of what works to prevent violence against women in South Africa. What follows is a discussion of South African programmes that address sexual harassment which are grounded on the appreciation of the importance of local realities and has gained applause in addressing sexual harassment.

5. Sexual education programmes and impact in South Africa

5.1 Alternatives to violence project

Alternatives to Violence Project (AVP) is active in South Africa since 1995. Participants especially those from violent communities, frequently talk of never realising that alternatives to violence exist. The programme's workshops create community and trust through sharing stories of physical or emotional violence. In a workshop, you may find men sharing stories of growing up in homes with domestic violence, or broken family relationships that have never been spoken out aloud, let alone to each other. Sexual harassment in the lives of these men is a normal trend which the AVP workshops aim to discontinue [38].

Patriarchal conditioning often results in the production of gender-based injustice and violence. The Alternatives to Violence Project include healing processes and techniques that can transform harmful masculinities and address trauma, interrupting these cycles. Studies exploring the effectiveness of AVP in South Africa, (John, [39, 40]) have yielded positive results. Several of these studies explain how workshop participants frequently adopt a new perspective to previously culturally accepted and world views. Participants explore the depths of their own experiences, and move beyond habitual ways of relating, to discover new pathways of mutual respect, authenticity and reconciliation between women and men. Studies have shown that this change is not temporary but to a significant degree is sustained [41–43].

5.2 Gender equity and reconciliation

Gender Equity and Reconciliation (GER) brings ordinary people together in a carefully facilitated space to reflect on their gender conditioning and share stories

within and across gender groups. In so doing, it tackles the very roots of patriarchy. They transform perceptions of 'otherness' and build empathy as people speak about and hear each other's pain, fears, and hopes. They help people develop a capacity for emotional awareness that extends into their lives, initiating a healing process that is vital to stopping violent or discriminatory behaviour. GER points to the connections between men's violence against women and themselves. The programmes offer men and women, strategies to address violence together [44].

A South African review of interventions with young men through the GER approach – which included a focus on livelihoods (and not just attitudes), the profound impacts were underlined. The review highlighted that the GER approach transforms perceptions of 'otherness' and builds empathy as people speak about and hear each other's pain, fears, and hopes. They help people develop a capacity for emotional awareness that extends into their lives, initiating a healing process that is vital to stopping violent and discriminatory behaviour [45].

5.3 One man can

Wikström [20] suggested that to keep the dignity of all people intact we need social change. She posited that to change society we need to work with both victims of harassment and intrusion as well as those who harass and intrude. According to Wikström [20], we need to fight toxic masculinity, by teaching men to process and express their emotions, so that they will be less likely to resort to harassment as a coping mechanism. The goal of 'One Man Can', a rights-based gender equality and health programme in South Africa implemented by Sonke Gender Justice Network, was to reduce the spread and impact of HIV and AIDS and reduce violence through working with participants' attitudes and social norms.

An evaluation of the 'One Man Can' programme found that men 'reconfigured notions of hegemonic masculinity both in terms of beliefs and practices in relationships, households, and in terms of women's rights' [46]. An assessment by Gibbs et al. [47] report that a more subtle shift was seen with men moving away from "harmful" aspects of a dominant youth masculinity towards a form of masculinity whereby male power is buttressed by economic provision and attempting to form and support "households"'. The overall result was some improvements in livelihoods and relationships.

5.4 The MenEngage Africa programme

The MenEngage organisation has recently gained traction in South Africa and centres on how men relate to one another, how they relate to women, and how existing gender relations are either reproduced or disrupted/reconstructed - and how change might be envisaged and planned. By involving themselves in gender work, men can work for a new gender order which is not only more equitable, but which frees them from the burdens that they carry. The aim is to promote the engaging of men and boys in gender equality and sexual and reproductive health and rights (SRHR) [48].

An external evaluation of the MenEngage Africa programme commissioned by Sonke Gender Justice (Sonke) as the lead grantee and secretariat of the MEA, found that the programme has had a significant impact in strengthening the men and masculinities field locally, regionally and globally. The work that MEA has led in engaging men and boys in gender equality has been relevant and meaningful, and has been instrumental in the growth of existing and new country networks. MEA uses a

socio-ecological model when implementing the strategy of engaging men and boys for gender justice. As shown by the external evaluation of MEA, the members and country networks have made an impact at individual and community level, as well as in the policy arena, at country, regional and global levels. The model is being used in the new strategic phase, and the expertise acquired will also be shared among network members, partners and colleagues from other regional networks and academics, thus enriching the field [49].

5.5 Stepping stones

Stepping Stones is a workshop series designed as a tool to help promote sexual health, improve psychological well-being and prevent IPV and HIV. The workshops address questions of gender, sexuality, HIV/AIDS, gender violence, communication and relationship skills. In doing so they recognise that our sexual lives are embedded in a broader context of our relationships with our partners, families and the community or society in which we live. Originally developed for use in small, rural communities in Uganda, it has now been adapted for South Africa and after well over a decade of use is in its 3rd Edition. The Stepping Stones workshops are designed to be held with two or more peer groups, consisting of women and men, drawn from a community at the same time (although this is not essential). They consist of 10 sessions held with separate peer groups [50].

There remains a paucity of well-evaluated group-based, gender transformative interventions. Among some of the few interventions showing effect was the Stepping Stones randomised controlled trial with 34 clusters in urban informal settlements in eThekwini Municipality, South Africa. Participant inclusion criteria were aged 18–30 years, resident in the informal settlement, and not working or in education. A total of 676 women and 646 men were recruited from September 2015 to September 2016. End-line data were collected from March to October 2018 (24 months post-enrollment). The conclusions drawn from this study was that Stepping Stones was effective in reducing men's self-reported perpetration of IPV and strengthening women's livelihoods [51].

In low- and middle-income countries, group-based interventions to address intimate partner violence (IPV) working with men, whether or not they are violent themselves, are increasingly common. Stepping Stones and Creating Futures (SSCF) is one intervention demonstrating reductions in men's perpetration of IPV through working with men around gender inequalities and livelihoods. Using a case study of a young man living in an urban informal settlement in South Africa who was a participant within a large randomised controlled trial evaluating SSCF, [52] discuss how this young man's use of violence changed. This reduction occurred through recognition that his situation was not a personal failing, but similar to others, thus reducing the shame he felt, learning to control his anger, and starting to understand how others felt when he used his power over others. This case study provides some initial evidence about how group-based interventions working with men may start to transform men's practices.

6. Conclusion

The existence of legislature, policy guidelines, policy mandates and the policies themselves cannot guarantee safe and happy spaces for women. Typically, institutions

refer to the policies and procedures when abuse manifests itself, but it is not enough to have policies alone Zuma, Hamlall and Dorasamy [53] to address the scourge of sexual harassment in South Africa.

In his women's day address to the nation in 2021 President Cyril Ramaphosa highlighted the crisis of violence against women:

> *We have lost our way, the crisis of violence against women and children is a great shame on our nation. It goes against our African values and everything we stand for as people. We grew up being taught that as men and boys we must respect women and protect children. We were taught to never, ever raise our hand against a woman. But we have lost our way... Let us move together, a nation resolute and above all united, to end gender-based violence and femicide together [54].*

Although South African government departments generally recognise the severity and extent of sexual gender based violence there is a heavy reliance on NGOs and other non-profit organisations to render sexual education. There has to be a concerted, deliberate, realistic and practical endeavour to change institutional cultures.

In this chapter I hope to have shown the value of addressing sexual harassment through sexual education programmes that involve men in gender equality initiatives in a climate where patriarchy and chauvinism is widely prevalent and all-pervasive. While any intervention should take cognisance of local contexts, those framed outside of Africa and implemented in the African contexts require that the particularities of each context are implicit in the design. This improves the chances of effecting individual and social change using local understandings and values.

There is a strong case to be made for the inclusion of men in work towards gender equality. While men are structurally recipients of the patriarchal dividend, there are many layers within this, and not all men are equally located to benefit from the patriarchal dividend. While many men continue to have advantages over women – and can be party to their oppression – they can also struggle to fulfil gendered expectations of being a 'breadwinner', head of the household, having sexual virility and prowess, tolerance of pain and hardness to list a few.

Liberating men from these expectations and having them participate in constructing a society in which all may have opportunities to act in the interests of the wellbeing of their households and of themselves, is what the challenge of gender equality work with men is about.

Although we still have a long way to go before we reach our goal of ending gender-based violence and sexual harassment in South Africa, it is hoped that the gender equality interventions that have been showcased in this chapter and the value of engaging men within the particularities of the contexts within the African context, offers some ideas of how this important ongoing work is possible.

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Chapter 2

Perspective Chapter: Sexuality and Relationship Education and Advocacy by People with Disabilities through Peer Education

Patsie Frawley

Abstract

For almost two decades the author has worked alongside people with disabilities to co-develop a model of sexuality education and advocacy framed by sexual rights, and modeled on a primary prevention of abuse approach. This model, Sexual Lives and Respectful Relationships, is the focus of this chapter. In this model, narratives of sexuality and relationships 'told by' people with disabilities are used as education and advocacy tools within a peer education program co facilitated by people with disabilities and community sexual health professionals. This chapter draws on the rich experience of this work and highlights through sharing the story of the program the importance of positioning people with disabilities as 'experts' in their own sexuality education as peer educators, co-developers of programs and advocates.

Keywords: sexuality and disability, disability, peer education, sexual rights, sexuality

1. Introduction

Sexuality in the lives of people with disabilities has been problematized, managed, restricted and discouraged, in particular for people whose experience of disability relates to their cognitive engagement with the world. For them there has been a persistent view that they are 'incapable' of being sexual, having sexual agency, and therefore 'deciding' how to 'safely' and 'appropriately' express their sexual desire and identity [1]. For people whose engagement with the world also includes management of physical, sensory and communication barriers, other layers of perceived incompetence have been applied to 'their sexuality' based on ableist ideas of what is a 'normal' body [2].

Decades of self-advocacy by people with disabilities and advocacy by their allies has failed to shift these perceptions enough so the sexual lives of people with disabilities are theirs to determine, and to conduct in privacy. Still their sexual lives are mediated by policy, laws, institutions and a host of people in services, their families, and for some legal bodies. This is not the experience of all people with

disabilities. Many have challenged the attitudes that underpin these perceptions by speaking out, acting out and coming out as sexual people in their own right in their own way [3, 4].

The program that is the focus of this chapter, Sexual Lives and Respectful Relationships, is a peer education program co-developed by and for people with disabilities in Australia. This program has acted as a platform for people with disabilities to speak out about their sexual rights, and to self-advocate through their stories and peer education for respectful relationships [5]. While this approach was developed almost two decades ago, peer education by people with disabilities in sexuality education programs, in particular for people with intellectual disabilities, is still not 'the norm' [6], despite peer education being strongly advocated for in comprehensive sexuality education for young people [7]. This chapter highlights how people with disabilities can be included as 'experts' in their own sexuality education and considers some of the barriers and enablers to positioning people with disabilities at the center of their sexuality education.

2. Hearing the voices of people with disabilities

'Nothing about us without us' [8] is the dictum of the disability rights movement. Internationally this movement has been politically active at least since the 1970s. This movement is generally understood to be representative of a broad range of people with lived experiences of disability however it has been somewhat differently formed and operates in different countries according to different socio-political contexts that relate to disability. As a grassroots movement of people with disabilities it has shaped the way disability is understood and the legislation, policy and practice that impacts on the lives of people with disabilities with the aim for equality of rights, and seeing disability rights as human rights [9].

In 2006 after decades of activism and advocacy the United Nations Convention on the Rights of Persons with Disabilities [10] was developed with unprecedented involvement of 'civil society'-people with disabilities, in shaping this international law [11]. Disabled people's organizations from across the world were 'at the table' at the UN debating and framing this Convention. This was an important symbol of the previously mentioned dictum of the disability movement 'Nothing about us without us'. People with disabilities were present and their voices were heard. Importantly the UNCRPD Article 33 requires the continued involvement of people with disabilities in monitoring the implementation of the Convention, meaning the voices and experiences of people with disabilities continues to shape the laws, policies and programs that impact their lives.

For many people with disabilities sharing their stories is the key way they can shape the way society understands them and their lived experiences. While this approach has been enabled by modern technology and social media platforms, these resources have not always been available to people with disabilities, and are still inaccessible for many people with disabilities whose stories, particularly about their sexuality and relationship experiences are still 'left out' of the narrative about disability lived experience.

In Australia since the late 1990s and early 2000s partnering with people with disabilities through collaborative research has enabled people with disabilities to tell their stories of sexuality and relationships and have these stories used in training and research.

2.1 Stories of sexuality and relationships

In 2003 an anthology of stories of sexuality and relationships 'told by' people with intellectual disabilities was published as the appendix to a training manual [12]. Co-researchers who were people with intellectual disabilities from self-advocacy groups, and representatives from disability advocacy worked on a research advisory board engaging with the anthology of stories to develop a rights-based sexuality education program for people with intellectual disabilities, and training program for staff and families [13]. This anthology was developed using a narrative research approach—put simply researchers spent as long as it took to talk to, listen to and co-develop the person's story with them. The researchers reflected that for many of the storytellers, this was the first time they had been in conversation about their experiences of sexuality and relationships where they were in charge of the narrative [13].

Most of the twenty-three people whose stories were published told stories about negative experiences of sexuality where their sexuality was the focus of behavior intervention because their sexual expression was seen as a 'problem' and 'inappropriate', and experiences of abuse.

> *Many of the story-tellers told of unsafe sexual lives because of [the] lack of information about sexuality and relationships, poor or non-existent sex education and vulnerability to sexual exploitation. Almost all of the story-tellers reported some form of sexual abuse ([13], p. 1).*

Many also spoke about the importance of sexual expression in their lives, the questions they had about some aspects of sex, sexuality and relationships including consent, sexual health information and reproductive choices. The story by 'Shaughan' shares this young gay man's aspirations:

> *I'd like to have a boyfriend and do something together. I'd like to share feelings with him. I'd like to find a caring, loving sort of man ([14], p. 58).*

The overarching themes from the stories were; that people with intellectual disabilities had diverse experiences of sexuality and relationships disrupting the dominant discourse of homogeneity and inherent incapacity to be sexual, that people with intellectual disabilities were generally not seen as sexuality rights holders, people's sexual lives where they had a sexual life was conducted in a hidden way to avoid restrictions on sexual freedoms and relationships, there was a strong gendered approach where men were seen a dangerous and women vulnerable, and while some celebrated sexuality for most there was a strong experience of loneliness and rejection [12]. This research highlighted the sexual inequality of people with disabilities in Australia and for the first time created a platform for their voices to be heard and frame policy and practice.

2.2 Building a movement: sexuality rights and peer education

The findings of the Living Safer Sexual Lives research made a number of recommendations relating to sex education for people with intellectual disabilities including a recommendation to develop a comprehensive program that used the stories as its focus and was made available to disability support staff, organizations, families and people with intellectual disability. Following this the training manual referred to

earlier, which used a sexual rights framework informed by the work of UK researcher and advocate Ann Craft [14], was published in the UK and the training using the stories as the focal point, was delivered in Australia and internationally.

The set of rights articulated by Ann Craft have underpinned the body of work reported here for over two decades and have been 'translated' by people with disabilities into group activities to explore these rights within the stories and through people's own experiences. The set of rights are, people with disabilities have the right; to be treated like an adult, to have information about sexual health, sex and relationships, to be sexual, to make their own decisions about relationships, to have their privacy respected, to be safe from violence and abuse and to be able to do these things without other people stopping you. The stories and the rights-based approach co-developed in this program have become synonymous with advocacy and action to change the way sexuality and relationships is understood and supported for people with intellectual disabilities in many countries. The research approach used was also referred to and used to shape inclusive research with people with intellectual disabilities [15].

Overall, this program has been recognized as an innovative way for sexuality education for people with disabilities to be co-developed using the experiences as told by people with intellectual disabilities as a springboard from which to 'leap into' the questions people want answered through a formal education program. Until the development of this program sexuality education where it was available for people with intellectual disabilities, was primarily biologically and health focused and delivered in didactic modes, and within behavior management programs [16]. Extending from the work of *Living Safer Sexual Lives,* the author in collaboration with people with disabilities who worked as co-researchers and later peer educators, developed the *Sexual Lives and Respectful Relationships* model. Central to this model was a peer education program recognizing that the 'Nothing about us without us' call needed to be answered by supporting people with disabilities to be 'the educators' as experts in their own experiences.

Through this work people with disabilities shaped what information would be shared in sexuality education with their peers and how it would be shared. Not surprisingly they used their experiences as self-advocates in the disability movement and in their own lives to frame this education. They used the stories, co-developed resources, developed 'key messages' to accompany the stories and formed collaborations with sexual health professional to co-facilitate the program.

3. Peer education: part of an ecological framework

Peer-led sex education is not a new approach in health promotion. This approach gained prominence during the HIV/AIDS crisis in the 1980s–1990s being built on the assumption that those with the lived experience of a sexual health experience were best placed to support others in their situation to gain and use important sexual health knowledge [17]. While research suggests the outcomes of peer education may not always be clear for those receiving the education, it strongly suggests there are significant benefits for the peer educators [18]. However, for people with disabilities this approach to sexuality education is still not common [19] despite the value of self-advocacy in the disability movement which is built on a peer to peer approach. It was these two converging ideas—self advocacy and peer education, that underpinned the development of the Sexual Lives and Respectful Relationships model (previously referred to as Living Safer Sexual Lives: Respectful Relationships). In addition, using

a social ecological framework [17], this model recognized that people with disabilities did not need to do this work on their own, embedding in the model layers of collaboration with community professionals from the sexual health and sexual abuse prevention sectors. Additionally, a layer of 'learning partners' was added in recognition that all learners need people who they can get informal support from when they are accessing new, complex and sometimes difficult information that might lead to the need for broader systemic and relational changes. **Figure 1** depicts this model.

In this model each 'layer' is interconnected as an approach that enables the model to be implemented in local communities where people with disabilities can work as peer educators, where local sexual health and related services can be involved as co-facilitators (later called program partners), where advocates and allies of people with disabilities can be learning partners, and where participatory action research can be 'wrapped around' the local work to build further knowledge of the transformative effect of this work.

This model has been implemented in Australia in 7 sites with one site continually running the program for over a decade. More than 50 people with disabilities have been trained to be peer educators and 10 people with disabilities worked as co-researchers and project workers over this time to co-develop new resources, undertake research on the program, speak at conferences and train other peer educators. Despite the success of the program and in particular the use of a peer education approach, there has been a number of challenges to sustaining the model, and managing expectations and opportunities for peer educators and community networks. Where the model has been sustained it has been through embedding it in a sexual

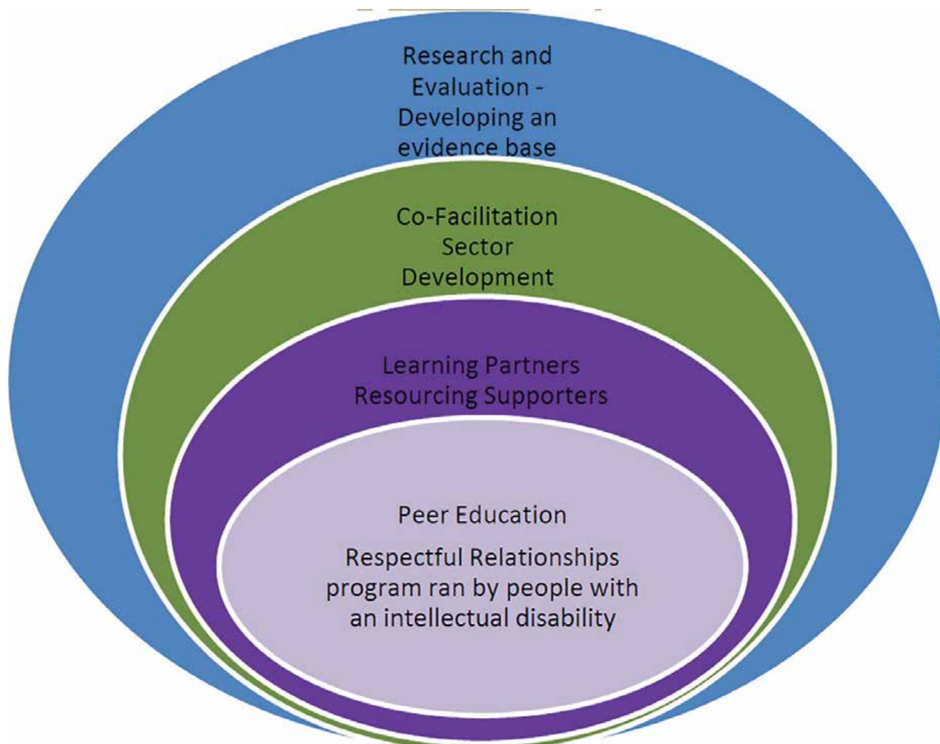

Figure 1.
SL&RR model [20].

assault service which works in partnership with a self-advocacy organization with people with disabilities leading the work and shaping the direction of the program and model locally.

People with disabilities are recruited often through self-advocacy groups where issues of sexuality and relationship rights have emerged in their advocacy work, and community partners are identified through local networks of services that provide sexual health, sexual abuse prevention and related services. The learning partners are identified by the learners in the program and most often are family, advocates or support workers who make themselves available to support the learner by meeting with them outside the program and talking over what the learner has been engaging with in the program, and questions they might have about how to 'put their learning into practice' in their lives.

The model has undergone a number of evaluations and been the focus of a series of research projects that have interrogated barriers and enablers for implementing peer education in this model [4, 20–22]. It has also been recognized as a leading model in the provision of sex education for people with disabilities because of its use of peer education, and the benefits this approach has had not only for learners and peer educators but also for 'non-disabled' people who have engaged in the program as co-facilitators and network supporters [19–22]. Overall, peer educators in this program have related their experiences as being overwhelmingly positive in their own lives including having an impact on their own relationships. Importantly for them, being a peer educator positions them as experts in their own sexuality and relationships and as trusted and knowledgeable people within their peer networks.

3.1 Developing and sustaining peer education in sex education with people with disabilities

3.1.1 Partnering with people with disabilities

Beginning the development of this model required a strong commitment from people with disabilities who had been advocating for decades to have their voices and experiences of sexuality and relationships acknowledged and heard. While not a peer education program the first iteration of the work that included the stories of people with disabilities as the core learning tool [12] came about because women with intellectual disabilities were asking why their sexuality rights were not getting attention in advocacy locally and globally. Two members of the co-researching group had been involved in research and policy advice on reproductive rights including advocating for changes to sterilization laws and practices that had impacted on their own lives, however their calls for sex education and accessible sexual health information were often not heard. One of these women had also been involved in a groundbreaking cervical health peer education program for women with intellectual disabilities. Through this work they recognized the power of working alongside their peers to get health information across in an accessible way using their own stories. They also had gathered important experiences of working in collaboration with a women's health service where they were valued for their 'expertise by experience'. A key then to developing peer education in sex education with people with disabilities is to be known by, and know people with disabilities who are current or emerging spokespeople, advocates and self-advocates and establishing collaborative relationships with them.

Researchers, teachers and other sexual health professionals need be committed to forming alliances and relationships with people with disabilities, and sustain them

through collaborative work. The Sexual Lives and Respectful Relationships model did this by ensuring the research team were actively involved and engaged with people with disabilities as co-researchers, were recognized as allies of people with disabilities, and were experienced in inclusive research practices. These strong connections also ensured that the program could be responsive to the current sexuality and relationship experiences of people with disabilities and at the edge of critical research on sexuality and disability where people with disabilities could shape the direction of the program and this work more broadly. This has been particularly important in responding to the diverse experiences people with disabilities were sharing in their stories.

3.1.2 Responding to diversity

Peer educators with disabilities in sexuality and relationships programs like Sexual Lives and Respectful Relationships, are people who have a strong commitment to their sexual rights and the sexual rights of their peers. They are acutely aware of the key issues they are facing in having their sexuality rights recognized. While researchers and educators may be informed at a broad level about the key socio-political issues impacting sexuality and relationships for people with disabilities and education approaches, people whose day to day lives are affected by the intersecting experiences of ableism and sexual discrimination including homophobia, transphobia, biphobia are important collaborators in co-developing sex education programs using their lived experiences. In the Sexual Lives and Respectful Relationships program these experiences were raised when co-researchers with disabilities and peer educators in networks recognized a gap in the anthology of stories that had been used in the program. They noted that since these stories were developed much had changed in society about sexuality identity and expression, and increasingly more of their peers were identifying or wanting to identify as and express their LGBTQ identities.

This advocacy led to the development of a research project to co-develop stories with LGBTQ people with disabilities and develop an extension of the program that had a focus on the issues experienced by LGBTQ people with disabilities [23, 24]. A research partnership was formed with a disability service and research funding was received from an LGBTQ health and advocacy service to undertake this new work. Two new stories were co-developed with LGBTQ people with intellectual disabilities and a research group including peer educators from the Sexual Lives and Respectful Relationships who identified as LGBTQ co-presented the program. The new resources co-developed for the program became part of the Sexual Lives and Respectful Relationships suite of resources available to the networks running programs. Further, peer educators from the program were involved in dissemination of the research findings at conferences, and co-authored publications. This work informed the development of a larger research grant working with a disability LGBTQ self-advocacy organization and the LGBTQA health and advocacy sector.

Peer education by people with disabilities offers an important opportunity to acknowledge and respond to the sexual diversity of people with disabilities and co-develop educational resources that are meaningful to people with disabilities and their diverse sexuality and relationship experiences. The Sexual Lives and Respectful Relationships program has a large range of resources that have been co-developed with people with disabilities that are used in the program, and a train the trainer program also co-developed with peer educators. The resources are always under review and new resources developed in response to the advocacy of people with disabilities who are committed to continuing peer educator in this sexuality and relationship education program.

4. Conclusion

Co-development of sexuality education programs with people with disabilities and peer education by people with disabilities challenges the sexual ableism Michael Gill writes about [1]. Like other 'isms' ableism is inbuilt into society and sustained by the actions of people 'otherwise' privileged and positioned as 'normal'. Sexual ableism, as Gill notes underpins much of the policy and practice that has positioned people with disabilities as 'incompetent' and 'incapable' of knowing themselves as sexual people, determining how, with whom and in which ways they are sexual, and ultimately being acknowledged as sexual citizens 'like' those not labeled as disabled. Peer education by people with disabilities offers the field of disability sexuality education an opportunity to challenge sexual ableism. As reflected through the work of the Australian program and research shared in this chapter, when the power of knowledge development and dissemination is shared through authentic collaborations with people with disabilities sexuality education can be accessible, meaningful and innovative.

Responding to the call of 'Nothing about us without us' led the author of this chapter on a twenty-year experience in sexuality education with people with disabilities whose work confirms their expertise by experience and has paved the way for them to sustain and grow their work as educators and advocates.

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Chapter 3

Sexual Education, What Challenges for Tomorrow?

Agnès Jacquerye and Pascal De Sutter

Abstract

In many parts of the world, political and government authorities, school principals, teachers, and parents are not so sure about the need for sex education to young people. They are reluctant to provide it as they dread promoting sexual activity and worse, an unbridled sort of sexuality. Sex education was introduced in schools less than five decades ago, for political and public health reasons. First limited as a whole to “no sex” or “safer sex” and often delivered in an excessively conventional way. More recently, other topics relevant have begun to be added, such as incest, gender identity, sexual orientation, consent relationship, interpersonal violence, and LGBTQIA+. At a time when social networks and online pornography have become young people’s main information sources on sexuality, sexual education is more essential than ever. Clearly, it is high time we had one approach to sex education, serving emotions, the body, human relationships as well as erotic art and ethics. Programs using interactive learning and skill building are essential in engaging young people with the knowledge and tools required for healthy sexual decision-making. Modern implementation strategies of communication, including digital and gaming, are necessary to address young people in a positive way.

Keywords: approaches in sexual education, sexual health, sexual rights, comprehensive sexuality education, sexual confidence

1. Introduction

Our approach is consistent with the World Health Organization (WHO) definition of sexuality: *“Sexuality is a central aspect of being human throughout life. It encompasses sex, gender identities and roles, sexual orientations, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors* [1].” This definition highlights that sexuality is part of two distinct spheres: the private, that of the individual, and the public, that of society [2]. Are the boundaries between the private and public spheres so clear-cut?

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The role of the public sphere is to promote a state of well-being that addresses the physical, mental, and social dimensions of sexuality and reproduction. It also has the role of promoting sexual health through innovation and sex education, in keeping with human rights, and of developing individuals' autonomy with due respect for diversity [3]. This public sphere can be liberating for the individual, where gender relations, sexual abuse, and the transmission of sexually transmitted diseases, among others, are at stake [2]. It can also prove restrictive or even oppressive when sexuality education is socioculturally, religiously, or politically dominant, preventing a lasting transition to universal values in relation to sexuality [4]. Even though some prohibitions have been relaxed—thanks to the secularization of society and the retreat, for the most part, of a restrictive sexual morality—the Catholic religion, for example, for a long-time imposed virginity before marriage and the sexual as exclusively aimed at procreating [5]. Today, abortion, which is currently at the center of the American [6] and even French [7] political arena, is a sexual issue over which elections can be won or lost. As for the private sphere, it is theoretically reserved for strict confidentiality and intimacy. Virginity, still cited as an example, is a matter of intimacy and therefore private. However, in a number of societies, the proof of its loss is claimed and needs to be presented to the eyes of all. Moreover, in the age of social networking, some people are exposing their private sphere, as demonstrating intimacy is an issue of value and authenticity in the eyes of peers [2, 8]. In the course of time, boundaries have tended to fluctuate; they have been imprecise and especially complex. This leads to a blurring or even an opposition between the public and private spheres. Therefore, extreme vigilance and permanent foresight are essential to seek a balanced re-negotiation between these two spheres. Sexual health is part of this negotiation. It implies a collective dimension since it deals with common wellness. The challenge is to know how far this approach can be taken without offending deep-seated convictions and without offending individuals' privacy [2]. Clearly, sexuality education, which is linked to promoting sexual health, is also involved in this ongoing re-negotiation. It is therefore understandable that its implementation regularly comes up against renewed opposition because of disagreements about what should be included in sex education programs [9]. Especially since, in recent years, another view of sexuality such as gender identity, the rejection of heteronormativity, and the LGBTQIA+ movement's claims are disrupting this already shaky ground. Moreover, in the age of smartphones, texting, Twitter, Instagram, Facebook, and Tiktok, fierce competition confronts public sex education, the media, already being de facto sex educators [10]. Finally, will Artificial Intelligence change our sexuality with the contribution of, among others, erotics (science that deals with the relationship between human beings and robots) and teledildonics, this new connected sex toy industry [11]?

The existing gaps are therefore opportunities for more ambitious and avant-garde strategies. Up-to-date sexuality education based on reliable, scientific, comprehensive information [12], and accessible to all is more essential than ever.

2. The journey of sex education in the west

Concepts of sexuality and sex education are constantly changing between the private and public spheres due to a variety of political, societal, ecological, technological, scientific, ethical, and privacy-related factors. We found it interesting to review, in a necessarily synthetic and humble way, more than 100 years of history, with a view to examining how sex education in schools was born and has evolved over the

years in the West. Revisiting the past enables us to see where we stand today and to better anticipate the future. We present the evolution of sexuality education in four periods: 1) before 1900, 2) from 1900 to 1960, 3) from 1960 to 2000, and 4) from 2000 to early 2023. To each period, we add sexuality education vectors, that is, reflections or research results from experts contributing to the advancement of mindsets on sexuality. For greater understanding, we then present the section on the development of sexual health and sexual rights.

2.1 Evolution of sex education

2.1.1 Before 1900: The enlightenment, the first sexual revolution

The eighteenth century, the Age of Enlightenment, was driven by the French philosophical, literary, and intellectual circles and aimed to promote rationalism, individualism, and liberalism against the Catholic Church obscurantism and superstition. It is also called "the Century of Sex" because it initiated the first sexual revolution [13]. This movement for liberating bodies views sexuality as a natural act, which must escape the control of external authorities, including religious. These years were the time when the individual was recognized as an entity and sexuality considered as a private matter [14–16]. In the following century, arose the idea of a sexuality intrinsically bound to marriage [17].

2.1.2 The period from 1900 to 1960: The awakening and birth of sexuality education

2.1.2.1 Sexuality education

The sexual liberation movement that began in the eighteenth century continued into the twentieth, though not unhindered. Following in the footsteps of the previous century, the early twentieth century was still marked by venereal diseases [18]. Some pioneers began to invest in what appeared to be the beginnings of sexuality education. They included doctors, mainly venereologists, priests hostile to contraceptive practices, freethinkers, and feminists [19]. Sexuality education began to be debated in France as early as 1911 [20]. Pioneers of sexology in the United States included H. Ellis, A. Berge, A. Moll, H. Tavoillot, P. Chambre, S. Freud, W. Reich, and B. Spock. They saw sexuality as an important, if not fundamental, and optimistic component of individual wellness and fulfillment. They emphasized the importance of sexuality education in the process of educating children, adolescents, and adults [21, 22]. For his part, in his December 31, 1929 encyclical "*Divini illius Magistri*" on education, Pope Pius XI rejected so-called sex education methods [23]. The term *"chastity education"* was preferred by Church authorities [24]. Despite theoretical and scientific advances [5, 25–27], for religious, moral, secular, or ideological reasons, the sexuality education that was adopted focused on abstinence and abstinence before marriage. The bonds of marriage were thus made sacred, and sexuality limited to reproduction. Under the guise of *"sexuality education,"* it had more to do with the pedagogy of chastity and morality. Not only was this omission of education intended to curb the acquisition of knowledge and out-of-wedlock pregnancies, it was also meant to delay the development of feelings and passions [28] regarded as dangerous. The main aim of this no-sex education was to protect the family model and social order, in line with the traditional family model: marry and have children [22]. Although a certain amount of sexuality education did exist, responsibility for it lied mainly with the family, with parents, and

to a lesser extent with religion, in the form of prohibitions. **Table 1** summarizes the characteristics of this approach, which we call Approach 1.

2.1.2.2 Vectors of sex education

The sexuality education pioneers' work fortunately opened up a breach in the protectionist and moral fortress of no sex and sexuality for the sole purpose of procreation [29]. This breach was widened by the first scientific studies on sexuality, such as those by Kinsey. His 1948 and 1953 publications challenged the strict opposition between homosexuality and heterosexuality. The idea that heterosexual orientation, unique and pure, would be different from homosexuality collapsed [30, 31]. The outcome was a major step forward in the recognition of homosexuality.

In addition, three women questioned the stereotypes associated with femininity and introduced an early way of conceptualizing gender: Viola Klein, an Austrian-born specialist in women's social policies in the post-war welfare state (1944). She introduced staunch conceptions of equality and freedom [32]. In 1949, French philosopher Simone de Beauvoir published "*Le deuxième sexe*." She advocated *"equality in difference"* and women's emancipation [33]. As for Margaret Mead, an American cultural anthropologist, she was responsible for the first reflection on sex roles in the 1930s. Based on her anthropological observations, she came to regard the assignment of certain character traits to men or women as arbitrary [34–37].

2.1.3 1960 To 2000: Sexual education, recommended and then compulsory, the second sexual revolution, the beginnings of sexual health

2.1.3.1 Sexuality education

Whether in the United States, Canada, or Europe, efforts to have sex education recognized as a collective right began around 1960–1970. Structured and official sexuality education was henceforth seen as essential. This idea was promoted, among others, by the American sexologists Masters & Johnson (1966–1970), by the legalization of the contraceptive pill (1967), by the May 1968 events and by the liberalization of abortion (1975). One thing is for sure: sexuality changed in status, there was a dissociation between sexual activity and procreation [30]. This association, namely "*effective contraception*" and "*discovery of orgasm*," thus gave rise to the contraceptive revolution; the second sexual revolution took place. Sexuality with erotic purpose became a legitimate object of knowledge, and it also legitimized for each one to express their sexuality [6, 29, 38]. These societal advances led to the introduction of the first sex education programs. These were designed to awaken responsibility while remaining largely evasive about sexuality itself [39]. Although the family and religious spheres retained all their influence, sexuality education in schools was optional and then became compulsory in 1975. The introduction of emotional and relational life was initiated to a greater extent in Europe than in the United States [40]. During that period, three distinct and complementary teaching contents can be identified:

- Abstinence Only Until Marriage—AOUM: This pedagogy mixes moral aspects with medical purposes, centered on the prevention of sexual problems likely to have repercussions on health such as teenage pregnancies and STIs. While affective aspects were introduced, they were framed within the narrow confines of the family and procreation. Discourse was based primarily on the argument of psychosexual immaturity: the body was physically mature, but it was deemed socially immature to enter

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Times	Approaches	Values	Objectives	Content being taught	Themes	Spheres of learning
<1900	1 **Pedagogy of chastity and morality**	**Chastity** **Virginity** • Sacredness of the marriage bond where sexuality is limited to reproduction	**To prohibit**: • sex relations **To postpone:** • sex in marriage **To ward off:** • out of wedlock pregnancies	**No sex** • Abstinence • Abstinence before marriage	• Mainly prohibitions • For some: anatomy and physiology of the human body	Family sphere Religious sphere
<1960	2 **Medical pedagogy** Listing of health problems that may have negative effects Good health Sexual health	**Sexual and reproductive health** • Political and moral legitimacy of non-reproductive sex • Good health and sex health	**To prevent:** • STIs/HIV • unwanted pregnancies **To improve:** • Sexual life • Sex relations	**No sex and Safer sex** • AOUM • Abstinence as an option + contraceptive methods + Safer sex • Emotional and relative life	• Anatomy and physiology of the human body (Biology courses) • Emotional and relative life	• Family sphere • Religious sphere • School sphere, recommended and then mandatory • Family planning • International sphere
<2018	**3** **Secular pedagogy** citizen, egalitarian and non-discriminatory based on a factual approach	**Human and sexual rights** • Social and egalitarian dimension • Sexual and reproductive health • Positive sexuality • Autonomy • Openness to pleasure • Respect for the person's health • Well-being and dignity	**To prevent:** • inequality • sexual violence • sexual abuse • STIs / HIV • Unwanted pregnancies • cyber-bullying **To adopt:** • inclusion • respect • equality • empathy • responsibility • reciprocity	**Comprehensive sexuality education** **CSE** Themes with learning objectives: • knowledge • attitudes • skills Age and developmentally appropriate parts: • 5–8 years old • 9–12 years old • 12–15 years old • 15–18 years old and over	**Key concept 1:** Relationships **Key concept 2:** Values, Rights, Culture and Sexuality **Key concept 3:** Understanding Gender **Key concept 4:** Violence and Staying Safe **Key concept 5:** Skills for Health and Well-being **Key concept 6:** The Human Body and Development **Key concept 7:** Sexuality and Sexual	• Family sphere • School sphere mandatory • Family planning • International sphere • Non-formal and community settings: Sports centers Faith-based organizations Professional networks Youth movements Health institutions School holidays Online platforms

Times	Approaches	Values	Objectives	Content being taught	Themes	Spheres of learning
					Behavior **Key concept 8:** Sexual and Reproductive Health	
<2023	**4** **Secular and hedonistic pedagogy** citizen, egalitarian and non-discriminatory based on a factual approach	**Positive and hedonistic sexuality** • Human and sexual rights • Social and egalitarian dimension • Sexual and reproductive health • Self-awareness • Self-confidence • Awareness of the other • Sharing and reciprocity • Self-reliance • Respect for the individual's health • Well-being and dignity	**To prevent:** • inequality • sexual violence • sexual abuse • STIs / HIV • unwanted pregnancies • cyber-bullying **To adopt:** • inclusion • respect • equality • empathy • responsibility • sharing and reciprocity **To fell and become:** • fulfilled and happy • competent in one's situation by assuming one's personality	**Comprehensive sexuality and self-confidence education CSSCE** Thematic with learning objectives: • knowledge • attitudes • skills Age and developmentally appropriate parts: • 3–18 years old and over for Basic Key concept • 5–8 years old • 9–12 years old • 15–18 years old and over with contribution of neuro, emotional and sexual sciences	**Basic Key concept:** Intrapersonal relationships **Key concept 1:** Relationships **Key concept 2:** Values, Rights, Culture and Sexuality **Key concept 3:** Understanding Gender **Key concept 4:** Violence and Staying Safe **Key concept 5:** Skills for Health and Well-being **Key concept 6:** The Human Body and Development **Key concept 7:** Sexuality and Sexual Behavior **Key concept 8:** Sexual and Reproductive Health	• Family sphere • School sphere mandatory • Family planning • International sphere • Non-formal and community settings: Sports centers Faith-based organizations Professional networks Youth movements Health institutions School holidays Online platforms • Peer networks • Training centers public and private • Media, AI, etc. With quality labels

Table 1.
Approaches to sex education.

into a lasting love relationship. The essential message during this period was therefore to have sex as tardily as possible [40]. In general, there was no explicit encouragement to have an active sexual life, especially regarding girls [29]. The information must be scientific, and it naturally found its way into school biology classes.

• Sexual health: this concept was introduced in 1975 by the WHO [41]. Although the relevance of sexual education was accepted, it was problem-solving-oriented with a rather defensive perspective. In continuity with the definition of health that it had established 27 years earlier, the WHO was committed, on the other hand, to the consecration of sexual optimism. It promoted the concept that sexuality contributes "to better health and wellness when it can be experienced and practiced freely, without constraints, but certainly not without specific rules" [42]. Moreover, the WHO engaged in the process of legitimizing the dissociation between reproductive and non-reproductive sexual activity [29]. Sexual health was defined as follows: "*the integration of the somatic, emotional, intellectual and social aspects of sexual well-being in that they can enrich and develop personality, communication and love. The concept of sexual health involves a positive approach to human sexuality. The goal of sexual health is the enhancement of personal life and relationships, not just counseling and care for reproduction or STDs*." [41]. The concept of sexual health thus broke away from venereology and gynecology to focus on wellness and the medicalization of wellness [42]. Within this framework, it also developed the nomenclature of health problems that can have negative effects on sexual health and sexuality.

• Safer sex: This approach was characterized by the arrival of the early 1980s AIDS epidemic. In the absence of an effective treatment, sexuality education, which in the 1970s had taken on the trappings of a more libertarian ideological struggle, became essentially a public health tool, without however completely ignoring moral aspects. The notion of risk-free sex, also called Safe sex or Safer sex, was introduced in the curricula. It was added to the information already provided on contraception and included a set of practices intended to reduce the probability of passing on STIs, such as HIV. Messages focused on condoms [43], which became the ritual for entering sexuality. Sexuality education was then more oriented toward the prevention of STIs to the detriment of real sexual and emotional education policies [44]. In those years, sex education was still too limited to the prevention of sexuality as a risk of death or unwanted life [45]. This medical pedagogy leads us to Approach 2 (**Table 1**).

2.1.3.2 Vectors of sexual education

Several research works are worth mentioning. In 1972, the British sociologist and feminist Ann Oakley published a book, "*Sex, Gender and Society,*" where she differentiated between anatomical sexual differences (sex, which would be invariant) and social differences (gender). She thus further advanced the concept of gender in the public mind [46]. In 1976, Shere Hite published her *"Hite Report"* in the United States, presenting the results of her survey on female sexuality. It showed that most women often reach orgasm alone through masturbatory practices, but that they remain mostly dissatisfied when having intimate relationships with their male partners [30]. The feminist movement emerged strengthened. Michel Foucault, a philosopher of the history of sexuality, took a stance in 1976, with the publication of his first volume on *"The Will to Know."* He explains the ineffectiveness of standing up against a repression of sexuality in order to liberate it. He shows rather how sexual life has triggered a systematic urge to know everything about sex, which has been systematized into a "science of sexuality" [47]. In 1989, the African-American jurist Kimberlé Williams

Crenshaw introduced the concept of "*Intersectionality*" [48, 49]. She presents the notion of the accumulation of several social handicaps. This jurist helps to understand how black women (first handicap) or poor women (second handicap) do not suffer the same violence or discrimination as women from privileged and white socio-professional classes [50]. She strengthened the feminist movement and also contributed to the development of the gender movement. In the same vein, American sociologist Judith Butler published her book *"Trouble in Gender"* in 1990. She believes there are as many genders as there are individuals, so kiss goodbye to the masculine on one side and the feminine on the other. She atomizes the idea that there are only two genders. It also lays the foundations of *"Queer Feminism,"* a feminism that thinks outside the opposition between the two genders and considers that neither the gender nor the body are binary [48, 51].

2.1.4 Between 2000 and 2023: Sex education, sexual health, and sexual rights as a coherent whole

2.1.4.1 Sex education

Recommendations for sexuality education prior to the 2000s were gradually bearing fruit. More and more countries were making sex education compulsory both in primary schools and in junior and senior high schools, for example in France, at the rate of three sessions per year. Some governments, in collaboration with universities, agencies, and associations, have been investing in updating and distributing their guides for school principals and teachers [52–56]. With these reference documents, schools were provided more guidance on what to teach. However, there was still not enough exchange among countries to develop common sexuality education strategies and programs. This also made it difficult to evaluate the impact of sex education [40].

The first international frameworks for sex education were developed as a result of numerous meetings and work among experts in sexual health and education. These initiatives were supported by the WHO, the United Nations Educational, Scientific and Cultural Organization (UNESCO), Joint United Nations Program on AIDS (UNAIDS), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF) between 2001 and 2009 [40, 57–62]. In 2010, WHO published the first version of its "*Standards for Sexuality Education in Europe*" [40]. At the same time, UNESCO, in collaboration with other organizations, published the first version of the *"International Technical Guidance on Sexuality Education"* [63]. These two reports share some similarities. They serve as frameworks for policy-makers and authorities responsible for sexuality education. With the publication of these frameworks, many countries further improved their sexuality education programs.

Following the major advances in gender equality, the fight against violence against women, and the inclusion of LGBTQIA+ and gender concepts (see 2.2.), it has become essential to integrate these concepts into the new sexuality education programs. A revised version was therefore necessary. Hence, UNESCO, together with UNAIDS, UNFPA, UNICEF, UN Women and WHO, published the second version of the *"International Technical Guidance on Sexual Health"* [64]. This approach intended to go beyond previous sexual education programs and focused on abstinence, problems, and their prevention. For this reason, it has been called *"Comprehensive Sexuality Education"* (CSE). In addition to lessons on the human body and its sexual

development, fertility, contraception, sexuality and STI prevention, concepts related to sexual rights, psycho-affective development, consent, respect for and inclusion of sexual minorities and gender differences were added, all based on a factual approach that was intended to be secular, civic-minded, egalitarian, and nondiscriminatory. We have called it Approach 3. (**Table 1**) CSE is defined as "*a curriculum-based teaching and learning process that addresses the cognitive, affective, physical and social aspects of sexuality. It aims to equip children and youth with the knowledge, skills, attitudes and values that will enable them to develop their health, well-being and dignity; to develop respectful social and sexual relationships; to explore the impact of their choices on their own and others' well-being; and finally, to understand and defend their rights throughout their lives.*" The guiding principles are organized around eight key concepts of equal importance. They are mutually reinforcing and meant to be taught together. These key concepts are divided into two to five themes (27 concepts in total) (**Figure 1**). Each theme is tentatively broken down into key learning objectives to help guide the development of locally relevant curricula. The learning objectives are age-appropriate and follow a logical sequence (i.e., they become more complex as youth age and mature) based on four age groups: 5–8 years, 9–12 years, 12–15 years, and 15–18 years and older. These principles are voluntary, not mandatory, and are based on current knowledge and international good practice. They take into account the diversity of national contexts sexuality education is provided in. These guidelines have far-reaching implications for advancing global development agendas and for addressing adolescents' health and well-being worldwide [65].

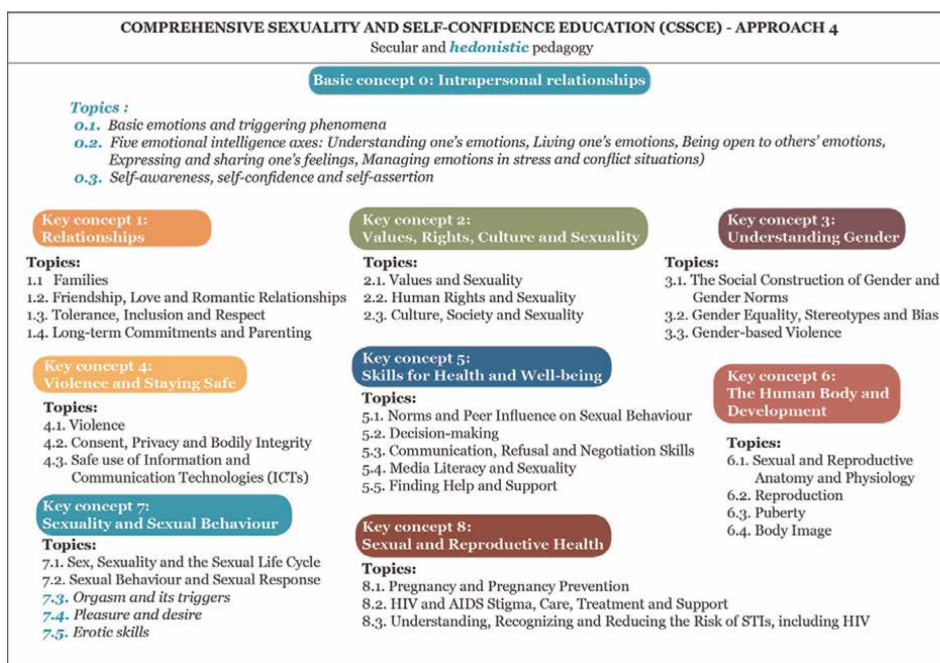

Figure 1.
Comprehensive sexuality and self confidence education—Approach 4.

2.1.4.2 Vectors of sexuality education

In 1998, 30 years after the discovery of the moon, Australian urologist H.E. O'Connel presented the complete anatomy of the clitoris. Previously, only the glans and the cap were known, since they were visible to the naked eye [66]. Her work was then relayed in 2016 by Odile Buisson, an obstetrician gynecologist and Dr. Pierre Foldès, a pioneer of clitoris excision repair. The latter highlighted the clitoris is of no use for procreation but is actually an organ for sexual enjoyment [67]. To disseminate this breakthrough, Odile Fillod, a specialist in popularization, created the three-dimensional clitoris, also called the bulbo-clitoral organ [68]. For the first time, in 2017, a complete representation of the organ was illustrated in the *"Life and Earth Sciences"* textbook [69]. The clitoris became popular, and it was no longer reserved to a handful of scientists, feminists, or lesbians. This discovery, easily represented in monochrome plastic version, had a huge impact in the media and networks. M. Mazaurette and D. Mascret entitled their book *"The revenge of the clitoris,"* thereby showing how the female sex had been gagged over the centuries and sometimes even with women's support [70]. On the subject of the clitoris, A. Koechlin claimed the production of knowledge, just like the production of ignorance, were eminently political issues [71].

2.2 The development of sexuality education and sexual rights, involvement in sexuality education

On many occasions, sexuality education content is undeniably part of a permanent negotiation between the private and public spheres. In the public sphere—despite numerous social, political and cultural obstacles—the successive and painstaking investment of international intergovernmental and nongovernmental organizations, as well as members of the World Association for Sexual Health (WAS), greatly influenced the way sexuality education was conceptualized, along with the content of the programs designed to implement it. The resulting actions have enriched sexuality education by introducing the concept of sexual health and integrating the concept of sexual rights into the human rights framework. In the following, we chart the progress made in this area over the past 60 years. **Figure 2**, inspired by A. Giami's articles on this subject, summarizes the development of sexual health and sexual and human rights stages that have influenced the content of sexuality education programs.

In the 60s, the first steps toward opening up human rights to sexual, reproductive, and gender issues were taken. In 1968, representatives of 120 countries took part in the first International Conference on Human Rights, organized by the United Nations [72]. The ensuing so-called *"Teheran Declaration"* introduced an indirect reference to sexuality as part of the field of human rights, through family planning and the denunciation of social discrimination and violence against women. Initially, sexuality education was limited mainly to premarital sexual abstinence as well as the prevention of STIs and pregnancies outside marriage. The initiative came in response to the need for solutions to these problems. In 1975, WHO shifted its focus to the reasons why engage in sexuality education. This more unifying and meaningful strategy integrated sexuality education into a higher dimension of sexual health [41] (defined above). With this landmark decision, the WHO endorsed "*The principle of the association between non-reproductive sexuality, well-being and personal fulfillment*" [29]. This work was of vital importance to the advancement of sexuality education at international level. This approach was further extended by the WHO in 1987. From then on, the

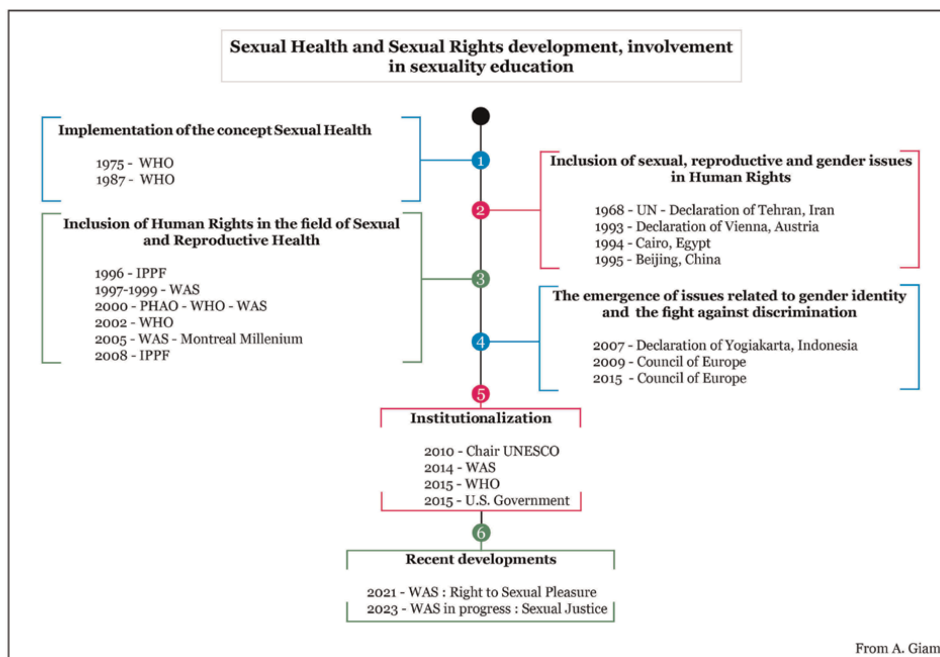

Figure 2.
The development of sexual health and sexual rights, involvement in sex education.

international organization now has encompassed, within sexual health, concepts such as education, information, counseling, and sex therapy. The need to improve professional training and research was also determinedly reaffirmed. In addition, the WHO now takes account of the public health dimension and political issues linked to human rights, affirming "the rights of individuals to be free from sexual exploitation, oppression and abuse." Sexual health is therefore associated with rights, as well as a state of wellness [73]. The drive to include sexual and reproductive health, as well as gender, in the field of human rights has since experienced numerous international developments. From 1993 to 1995, a succession of world meetings were held on human rights (*Vienna Declaration*) [74], population and development (Cairo) [75], and women (Beijing) [76]. They focused on violence against women, the freedom to lead a satisfying and safe sex life, the abandonment of exclusive reference to family planning, women's right to control their sexuality, and gender equality. This work constituted the matrix of the first wave of human rights applied to sexuality. Mobilization in favor of sexual rights had undeniably begun. These include the *"Charter on Sexual and Reproductive Rights"* by the International Planned Parenthood Federation (IPPF) in 1996 [77] and the first WAS *"Declaration of sexual rights,"* in Valencia in 1997 and Hong Kong in 1999 [78]. In 2000, the Pan American Health Organization (PAHO) and WHO, in collaboration with WAS, updated the concept of sexual health. These three international organizations consolidated the hybridization of the notions of sexual health and sexual rights. Without the provision of sexual rights, they consider the objectives of sexual health cannot be achieved and maintained [79]. As health protection is a fundamental human right, it then follows that sexual health is based on sexual rights. This deduction has become increasingly obvious, so much so that the association between sexual health and sexual rights has become the *"regime of truth"*

for sexuality, mainly in the Western world [79]. Two years later, in 2002, the WHO issued its *"Definition of sexual health and sexual rights in the context of reproductive health"* [80]. This declaration integrates the dimension of consent, i.e., the right to have coercion-free sexual relations, which primarily concerns the rights of women and children. The declaration also places greater emphasis on erotic sex life than on reproductive health. In addition, the WHO opens up a public health perspective by emphasizing access to care and services as well as sex education [81]. The journey toward the inclusion of sexual and reproductive health in the field of human rights continued and reached a new milestone. In 2005, at its 17th sexology congress in Montreal, the WAS presented the *"Montreal Declaration, Sexual Health for the Millennium."* This declaration includes eight rights in all but puts sexual rights at the top of the list and brings sexual health and recognition of sexual pleasure's health benefits back to the debate center stage [81, 82]. For its part, IPPF presented its second version on sexual rights, the Revised Charter on Sexual and Reproductive Rights (in 2008). This declaration focuses primarily on reproductive health, women's health, and the right to family planning in the best access conditions, as well as the right to equality in the face of all forms of discrimination [79, 82]. Parallel to these advances, issues related to gender identity, homosexuality, and the fight against discrimination are also emerging. There were also a number of landmark pronouncements on these issues, which had an impact on the content of sexuality education syllabuses. A case in point is the international meeting held in Indonesia in 2007, which resulted in the *"Yogikarta Principles"* for International Human Rights Law on Sexual Orientation and Gender Identity. This document is essential for LGBTQIA+ representatives, as it confers them strict equal rights. It also initiates the fight against the discrimination these people are subjected to when it comes to their basic civil rights [79]. In the same vein, the *"European Commission's report on human rights and gender identity"* was published in 2009. This document sets out a series of recommendations to protect transgender people's human and sexual rights. The report mentions, among other things, the recognition of hormonal and surgical treatments and psychological support, shortening the duration of civil status change procedures, abandoning definitive sterilization to change sex [79, 83].

Four subsequent events reinforced the notion of sexual rights, which had become a compelling theme [73]. In 2014, the WAS, the first to take a stand, presented a new *"Declaration of Sexual Rights,"* following on from its 1997 declaration [84]. It was followed in 2015 by the WHO, which published a broad document on *"Sexual health, human rights and Law"* [85]. Also in 2015, the United States Government publicly recognized the importance of sexual and reproductive health and rights, with the term sexual rights now being used "*Sexual and reproductive health and rights*" [73]. Finally, in 2010, UNESCO instituted a Chair in *"Sexual Health and Human Rights."* One of its main activities is to develop health professionals' teaching and training in the field of sexual health and human rights [73]. These four events were converging toward the institutionalization of sexual rights. Sexual health and sexual rights are not therefore a normative category that is imposed "by right" [86]. In fact, this institutionalization is the result of a long process that began in 1968 and has been driven by the successive adoption of firm, or less firm, decisions by international organizations [73]. However, such institutionalization is not the end of the story, since sexual rights are constantly evolving. One example is the *"Declaration of Sexual Pleasure"* published in 2021 by the WAS [87]. In it, sexual activity is recognized as a source of pleasure and therefore of health. Sexuality for erotic purposes thus becomes a legitimate object of knowledge [38].

This brief historical overview explores the key stages in the development of sexuality, sexual health, and sexual rights [88]. However, a number of important issues do linger despite these undeniable advances [81]. Some organizations prefer to focus on reproductive health rather than sexual health. As a result, sexual rights cannot yet be differentiated from the field of reproductive health [81]. Furthermore, the current proliferation of nonreproductive recreational sexual relations, including masturbation and homosexuality, as well as the generalization of relationships outside marriage, pave the way for the promotion of consensual sexual relations. They also highlight the battle—still to be waged—against the sexual constraints too often exerted on women [81]. Another factor is that the texts instituting sexual rights too often betray essentially heteronormative agendas [81]. Opening up sexual rights to trans- and more generally to LGBTQIA+ people is still a matter of debate due to the discrimination and violence directed at these communities because of their identity characteristics [79]. As for gender-related issues, we wonder how far this will lead to, given the emergence of gender diversity and fluidity, implying a profound change in mentality linked to the right to self-defining identities [79]. Following this path, we now understand the reasons why CSE programs are enriched by the integration of sexual health and sexual rights, even though not all the recommendations are yet to be operationalized in the field.

3. Analysis of approaches to sexuality education

3.1 What does the literature review tell us?

Recent studies of the literature, mainly in the form of systematic reviews, have been carried out to ascertain the impact of sex education approaches and the factors fostering their integration [89–93]. This work lends us the opportunity to summarize what is working, what does not, what's missing, what needs improving, and what questions are still outstanding. They open the way to new proposals to enrich the current approach to CSE Approach 3 [64].

3.2 What is working?

There are many arguments in favor of CSE Approach 3 [64]. It emphasizes the positive aspects of sexual and reproductive health [90]; it does not lead to an increase in sexual activity, risk behaviors, or STIs/HIV infection rates [64]. On the other hand, it can lead to a delay in initial sexual intercourse or encourage the use of protection or contraception on first having intercourse [90, 91]. What's more, it acts at different levels: it goes beyond risk behaviors. It also improves knowledge and skills by promoting healthy relationships; it strengthens child sexual abuse prevention skills and reduces intimate partner violence; it improves understanding of gender and gender norms and reduces homophobia and homophobia-related bullying [89]. Furthermore, the literature shows both the effectiveness and importance of addressing gender and sexual orientation in the contexts of human rights and legality [89, 90].

3.3 What does not work?

According to an overwhelming majority of studies, sex education programs based on AOUM Approach 1 fail to delay entry into sexual life, nor do they prevent risky

behavior [94–96]. Young people say they do not receive—from their parents or other legitimate sources—the basics for positive, respectful sexuality, and sexual relationships [97]. As for educators, their training does not adequately prepare them for their multifaceted role, especially as sexuality differs from other subjects [39, 98, 99]. What's more, teachers are not always comfortable talking to young people about sexuality and gender [64]. Some feel they lack knowledge, skills, confidence, and ease when talking about sexuality [92].

3.4 What's missing?

The absence of a relational context is predictive of poor school results [89]. Young people feel ill prepared for healthy [100, 101], romantic, loving, and lasting relationships, especially by parents, teachers, and other adults, which leads to anxiety [92]. The vast majority of parents are silent on topics such as misogyny, sexual harassment, consent, and interpersonal violence or gender issues [92]. The same applies to the high rates of sexual assault among young people [92]. The implementation of human rights and gender equality is very poor [102]. The collective heteronormative heritage marginalizes LGBTQIA+ people and hinders the development of healthy relationships [103]. Abortion and genital mutilation are also rarely addressed [102].

The themes of pleasure and desire are currently excluded and do not meet young people's needs, especially as educators are often uncomfortable addressing these subjects [6, 89, 90]. There is as yet no real consensus on the criteria for defining sexual well-being and other aspects of positive sexuality [104]. Twenty-three articles reveal significant gaps in erotic education, gender equity, vulnerability, connection, communication [93], and knowledge, in particular, about first sex [93, 105]. Key components identified as an optimal sexual experience include presence; connection accompanied with sharing and reciprocity; deep sexual and erotic intimacy; authentic communication; risk-taking and interpersonal exploration; authenticity; vulnerability and transcendence [93]. This development of erotic skills is therefore emphatically encouraged [93]. In terms of form, what is lacking is a playful pedagogy that makes it easier to open up dialog [92].

3.5 What needs improving?

Start CSE early, even from kindergarten onward, and well before sexual activity begins. This early approach helps prevent sexual abuse and provides self-protection [89, 106]. In addition, it is highly advisable to organize long-term, staggered education that is age-appropriate and disregards gender and sexual orientation stereotypes [89].

In terms of themes for improvement, young people are asking for psychological and emotional skills to cultivate healthy relationships that pave the way for safe and enjoyable sexual experiences, whether in friendship, one-night stands or romantic relationships, all of which are essential for optimal health and well-being [9, 89, 90, 92, 93]. Knowing how to deal with difficult emotions can also help youths improve their academic performance [9, 89]. CSE Approach 3 fortunately addresses sexual health beyond the biological aspects of sex [90]. When pleasure and desire are addressed, pleasure is too often associated with "danger pleasure," whereas the need for information is based on "satisfaction pleasure," without falling into the "pleasure imperative" trap [107–109]. As for desire, it is a subject that deserves a great deal of thought, especially for women, on account of this: Is desire focused on pleasing the

other person, or on expressing one's own desires [110]? Young people are also asking questions about how to communicate and better satisfy their partner(s) [111]. What's more, healthy sexuality that is all about pleasure and intimacy makes people want to have sex [93]. Moreover, addressing the issue of gender and power [112] can multiply the effectiveness of risk behavior prevention. This subject is of less interest to men but is inherent to gender inequalities [113]. The younger generation is also calling for more inclusive sex education for LGBTQIA+ people, irrespective of sexual orientations [92, 114, 115]. They call for the struggling against homophobia and transphobia [9]. A hostile environment is associated with poorer school results. Conversely, a favorable environment promotes success and improves mental health. Integrating themes such as intersectionality, sexual orientation, and origin, class and culture considerations into the *"Social justice"* dimension also meets a demand [89]. LGBTQIA + people are also demanding dialog on the subject of healthy relationships, sexual orientation, gender identity, sexual pleasure, and communication [92]. As for queer and trans youths, they need sexuality education that is relevant to their lives [9, 92]. Young people also want more debate on sexual health issues across a broad educational spectrum [92]. One request remains important: to extend CSE to people with disabilities. These poor relations of sexual education are, in fact, more exposed to sexual health risks, sexual abuse and exploitation, unwanted pregnancies, and STIs [89].

As far as teachers are concerned, young people say they need qualified educators to talk about sexuality at ease and with preparation [92]. To achieve this, teachers need to understand their own values, assumptions, and experiences where their own sexuality is concerned [92]. Young people want educators who are confident [116], who encourage them to stimulate reflection, develop empathy and critical thinking, and who look at sexuality in a positive and inclusive way [92]. Teachers who address homophobia, transphobia, and other issues specific to LGBTQIA+ youths need specific training [92]. All this requires adequate financial resources and practical support [92]. Young people are also very interested in peer teaching with expert support [115, 117]. They listen to peer educators, opinion leaders, and influencers, even though these approaches still leave room for improvement [115].

As far as the teaching itself is concerned, teaching methods should be more playful and therefore more attractive. Board games, card games, ice-breaking exercises, activities that get people moving, quizzes, multiple-choice questions, fun approaches, and jokes are all desirable, as they open the door to debate and dialog with teacher and peers alike [92]. Counseling young people by working on emotions, for example, with the help of artificial intelligence, as proposed by UNESCO with the Sacha system [117], is also very promising.

As for schools, A.J. LaVanavay questions the appropriateness of the school as a place for teaching sexuality. In any case, she questions its role in this respect [9]. On the other hand, S. Denford et al. believe that schools play a key role in the implementation of sex education [118]. At school, it is important to include the subject in other courses too, such as social studies, languages, physical education, mathematics, music, and art [89]. Today's teenagers are influenced by the digital and technological environment. It is hence all the more important to tailor sexuality education interventions to this environment. Online searches for information on everyday health issues, sexual health, and physical well-being are on the increase [119–121]. B.J. Gray et al. consider the Internet to be an increasingly important source of information and advice on this subject for young people and adolescents [122]. Also, many authors advocate digital platforms and blended learning (school and Internet) as promising greater

effectiveness in promoting teen-age sexual health [123]. In addition, a combination of face-to-face and digital interventions seems preferable, given the Covid experience [124]. Access to information is facilitated by smartphone applications, which are becoming an increasingly important vehicle for sexuality education [124]. Thanks to their ubiquity and popularity, digital media offer a promising avenue for sex education, especially as the confidentiality and anonymity they provide suit young people [125]. In the school environment—both inside and outside the classroom—digital interventions offer greater flexibility than traditional face-to-face interventions when it comes to a variety of learning needs and benefits. This lower-cost medium also brings numerous possibilities for personalization, interactivity and a safe, controlled and familiar environment for the transmission of sexual health knowledge and skills [125–127]. At the same time, rigorous evaluation is required, particularly with regard to the opportunities offered by new technologies, which can lead to more cost-effective interventions than face-to-face programs. In view of their relevance, these new technologies are therefore highly recommended [89, 90, 128]. The same applies to peer-led digital programs [128].

3.6 Unanswered questions

Over the past generation, the Internet has introduced a new professional, social, personal, and sexual way of life [129]. Interpersonal relationships are becoming more distant, through our screens and connected objects, right down to the most intimate aspects of our private lives [129]. Today, spurred on by the isolation imposed by the Covid-19 pandemic, the arrival of digital technology and the world of tech, or shall we say *"sextech,"* have accelerated the opening up to other modes of enjoyment. Their aim is to combine the quest for sexual wellness with technological innovation. This new way of functioning includes the connected objects we already know about, but also robotics, virtual reality, artificial intelligence, immersive technologies, to name a few [130]. New intimate scripts are being developed through the practice of cybersexuality, pornography, and the use of sex toys. The path to assisted orgasm is now also more accessible to the sexually excluded the disabled and the elderly. Erobotics, which brings together humans and robots, is growing fast. Today, these new sexualities are spawning more questions than answers, and it is time we got to grips with them as soon as possible.

3.7 The metaphor of learning how to drive a car

Approaches 1 and 2 to sex education are conservative, protective, and even restrictive. They are not effective, preventing neither unwanted pregnancy nor STI/HIV. What's more, they fail to meet young people's needs and demands. While Approach 3 has the merit of gaining consensus internationally and among young people, it is not yet applied for all in an optimal way, and its implementation requires a great deal of adaptation, depending on the country and the existing culture. Young people report they are not sufficiently prepared to establish an intimate and fulfilling relationship with another person, whether lasting or short-lived [131].

The metaphor of learning to drive a car illustrates these approaches state of affairs. The first approach is not to bother to drive. This removes any dread of danger, but then of course it deprives you of the opportunity to travel in this mode. The second is to focus totally on the risks of accidents resulting from one's own or others' carelessness. This is the safety approach. The third approach is to learn the rules of the road as

a good citizen: respecting priorities, speed, the meaning of traffic lights, road markings, communicating with others, headlights, indicators, horns and what have you; respect heavy goods vehicles, two-wheelers, and pedestrians. While these notions are essential to integrate, the journey is still at deadlocked. At this stage, aspiring drivers remain on the sidelines. In the meantime, they observe drivers taking part in the *"Goodwood Festival of Speed,"* a paradise for car enthusiasts and speed lovers. He therefore believes that driving means opting for maximum speed and force (#porno) and acts similarly if no other information is provided. He's missing the fourth way. It means learning to drive in real, not virtual, conditions, alone or accompanied, in the countryside, in traffic jams, on the freeway, in the mountains, knowing your rights and those of others, confidently mastering the brake and gas pedal at slow, moderate or fast speeds. It means being equipped to take on the dream and enjoy the escape.

4. Proposal for a fourth approach to sex education

CSE Approach 3 therefore deserves to be enriched at various levels, as implicit needs and demands remain to be met. It is therefore important to create and reinforce these themes, to better prepare teachers, to innovate and diversify the places and means of transmitting information, and to foster access to it for all. Let us be more explicit about themes.

CSE proposes nine keys (**Figure 1**) broken down into 29 themes. We have added a new key, the basic one: intrapersonal relationships. After all, how can we position ourselves in terms of consent and deal with unwanted pregnancies, violence, discrimination, gender equality, romantic relationships, and decision-making without having learned and assimilated solid emotional baggage such as self-awareness and self-confidence? That is why we have added this dimension. Emotional competence is the ability to identify emotions, understand what triggers them, express them, and regulate them [132]. Moreover, the acquisition of such competence is predictive of good physical and mental health [133] and has a significant impact on psychological, social, and physical adaptation [134–139]. Current research highlights the need to develop this emotional competence at school [133]. We consider it essential and a priority, since it serves as a pillar for all the other keys and for the healthy fashioning of one's own life [140, 141]. That is why we propose it be developed as early on as kindergarten. To our knowledge, some sex education guides are beginning to introduce that dimension explicitly [142]. UNESCO also attaches importance to the notion of counseling [117]. However, this is far from sufficient. Under Key 4: Violence and security, in line with the literature review, we have added female genital mutilation (excision) to Theme 4. This practice, which is a violation of human rights, still exists in 31 countries [143]. Of the 27 themes developed in the 8 keys, the poor relation is key concept n°7, sexuality and sexual behavior. Only two themes are developed: Theme 1 concerns sex, sexuality and the sexual life cycle, and Theme 7.2 deals with sexual behavior and sexual response. The points raised concern fantasies, masturbation, condom use, and the complexity of sexuality. It's true the WAS charter on the right to pleasure wasn't published until 2021 [87], which may explain why pleasure is not yet clearly mentioned. However, in view of the analysis of the literature corresponding to the lack of knowledge, notion of pleasure and desire as well as erotic skills, we add three other aspects: 7.3. Orgasm and its triggers, both female [144, 145] and male [129, 146, 147]. 7.4. Pleasure and desire. And 7.5. erotic skills, to increase sexual confidence. **Figure 1** presents the keys and themes of approaches 3 and 4. We thus

propose Approach 4: comprehensive education for sexuality and self-confidence CESSC, based on UNESCO's International Guidelines on Sexuality Education. This fourth approach is hedonistic, secular, civic-minded, egalitarian, and nondiscriminatory, grounded in a fact-based approach. **Table 1** explains this approach in greater detail.

To quote V. Boydell et al., *"We are aware the inclusion of pleasure in sex education is an ideal or model yet to be achieved, as there are political, social and moral barriers to such inclusion. However, pilot studies or further research into the benefits of erotic education could highlight not only sexual benefits, but also relational and psychological benefits"* [148].

5. Sex education: What challenges in future?

Despite 2 years of confinement and loss of bearings due to Covid-19, we are experiencing an *"acceleration of history"* [149]. There is an overabundance of events and information that are gathering speed. In the early twentieth century, marriage-related sexuality was limited to reproduction. The 60s sexual revolution and the emergence of sexual health helped legitimize nonreproductive relationships (masturbation and homosexuality) and relationships outside marriage. In the twenty-first century, attention is focused on a type of sexuality linked to consent, in reaction to the constraints placed mainly on women and children; a rejection of heterosexuality as the sole reference point; a fight against discrimination linked to sexual orientation and gender identities; and finally, a recognition of the sexual rights demanded in particular by the LGBTQIA+ movement. The omnipresence of screens and remote interactivity also herald other upheavals. New technologies are leading us toward what we might call cybersexuality. From now on, there is no longer just one recognized way of living one's sexual life [129]. Sexuality is an integral part of this *"acceleration of history."*

In this ever faster-paced world, how can we educate children and young people about sexuality, while political debates persist about what is public and what is private? And above all, how can we avoid becoming the guardians of morality in our pluralistic culture [6]?

Today, the international model of CSE Approach 3, designed to be equitable and evidence-based, claims it has an answer [64], with ready-to-use strategic recommendations to speed up its implementation and effectiveness at national level [150]. Despite international consensus, its implementation faces multiple sociocultural, political, and systemic obstacles [151]. At the top of the list of current challenges at different decision-making levels are the following priorities:

Regarding international intergovernmental and nongovernmental organizations and the WAS

1. Better master strategies for implementing sexuality education programs, apply implementation science, and more specifically implementation science communications [152], to improve the impact of sexuality education in schools, other educational settings, and the media.

2. Fund high-quality, up-to-date teaching for educators.

3. Create an experts' center to award quality labels to teacher training centers, schools, and other stakeholders (similar to a dynamic accreditation system).

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Regarding curriculum content

1. Apply Approach 4 (ECSCS), which enriches the CSE Approach 3 with educational or financial incentives.

2. Prepare for the new sexual revolutions: design and critically analyze the teaching of new sexualities linked to new technologies.

3. Continuously improve teaching content by opening up to the Sexocorporal Approach [153], which aims to provide an in-depth understanding of a person's sexual functioning, to help them improve the quality of their sexual arousal and the sexual pleasure that accompanies it. Also open up to other ways of teaching sexuality: the sexual practices of millennial wisdoms (Tao [154] and Tantra [155]).

Regarding teaching-methods designers

1. Make teaching more stimulating through playful pedagogy. Facilitate educators' work by providing them with ready-to-use training courses or information banks that can be tailored to the field [150, 156]. Make the most of digital media such as Twitter, Instagram, Facebook, and TikTok, as well as television, to disseminate attractive, didactic messages capable of orienting young people toward more liberal public health objectives, and filling their gaps in sex education.

2. Encourage the creation of maturity grids that can be used by each young person to determine the priority themes that are appropriate for his or her stage of development.

3. Create and award quality labels, based on quality criteria, to schools, educators, influencers and peers.

Regarding teachers

1. Train at quality-labeled training centers.

2. Be clear about one's own sexuality and the one being taught (open-mindedness, discretion, impartiality, ability to stand back ...). Avoid setting a particular sexual orientation or lifestyle as the norm. Avoid taking sides in political and cultural wars.

3. Create discussion groups between educators as a place to share mutual support, and talk about failures and successes.

Regarding parents

1. Since the new information and communication technologies can give an additional impression of loss of direct control, leading to "moral panic," replace this direct control and the emphasis on reserve and restraint with a discourse based on individual responsibility [157].

2. Training in intrapersonal relationships: emotional intelligence, self-awareness, and self-confidence. Open up to sexuality and its various forms of expression.

3. Refer children to quality-labeled educational structures.

Regarding young people and teenagers

1. Follow quality-labeled training courses, according to the results of the maturity grid corresponding to each individual's needs and demands.

2. Learn to tell the difference between reality and fiction, especially when pornography meets virtual reality [157].

3. Set up peer exchange groups.

As clinical sexologists and teachers, we dare to take up these challenges.

> "*In the 21st century, living, loving and enjoying has become an entirely different adventure from that of times gone by* [129]."

6. Conclusions

Sexuality education today remains a controversial subject in families and schools, as well as in political, philosophical, and religious circles, as illustrated by the examples we have gathered. We set out to trace its evolution from the 1900s to early 2023, in a context limited to the Western world and culture. This historical journey has enabled us to understand the issues surrounding sex education and how they have evolved over time. In particular, it highlighted the arguments that led to questioning heterosexuality as the sole reference point for social behavior. The path taken has also led to modeling three main approaches to sexuality education. Among the milestones along the way are the positions adopted by international organizations, following debates aimed at giving a positive, protective meaning to sexuality by introducing the notion of sexual health. These positions are a reaction to the moral pedagogy adopted by the first half of the twentieth century's sex education pioneers. These international bodies have also committed themselves to establishing sexual rights, with a view to protecting women and children from sexual violence, preventing discrimination based on sexual orientation, and recognizing gender identities, LGBTQIA+ communities, and alternatives to the cis-heteronormative model. All these values were introduced in the third and most recent approach to sex education (Approach 3). The literature was then analyzed to determine the impact of all three approaches. It was concluded the most promising is the third (Approach 3) and most recent approach. However, young people are expressing more and more needs and demands. They want to acquire more psychological, emotional, and erotic skills to cultivate healthy relationships, paving the way for safe and pleasurable sexual experiences. That is why we are proposing a fourth and new approach, also based on an evidence-based approach (Approach 4). It includes the third approach in its entirety but is enriched by meeting young people and adolescents' concerns. It introduces a new theme in its own right: intrapersonal relationships. Based on the science of emotions, this approach helps build self-awareness and self-confidence. Once such skills have been acquired, they are reflected, among other things, in better practice of consent, and prevention of inequality, sexual violence, and discrimination. This fourth approach adds complementary topics to the theme of sexuality and sexual behavior, fostering better

knowledge, skills, and know-how in intimate and sexual relationships by opening up more openly to sexual pleasure and desire. This complementary education offers greater chances of improving young people and adolescents' mental, sexual, and emotional health. Last but not least, challenges are being thrown down to international bodies, educational designers, teachers, parents, and young people and teenagers alike. However, there are still fields yet to be explored that we are barely glimpsing: the cybersexual, heralding new sexual paradigms, and the silently but surely emerging new trend of adopting asexuality and abstinence.

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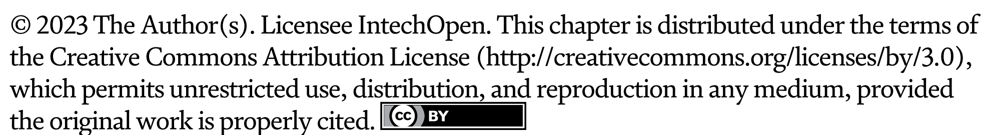

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Section 2

Sexual Health Education Interventions

Chapter 4

Perspective Chapter: Sexual Health Interventions for Adolescents

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Abstract

Comprehensive sexual education emphasizes a holistic approach to human development and sexuality. The goal is to equip adolescents with competencies and values that should enable them to make responsible well-informed decisions about their sexual and social relationships in a world driven by sexual and reproductive health and rights. Sexual education programmes provide mitigating effects on the sustained information adolescents receive from various unsubstantiated sources about their sexuality and gender, which often is contradictory and confusing. It has been widely recognized that sexual education is alone not adequate to empower adolescents for developing positive norms about themselves, relationships, and their sexual health if the component of human rights is overlooked. This chapter hence adopts a rights-based approach to comprehensive sexuality education. Advocacy is on availing opportunities for adolescents to acquire essential life skills and develop positive attitudes and values on their sexuality. The chapter addresses the following contemporary cross cutting issues prevalent among adolescents: Sexual and Reproductive Health and Rights; Sexuality Education; Prevention of sexually transmitted infections; Provision of family planning and prevention of unwanted pregnancies; Prevention of Gender Based Violence. Suggestions on contextualized approaches for effective adolescent sexual education are provided in each section.

Keywords: adolescent, sexual health, reproductive health, comprehensive sexuality education, rights based sexuality, family planning, unwanted pregnancies, gender-based violence, sexually transmitted infections

1. Introduction

Adolescents and young people have a right to comprehensive sexual and reproductive health services which include the right to sexual knowledge. Consequently, they require comprehensive sexuality education (CSE) to prevent unpredicted and unplanned health outcomes relating to their sexuality. A rights based CSE is recommended for both in and out of school adolescents aged 15–24 years. This

enables them to protect and advocate for their health, well-being, and dignity through provision of the necessary toolkit of knowledge, attitudes and skills [1]. Specifically, the initiative aims at empowering this vulnerable population cohort to stand for its sexual and reproductive health and rights (SRHR), and be able to protect itself from any form of abuse, guided by an informed decision mind set. Being a component of basic human rights, SRHR are an important global public health goal that concern adolescents and young people substantially [2]. Fundamentally, adolescents are repeatedly the target of sexual health interventions aimed at avoiding unwanted pregnancies and sexually transmitted infections (STIs) including Human Immunodeficiency virus (HIV) and gender based violence (GBV). These interventions depend on the cultural context, and range from abstinence-only programs to CSE [2].

Adolescents are meant to be the key stakeholders in sexual health education yet, they are rarely consulted when sexual health programmes are developed. Nonetheless, their contributions are crucial to guide relevant and appropriate sexuality education that promotes safer adolescent sexual behaviours [3]. It has been reported that long-term sexuality education programmes result in the reduction of teenage pregnancies and abortions as well as declines in the rates of STIs and HIV infection among young people [4].

The rights-based approach that expands the goals of sexuality education beyond disease and pregnancy prevention is an emerging model for CSE [5, 6]. This approach includes positive sexuality, empowerment, and community engagement. Content related to contextual issues that affect adolescents' sexual lives including gender and cultural norms, relationship power and sexual orientation should be incorporated into the rights-based approach empowerment programmes [5, 6]. Accessibility of comprehensive sexual and reproductive health services is therefore mandatory for adolescents and young people as a crucial basic human right if universal sexual and reproductive health coverage is to be attained [7].

2. Sexual and reproductive health and rights

Sexual and reproductive health is a state of complete physical, mental and social wellbeing in all matters relating to sexuality and the reproductive system [8]. In addition, individuals need to be empowered on the knowledge of their rights, be enlightened on the services available to them, and helped to overcome individual and societal barriers that prevent them from making informed decisions [9]. This derives from the right individuals have to make decisions governing their body and access services that support that right [10]. It is further asserted that SRHR comprise sexual health, sexual rights, reproductive health, and reproductive rights [10]. These components ought to be reflected in the programming of services and interventions that address individuals' sexual and reproductive health needs. Furthermore, SRHR focus on pertinent issues that include violence, stigma, and respect for bodily autonomy. These factors have a profound effect on the adolescents' physical, psychological, emotional and social well-being. Relevant stakeholders therefore need to develop policies, services and programmes that holistically address SRHR issues effectively and equitably. This is grounded on individuals' rights to decide over their bodies, and to live healthy and productive lives.

Sexual health focuses on counselling, care related to sexuality, sexual identity, and sexual relations. Related services include the prevention and management

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of STIs and Human Immunodeficiency Virus (HIV), and Human Papillomavirus (HPV) for girl adolescents.

Sexual rights entail the right of all persons to freedom from sexual discrimination, coercion and violence.

Reproductive health promotes delivery of accurate information to all people about their reproductive systems, and awareness creation on the services that support maintenance of reproductive health needs especially among adolescents.

Reproductive rights centre on the recognition of human rights of all people to decide freely and responsibly on the number and timing of their children and the right to attain the highest standard of reproductive health.

Adolescent sexual and reproductive health is related to multiple human rights that include the right to life, health, privacy, education, religion, freedom from torture, and the prohibition of discrimination, all of which need to be supported [1]. The ability of individuals to achieve sexual and reproductive health depends on the realisation of sexual and reproductive rights based on the human rights of all individuals.

Sexual and reproductive health and rights are anchored on four pillars; autonomy, control, respect, and support systems. Related services must fulfil public health and human rights standards in terms of availability, accessibility, acceptability and quality framework of the right to health [10]. Hence, an essential package of sexual and reproductive health interventions for adolescents includes; provision of contraceptive services, prevention and treatment of HIV/AIDS, management of STIs other than HIV, comprehensive sexuality education, safe abortion care, prevention, detection and counselling for GBV, infertility and cervical cancer, and counselling and care for sexual health and well-being.

There is need for SRHR providers to be open minded and play a critical role in shaping attitudes and perspectives of adolescents. This could be a means of challenging and entrenching positive social and gender norms, especially on girls. Meaningful conversations around SRHR need to be normalised in order to keep adolescents well informed, empowered and less vulnerable to STIs, GBV and unintended pregnancies.

Achieving positive outcomes in the area of sexual reproductive health requires huge investment and collaboration among all key stakeholders [11]. Equitable access to good quality SRHR enables bodily autonomy which is a precondition for adolescents' economic empowerment and their opportunity to contribute actively to democracy, peace and security [12]. The SADC SRHR strategy 2019–2030 emphasises the need for strong political commitment and adequate human and financial resources to support the SRHR initiative. Enablement of all people to exercise their SRHRs and make decisions that govern their bodies free of stigma, discrimination, violence and coercion could thus be assured. The SADC SRHR strategy also supports all the sexual health interventions relating to youths mentioned in preceding sections while advocating for the reduction of intimate partner violence, sexual violence and sexual exploitation to enhance comprehensive SRHR. In addition, midwives need to invest in adolescent health if they are to perform to their full potential [13].

Sexual and reproductive health and rights for all including vulnerable groups like adolescents could be achieved through realisation of the sustainable development goals and universal health coverage. Universal achievement of SRHR takes cognisance of government commitment, human and material resource availability, and collaborative action by various key stakeholders specialising in those areas. Special consideration of these factors could lead to the elimination of sexual and GBV, reduction in teenage pregnancies and STIs, and universal access to comprehensive SRHR services.

These rights should be applied to everyone including adolescents, and remain with them throughout life. All rights are equally important since deprivation of one impedes the enjoyment of all the others.

3. Sexuality education

Adolescents' susceptibility to practicing risky sexual behaviour due to lack of appropriate sexuality education has evolved over time and has since become a global concern [14]. However, despite clear and compelling evidence for the benefits of high-quality, curriculum-based CSE, few adolescents receive preparation for their lives that empowers them to take control and make informed decisions about their sexuality and relationships freely and responsibly [15].

Sexuality education also referred to as CSE [16] is viewed as a rights-based approach that aims to empower young people with the knowledge, skills, attitudes and values they need to determine and enjoy their sexuality; physically and emotionally, individually and in relationships. The concept proposes education beyond information and hence a need to motivate young people to acquire essential life skills and develop positive attitudes [15]. The education should include issues of adolescent sexual development, sexual orientation, sexual behaviours, pregnancy, contraception and related health problems and their complications [17]. Sexuality education for both boys and girls takes place through a potentially wide range of programmes and activities in schools, community settings, religious centres, as well as informally within families, among peers, and through electronic and other media.

Adolescents are the key stakeholders and consumers of CSE because they are at a stage of transitioning from childhood to adulthood. This stage of development is characterised by physiological changes such as sexual maturity and body shape changes, cognitive-complex thinking, social development, and thinking about one's rights. In addition, menarche and spermarche (first menstruation in females and first sperm emission in males) occur during this period and adolescents become aware of their sexuality. They show personal responsibility and begin to experiment on many things including sexual indulgence at early adolescent stages [18]. Lately, adolescents experience puberty at younger ages than the previous generations due to better health and nutrition. Furthermore, some cultural and religious practices tend to prescribe early childhood marriages without consent of these young people [18].

There are several emerging issues resulting from the changing values/norms of society linked to globalisation. These include; child pornography, prostitution, child sexual abuse and poor parenting, adolescent dating violence, intimate partner violence, body image disorders, rape and abortion, female feticide, psychosexual disorders, homosexuality and masturbation by adolescents [18]. Risky sexual behaviours and lack of knowledge on sexuality-related topics in middle to low income countries are among the leading sexual health problems. These problems are mostly associated with socio-cultural practices that eventually lead to STI and HIV infections, unplanned early pregnancies, and unsafe abortion [19, 20]. Similarly, countries holding conservative attitudes and cultural taboos towards sexuality education have higher incidences of sexually transmitted diseases, teenage pregnancies, child marriages and sexual abuse in their populations [14].

Adolescents need reliable sexuality information that prepares them for safe and life fulfilling skills. This is because at this stage they tend to receive confusing and conflicting information about relationships and sex. When delivered well, CSE

enables young people to adopt positive sexual behaviours. These include delaying the age of sexual debut, reducing the frequency of sex and number of sexual partners, and increasing use of contraception especially use of condoms, thereby delaying pregnancy and preventing STIs [21].

Comprehensive sexuality education encourages active participation, which is integral to the empowerment of adolescents, while also helping them to make independent decisions with confidence [21]. In addition, adolescents open up, share their personal experiences and adopt a change of attitudes towards gender and sexuality. Comprehensive sexuality education also helps adolescents to accept who they are, acquire assertiveness and self-esteem skills, confidence when discussing sexuality, and acquisition of self-respect and life skills which enable them to make informed decisions about interpersonal and romantic relations. Overall, CSE motivates young people to access friendly sexual and reproductive health services, gain independence, and acquire sexual rights [20]. Sexual education can also reduce adolescent and youth vulnerabilities to violence by promoting bodily autonomy and integrity, self-confidence and negotiation skills including gender-equitable norms.

Appropriate CSE often leads to better acceptance and appreciation of one's own body. It eliminates curiosity about their bodies and teaches young children on how to protect themselves from abuse. Furthermore, CSE also helps young people to express love and intimacy in appropriate ways as they interact with all genders in respectful ways [3]. Through CSE, adolescents learn to apply critical thinking skills, effective decision making and effective communication with family, peers and romantic partners. They also learn to take responsibility for own behaviour and tend to enjoy and express one's sexuality throughout life. Early child pregnancies, child marriages, STIs and HIV and all forms of gender based abuse could thus be reduced [3].

It is recommended that CSE should start in the classroom as an on-going process of acquiring information and cultivating positive attitudes, beliefs, and values [19]. Moreover, the human rights perspective postulates that complete sexuality education must be scientifically and age-appropriate, and recognise peoples' culture, rights and gender equality [22]. Schools and other educational institutions should scale up access to quality CSE that is culturally appropriate, gender sensitive and evidence-based, and should be inclusive of both in and out of school boys and girls.

There is need to increase access to youth-friendly sexual and reproductive health services. Comprehensive sexual education should therefore be linked to accessible, affordable and effective health services and commodities such as; condoms, contraceptives, HIV counselling and testing, HIV and STI treatment, post-abortion care, safe delivery, prevention of mother-to-child transmission and other related services. Awareness programmes on CSE should be extended to teachers, health care providers, parents, peers, law makers and society at large. The above mentioned cadres are sometimes the perpetrators who tend to promote threatening, unfriendly and inaccessible environments due to inadequate knowledge and conflicting religious-cultural beliefs and legal restrictions [14].

Sexuality education should take place in conducive, non-threatening environments that motivate adolescents to be active participants in the discussions. This could assist them gain confidence to freely open up, develop own body autonomy and make informed decisions regarding rights and wrongs. In addition, teachers and peer educators need to be adequately trained with appropriate knowledge and skills on facilitating sexuality education programmes. Parents and the entire community also need to be equipped with information on parenthood regarding sexuality issues throughout their children's developmental journey from puberty to adulthood.

4. Prevention of sexually transmitted infections

Sexually transmitted infections are a public health issue of concern. Globally, more than 1 million cases of STIs are acquired every day and about 374 million new cases are recorded every year although there are notable variations in geographic regions and age groups [23]. The burden of STIs is higher in lower and middle income countries with sub-Saharan Africa having the highest number of new cases globally [24]. Adolescents and young adults aged 15–24 make up 25% of sexually active individuals and account for about 50% of new infections [25]. Because adolescents normally face barriers in accessing prevention and management services such as inability to pay, lack of transport and confidential concerns with parents and guardians, they are a particularly high risk group for STIs. Other health behaviours such as high risk for substance abuse, victimisation through violence, poor mental health and suicide related experiences have been shown to co-occur with, and contribute to the risk of HIV and STIs, and unintended pregnancies [26]. Decreased condom use and expanding sexual networks facilitated by dating apps also contribute to high STI rates among adolescents [25].

Adolescents tend to have their first sexual experience whilst still at school where they spend most of their time. Regrettably, the majority of them have their experience of sex education too late [27]. It is for this reason that schools are better placed to deliver CSE to children starting from kindergarten before they are sexually active. This is meant to equip them with the necessary skills to prevent early sexual debut and consequently STIs and unwanted pregnancies.

High quality STI prevention interventions and care include CSE programmes, testing and treatment services, preventive technologies, vaccines and supportive and dignified care [25]. Students need to be given age-specific and accurate information on the prevention, transmission, symptoms and treatment of STIs. Promotion of abstinence to delay sexual debut is one approach that has been promoted to prevent STIs. However, although it is 100% effective in preventing STIs, abstinence has been criticised because it is misaligned with adolescents' sexual behaviours. Condom use is therefore encouraged as it provides dual protection against STIs and pregnancies. Rights-based approaches are more holistic and provide young people with information that will enable them to cope with sexuality issues including STI prevention.

It is estimated that 258 million adolescents, about 8% of the global youth population, are out of school. Of these, 60 million are primary school going age or less [27]. Research has shown that out of school adolescents are more likely to initiate sex early and marry at a young age, usually to elderly men. Their risk of exposure to STIs is therefore high. Consequently, CSE should also be provided to out of school adolescents to equip them with life skills for the prevention of negative sexual and reproductive health outcomes. A significant increase in adolescent pregnancies was reported at the height of the COVID-19 lockdowns [28]. This suggests that young people who were previously at school, and who may have received school based CSE practised unsafe sex and got pregnant. Moreover, these adolescents were exposed to the risk of getting STIs. Evidently, sex education on its own is not very effective in preventing STIs and has to be linked to service provision like access to condoms and confidential counselling and treatment.

Parents should be actively involved in sex education programmes to reinforce the information their children already have. A compressive sex education includes gender components which empower young people to negotiate safer sex and avoid STIs. Rights based approaches also enable stigmatised disabled and Lesbians, Gay,

Bisexual, Transgender, and questioning + (LGBTQ+) adolescents to access STI preventive services and treatment [25]. These stigmatised groups derive less satisfaction from their sexuality education than their peers and this is an area which needs to be strengthened.

5. Provision of family planning and prevention of unwanted pregnancies

Unintended pregnancy among adolescents represents an important public health challenge in both high-income and middle and low-income countries [29]. Globally, contraceptive use among adolescents remains consistently low [30]. This is attributed to lack of access to information and health services related to sex which consequently increase the risk of unsafe abortions and carrying unwanted pregnancies [31]. The capacity of adolescents to engage in early sexual activity has evolved over time and presents challenges to policy makers [32]. Increasing contraception among adolescents is therefore important for the prevention of adverse health outcomes such as maternal mortality, obstructed labour and obstetric fistula as well as negative socio-economic outcomes including reduced opportunities for education and employment [30]. On the contrary, increased access to family planning services results in adolescents' ability to delay parenthood and enjoy improved health and educational outcomes.

Other provider, individual, health system and societal barriers to the use of contraceptives by adolescents have been observed in different settings. These include; poor contraceptive knowledge among adolescents, inadequate training of health workers in the provision of adolescent sexual health services, weak input of reproductive health information in educational institutions, religious factors, and access of reproductive sexual health services being considered a taboo in some cultures which do not expect that age group to use contraception [33].

There is need to increase awareness and knowledge of family planning methods among adolescents. This calls for the education of community members towards remodelling use of family planning services among sexually active adolescents. This may be more beneficial towards the prevention of unintended pregnancies. In some settings, efforts to increase education and access to voluntary contraception were thwarted by the emergence of the COVID-19 pandemic in 2020. This resulted in further exacerbation of risk vulnerabilities because of the associated restrictions which included difficulties in accessing transportation, closure of health facilities, and mobile clinics, and community-based interventions including supply delays for contraceptives [34].

The reversal of the gains on contraceptive education of adolescents need to be revamped and intensified for sustained empowerment on the prevention of unplanned and unwanted pregnancies by adolescents. Several recommendations for family planning education and prevention of unwanted pregnancy can be proffered including health education of adolescents on contraceptives in conjunction with skills-building and improving contraceptives accessibility. Furthermore, all stakeholders should support young people to navigate through adolescence with adequate knowledge, skills and services to facilitate good decisions regarding their sexuality. This could be done through provision of CSE, strengthening education on communication between parents and adolescent children, and empowering youths for sexuality decisions. Reinforcing peer education strategies in health facilities and community setups could facilitate increased knowledge and consequently, adolescents could gain confidence and upgrade their rights-based approach to sexuality education.

6. Prevention of gender-based violence

Gender-based violence refers to harmful acts directed at an individual based on their gender. It is rooted in gender inequality, the abuse of power, and harmful norms which include sexual, physical, mental and economic harm inflicted in public or in private [35]. Gender-based violence also includes threats of violence, coercion and manipulation and can take many forms such as intimate partner violence, sexual violence, child marriage and female genital mutilation, with young people considered a high risk group [36]. Lesbians, Gay, Bisexual, Transgender, and questioning+ youth and young women with disabilities are also at increased risk of experiencing GBV [37].

Gender-based violence is a global pandemic and one of the most prevalent human rights violations in the world with serious health and security impacts for those affected [35]. When a woman has been subjected to GBV, she suffers short and long-term consequences such as injuries, unintended pregnancies, sexually transmitted infections and gynaecological disorders, as well as anxiety, depression, post-traumatic stress disorder and self-harm in some instances [38]. Almost one in every three women, or approximately 736 million women worldwide, have been subjected to intimate partner violence, non-partner sexual violence or both at least once in their lifetime [38]. Although the majority of GBV victims are women and girls and a majority of policymakers focus on them, it is important to recognise that men and boys can also experience GBV [35].

Effective prevention programming is a key component of a comprehensive strategy to reduce GBV. The best approach is implementing primary prevention programmes that address the underlying attitudes, norms, and behaviours that support GBV. Preventive measures from 25 years of GBV programme development and evaluation have been suggested as follows [37]:

Educational programmes for youths in primary and secondary schools: Bullying and teen dating violence should be addressed as these could be risk factors for GBV later in life. In collaboration with community structures, students should be educated on the consequences of abusive behaviour and encouraged to keep within safe spaces to reduce the risk for GBV. Awareness on abusive behaviours and the associated mitigatory measures need to be created through delivery of a curriculum on dating violence, sexual harassment, and promoting healthy personal boundaries. This strategy is meant to reduce dating violence and sexual harassment among adolescents and encourage school authorities to maintain surveillance on unsafe areas.

Programmes for tertiary students: The focus is on changing sexual violence norms and promotion of positive social interactions among youth to enhance taking action against peer violence. The programmes should engage both males and females to inculcate the capability and responsibility to recognise and intervene before, during, and after violence has occurred. This inclusivity is meant to remove the focus on males being the potential perpetrators and females the victims. Although the programmes are delivered to tertiary students, the long term effect would be on all population groups including adolescents.

Selective prevention: These are school based programmes delivered to adolescents at risk of experiencing GBV. They are supplementary to the universal prevention strategies. Individuals for the interventions are identified on the basis of their risk factors such as race, class, ability, sexual orientation, and a family background of violence and substance abuse.

Programmes for boys and men: Gender-based violence awareness raising and engagement activities among this group are premised on the fact that most GBV is

perpetrated by males. Interventions should hence target males' unique role as potential perpetrators and bystanders.

Evidence from the aforementioned interventions suggest that that there is merit in programmes that target attitudes, develop skills, and are comprehensive in nature [37].

Since GBV is saliently promoted through socio-cultural practices entrenched within some settings, it is crucial for programming to create partnerships with the influential community leaders in addressing it. Such partnerships could achieve a change in the mindset of communities that practice harmful social and gender norms which perpetuate gender inequality. Using CSE as a primary prevention strategy to end GBV could help adolescents to nurture positive gender-equitable attitudes and values, which are linked to reduced violence and healthier, equitable and non-violent relationships [38]. This early intervention could have a long-lasting impact across the lives of both men and women including adolescents. There is therefore a need to advocate for, and develop policies that advance gender equality and social protection, including the elimination of all forms of GBV and discrimination against adolescents.

7. Conclusion

Comprehensive Sexuality Education is pivotal to addressing the health and well-being of adolescents. Application of a personalised learning approach provides age-appropriate and progressive education on sexual and reproductive health and rights, relationships, sexuality, contraception, and prevention of ill health. Opportunity to address sexuality with a positive approach, emphasising values such as respect, inclusion, equality, empathy, responsibility and mutuality are also enhanced. The impact is greater if school-based programmes are complementary to sexual education by families, teachers and community youth centres for out of school adolescents. Additionally, providing youth-friendly services at health and associated institutions enhances CSE for improved adolescent sexuality outcomes.

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Chapter 5

Novel Therapeutic and Educational Approaches: Using Technology to Improve Sexuality

Ariana Vila, Juan Ardoy-Cuadros, Rosa Romero-Moreno and Celia Nogales-Gonzalez

Abstract

Technological advancements have greatly contributed to the field of sexual health by offering innovative solutions for people with sexual difficulties. Sexual health is a matter of public concern. Traditional psychosexual therapies, including clinical and educational interventions, have proven to be successful in addressing a number of these concerns. However, people often refrain from seeking sexual therapy due to the societal stigma associated with it. In this light, it appears doubtful that the traditional ways of providing mental healthcare will be able to meet the existing needs. By providing a discreet and confidential platform for individuals to receive the support they need, new technologies present a promising solution to help reduce the stigma and shame associated with seeking help for sexual disorders. With the help of technology, people can now access effective treatment options from the comfort and privacy of their own homes, thereby enhancing accessibility to sexual interventions for those who do not feel comfortable with traditional therapy. Overall, technology seems to have the potential to significantly improve the quality of life for people with sexual issues. The goal of this chapter is to evaluate the available technology choices to determine the most suitable option for a comprehensive and successful sexual intervention.

Keywords: technology-based intervention, sexual education, sexual therapy, sexual health, app, virtual reality, metaverse, impaired sexuality, telehealth

1. Introduction

Sexuality is one of the most neglected aspects of our society in terms of education, investigation, and intervention. Sexual problems trouble both women and men worldwide. Estimated prevalence studies report that around 40–45% of adults will have a sexual problem at some point in their lives [1–3]. This makes sexual difficulties twice as common as depression [4]. Sexuality, sex problems, and sexual health are clearly a matter of public interest. Psychosexual treatments, including clinical and educational interventions, are considered effective, but people do not seek them out for sexual help, mostly because of stigma. This stigma is related to the beliefs that

specific sexual practices are unnatural, immoral, or sinful, and that individuals who enjoy them are not deserving of the same rights and protections as other individuals. Sexual stigma can lead to social exclusion, discrimination, and harassment, so people tend to hide stigmatized aspects of their sexuality. This leads to both men and women feeling uncomfortable when talking openly about sexual problems, so mostly they keep them hidden. Potential patients feel that going to a hospital or clinic to receive psychological treatment for sexual disorders can be embarrassing [5]. Barriers for these potential patients include feelings of shame and guilt, a lack of perceived need for treatment, and poor intrinsic motivation to change. Due to these barriers, sexual dysfunctions are often untreated, resulting in decreasing sexual and general well-being in the population [6, 7].

The utilization of virtual reality (VR), metaverse, apps, and other technologies presents a promising avenue to enhance accessibility to psychological and educational interventions. This is particularly beneficial for individuals who may not feel comfortable seeking traditional options, including sexual treatments and educational interventions aimed at improving sexual knowledge. This chapter explores the psychological and educational interventions for treating and targeting impaired sexuality through the current available technologies: apps, VR, and metaverse. The purpose is to analyze the available options and determine which option best allows a complete and effective intervention. Other telehealth options exist, such as videocalls, but their potential benefits are much less than the benefits of the technologies included in this chapter (e.g., the technologies presented here offer higher stimulative control, greater confidentiality, and the possibility to face stimuli otherwise difficult to experience in real life). After the literature review, a program proposal for female orgasmic disorder (FOD), adapted to be delivered through a metaverse, is described.

2. Apps: convenient, accessible, and personalized

An app, short for "application," refers to a software program designed to run on a mobile device (such as a smartphone or tablet) or a computer. Apps can serve a variety of purposes, from providing entertainment and games to facilitating productivity and communication. As there are many types, including social media apps, navigation apps, weather apps, shopping apps, and more, apps are one of the first things that come to mind when thinking about a technology-related intervention. Apps are convenient for the user (designed to be easy to use and accessible from anywhere with an internet connection) and relatively cheap (several programmers offer their services at an affordable price). Actually, various apps that provide a space for sexuality interventions already exist and are described below. The effectiveness of apps, however, is relatively unproven because there is limited research on the use of apps for sexual interventions, whether educational actions or sexual treatments. Some promising results have been obtained using apps to try to improve the sexual health of certain population groups. For example, studies have found that apps used as educational interventions can reduce the risk of unsafe sexual behavior in young people [8], and apps used as clinical interventions have improved sexuality among mothers [9]. One study that addresses FOD provides a comprehensive perspective. The authors [10] propose an intervention that includes both an educational and a clinical section reviewing some of the essential variables to treat the disorder (e.g., improving knowledge about female masturbation techniques). Even if there is limited research,

all the interventions that could be found, some of them mentioned above, showed positive results and were effective.

In addition to the academic research, sexual apps in the digital marketplace have great educational and therapeutic potential. However, there is no information available about what benefits they offer, where their content comes from, or if anyone reviews or controls either the apps or the content they include. Some of these apps could be useful resources and potential tools for researchers, educators, and clinicians, but they are only known by commercial descriptors and the information provided online. For example, SexPositiveMe (sexpositiveme) is an app that allows the exploration of various aspects of sex and relationships, from fetishes and BDSM (i.e., bondage, discipline, dominance and submission, and sadomasochism) to ethical issues of non-monogamy and LGTBIQ+ identity (i.e., Lesbian, Gay, Bisexual, Trans, Intersex, and Queer). The app provides information and resources on a variety of sexual topics, including sexual health, pleasure, and communication. Kindara (kindara.com) is another kind of sexual app, designed to help women track their menstrual cycles, ovulation, and fertility. This can be useful for both family planning and understanding one's own reproductive health.

Due in part to the previously mentioned stigma around sexuality, some apps that may be of interest to researchers existed for only a short period of time. All social media platforms have restrictions to sexual content, even if its purpose is education. To the best of our knowledge, apps that feature sex education content, that would help users to better their sexual well-being, often face difficulties in promoting themselves on social media due to strict regulations placed on them and, therefore, cannot survive. Two examples of one of these apps with a great purpose that did not last are Happy Play Time, which used games and interactive activities to teach children about healthy sexuality, including consent and personal boundaries; and Amaze was designed to educate young people about puberty, sex, and relationships through engaging and informative videos. The discontinuation of these apps may serve as motivation to continue deepening our knowledge on the topic and contribute to dismantle the stigma and taboos surrounding sexuality.

Of the existing apps related to female sexuality, only a small number have the specific and direct objective of improving women's sexuality, including sexual problems and disorders. The materials and interventions of two of these apps worth highlighting, Caliope (caliope.app) and Emjoy (letsemjoy.com), have been supervised by psychologists. Caliope focuses on improving communication and pleasure through erotic stories and didactic content aimed to help women get to know themselves better. In addition to communication and pleasure enhancement, Emjoy includes other aspects related to sexual well-being, such as self-esteem, present-moment awareness, and maintaining a healthy relationship.

One problem with apps is the disparity between the plethora of apps available online and those that have been verified to be effective. Verified, effective apps are often inaccessible for download and solely intended for research purposes. Considering the large number of individuals with untreated sexual difficulties and the potential for apps to offer education and therapy to a broad population, the inaccessibility of effective apps is astonishing. Further, among the accessible apps, only one (Emjoy) addresses factors that contribute to the persistence of sexual disorders. Additionally, even when apps are effective, they should not be the only form of treatment. Sexual disorders can arise from diverse physical and psychological factors, and they may require a multifaceted approach that includes medical care, counseling, and changes in lifestyle. Apps can serve as a complementary aid to conventional treatment options, but it is imperative to

exercise prudence when using any app related to sexual health. Health authorities should urge researchers, educators, and practitioners to meticulously scrutinize any apps they utilize for safety and credibility. Additionally, it is advisable for users to seek guidance from a healthcare professional prior to using any app as a treatment modality. Moving away from the technology of apps, the features of VR and metaverses could also be leveraged to aid individuals with sexual difficulties.

3. Virtual reality: the big brother of technology-based interventions

VR is a technology that employs computer-generated, three-dimensional (3D) environments to simulate reality, and in which people can interact in real time [11]. Currently, it is the technology with the largest number of studies across a variety of fields that prove its effectiveness, and the potential benefits VR presents seems greater than other technologies. VR uses multiple devices, such as a head-mounted display, one or more position trackers, and an interactive 3D visualization system. Regarding the psychological experience, it provides subjective experiences to the user that convey a deep sense of presence. An embodied simulation in VR can mimic the normal functioning of our brain, meaning that our brain may generate a simulation of the body in the environment. This virtual simulation can be used to impersonate behaviors, share thoughts, or represent emotions [11]. It is important to note that while VR and the metaverse are related concepts, they are not the same thing. VR is a technology that allows users to experience a computer-generated environment, which is typically limited to specific applications or games. Metaverses often use VR technology to interact with digital objects and environments but have a broader scope. Rather than being led by a single developer or publisher, metaverses offer fully immersive, virtual worlds that are shared by many users and develop as the users engage with each other according to their needs.

VR is becoming an important tool in the social sciences; various studies have shown the efficacy of VR used to treat different physical (e.g., [12]) and psychological (e.g., [13]) disorders, including acrophobia, general anxiety, and body dysmorphia. Technical innovation, improvement, and affordability have led healthcare to move away from conventional, in-person interventions and toward therapies that make use of technology. The therapeutic benefits of using VR in psychological treatment and educational interventions include greater stimulative control, confidentiality [14], and the ability to experience stimuli that would otherwise be difficult to encounter in real life [15, 16].

The high cost of VR (both in terms of the hardware and the development of the environments) presents an obstacle to broad implementation. That said, regarding interventions to improve sexuality (i.e., sexual health interventions, disorder-focused therapy, or interventions to promote sexual well-being), VR offers the following potential benefits [17–20]:

1. Increased privacy and comfort: traditional interventions for sexual disorders may require patients to engage in difficult and sometimes embarrassing activities in front of therapists or others. VR provides a more private and controlled environment for patients to explore and work through their sexual difficulties. Additionally, the patient's image is not compromised because the avatar is the one seen, which allows for less shame and facilitates attending therapy. However, therapists may miss the patients' nonverbal communication.

2. Greater control over stimuli: VR allows therapists to carefully control and manipulate the stimuli that patients are exposed to, which can be especially important in treating sexual disorders. Patients can be gradually exposed to increasingly challenging stimuli in a controlled environment, helping to reduce anxiety and increase comfort [21]. Interacting with live sexual situations generate anxiety functions as a controlled and experiential form of systematic exposure. Furthermore, VR can help with imagination tasks [22] (e.g., explaining methods of stimulation or other educational content).

3. Realistic simulations: VR can provide realistic simulations of sexual situations and scenarios, allowing users to practice and develop skills, acquiring knowledge in a safe and controlled environment. This can be especially useful for conditions like sexual anxiety, where patients may benefit from exposure therapy in a controlled setting. VR allows the possibility to use virtual sex objects or to experience situations that would normally be impractical or challenging to reach in in-person settings [23].

4. Increased engagement: VR can be more engaging than traditional therapy methods, helping to keep patients focused and motivated to continue with treatment. This can lead to greater success and better outcomes.

Overall, the use of VR in psychotherapy for sexual disorders shows promise in providing a safe, effective, and engaging option for people with sexual impairments. VR allows individuals with sexual difficulties to receive educational and clinical interventions without leaving the perceived safety of their homes [23, 24]. Considering this, it is worthwhile to explore the state of VR educational and psychological interventions that target impaired sexuality.

3.1 Virtual reality interventions for sexual-related problems

No studies on VR educational treatments for impaired sexuality appeared in a review of PubMed, PsycINFO, and Web of Science databases (February 2023). However, this search did result in the identification of six studies presenting VR psychological treatments for people with sexual problems. These studies can be divided into two theoretical approaches: those based on cognitive-behavioral therapy (CBT) and those based on psychodynamic therapy. Before describing each study in detail, it is important to note that all the studies aimed to treat various disorders, including sexual trauma, erectile dysfunction, premature ejaculation, and sexual anxiety. Some of the studies also assessed nonsexual-related variables such as depression or distress. The interventions were tailored to the participants' ages and other demographic characteristics. Significantly, every VR intervention featured in the retrieved articles reported effective results for the specific issue addressed.

The CBT studies consisted of three investigations using VR exposure therapy to treat sexual harassment victims and military veterans who were victims of sexual trauma. Loucks et al. [25] worked with male and female (ages 32–72 years) military veterans who were victims of sexual trauma. The authors used an Afghanistan-themed forward operating base and various civilian and military base contexts in VR as trigger stimuli. The participants were exposed to three 2-minute VR scenes, followed by 6–12 sessions of 90-minute BraveMind VR Exposure Therapy. The

authors reported a significant reduction in pre- to posttreatment clinician-assessed and self-reported sexual PTSD (sexual post-traumatic stress disorder) symptoms, with a large Cohen's d effect size, favoring intervention. The study did not report an education section or what meaning participants assigned to the VR therapeutic experience.

The study by Mozgai et al. [26] also worked with military veterans who were victims of sexual trauma, though participants' ages and genders were not reported. The authors applied 6—12 ninety-minute sessions of BraveMind VR Exposure Therapy, but no other information was provided about the treatment. While the authors did not explain the intervention program employed, there was a significant reduction in clinician-assessed sexual PTSD symptoms, favoring intervention. Results reported a significant reduction in symptoms from pre- to posttreatment, maintained in a 3-month follow-up assessment. Again, no education section or what meaning participants assigned to the experience could be found.

The third study, by Loranger and Bouchard [27], focused on female victims of sexual harassment aged 18–65 years. Virtual systematic desensitization exposed participants to a nighttime bar and various stages of sexual aggression. The authors targeted sexual anxiety through three immersions of 5 minutes in a CAVE-like system and compared the results with a control group. They found significant differences between conditions, and these differences were maintained at a 3-month follow-up assessment. Once more, the study did not report an education section or what meaning participants assigned to the experience.

In addition to the three CBT studies above, there are three psychodynamic studies on VR psychological treatments for people with sexual problems. The three psychodynamic studies were all led by the same author [28–30] and focused on using virtual experiences and multimedia recordings to treat male sexual dysfunctions and sexual anxiety. These studies shared the same therapeutic program, known as the "Optale Method": a VR psychodynamic psychotherapy aimed at evoking childhood mental images by using recordings, multimedia, and virtual experiences that described pathways through a forest. These scenarios treated facts pertinent to the ontogenesis of male sexual dysfunctions and were followed by a discussion about the experience. Some education sections were included as a part of this discussion.

In the first study, Optale et al. [28] worked with two groups of adults. One group (aged 22–75 years) was diagnosed with male impotence, and the other group (aged 21–44 years) was diagnosed with primary premature ejaculation. The intervention lasted 12 one-hour sessions over a 25-week period. Results were descriptive and only focused on the number of participants who improved or had a resolution after the intervention. Assessment criteria and statistical data were unclear, but results suggested an effective intervention. A greater number of participants improved or had a resolution than remained stable after the intervention. After this first study, Optale et al. [29] worked with adults aged 23–66 with psychogenic impotence. These participants received 15 sessions over a 6-month period. Again, results were descriptive, and the authors only presented the number of participants who improved or had a resolution after the intervention. Assessment criteria and statistical data were not provided. That said, it was reported that sexual performance among participants was improved and maintained at a 6-month follow-up. Finally, Optale et al. [30] worked with three groups of adults (average ages 43.7, 53.9, and 39 years) diagnosed with impotence and premature ejaculation. Intervention consisted of 12 sessions over a 25-week period. One more time, results were descriptive, and the authors only presented the number of participants who improved or had a resolution after the intervention. Assessment

criteria and statistical data were not provided. This final study and its descriptive results also suggest an effective intervention, with a greater number of subjects improving or having a resolution than remaining stable after intervention.

4. Metaverses for people with sexual problems: present and future challenges

A metaverse is a term used to describe a collective virtual shared space that is typically accessed through the internet. It is a 3D digital world that is designed to simulate a physical world but includes various elements that are not present in real life. It can be categorized as a specific type of VR that entails the same advantages as VR (explained above) with additional benefits, such as a lower price and usability without the need for programming skills. As already stated, cost is the biggest disadvantage of VR; even if reducing market prices can make VR therapy a cost-effective alternative to traditional therapy, it still requires a big investment. In this way, metaverses overcome this weakness of VR, ensuring the increased privacy and comfort, greater control over stimuli, realistic simulations, and increased engagement of VR, along with affordable prices and the possibility of being delivered remotely and without the need for expensive equipment or facilities. In addition, considering the essence of metaverses, these virtual environments can provide a safe and controlled space for individuals to explore and express their sexual identities without fear of judgment or stigma. In a metaverse, users can create their own avatars (i.e., an image or 3D digital representation of a person in virtual environments that is customizable and can be designed to reflect the user's preferences, personality, or identity). This avatar is then used to interact with other users in real time and engage in various activities and experiences, such as attending virtual events, playing games, socializing, and even conducting business. Metaverses are often designed to be persistent, meaning that the virtual world continues to exist and evolve even when no one is actively using it. Metaverses are becoming increasingly popular, with platforms such as Second Life (secondlife.com), Decentraland (decentraland.org), and Roblox (roblox.com) being some of the most well-known examples. They have the potential to offer new forms of social interaction, entertainment, and commerce and are expected to play a significant role in the future of the internet and technology.

Research on the effectiveness of interventions in metaverses is still relatively limited. However, there is growing evidence to suggest that metaverses can be effective in treating a range of mental health conditions and providing educational programs to help teach about mental health issues. In a review from Boulos et al. [31], the authors analyze the potential of metaverses for mental health education, finding benefits that may be greater than those resulting from traditional interventions. This is the case in a study by Dickey et al. [32], which finds educational intervention on mental health leads to greater knowledge retention and higher levels of engagement among students when delivered through metaverse role-playing exercises rather than through traditional teaching methods. This finding relates to experiential learning, which involves using different senses and procedural memory to learn "how to do" something. This hands-on practice stresses a "learning by doing" style.

There is limited research on the use of virtual environments for sexual interventions, but some studies have explored the potential of metaverses for both educational and clinical interventions. Regarding the latter [16], the authors have designed and tested an avatar-based intervention protocol for FOD, adapted to be administered

through the metaverse Second Life. Preliminary results improved not only the diagnosis but also some of the main variables related to the disorder, including sexual satisfaction, function, and communication.

There are also several sex education programs that have been developed for use in metaverses. As with apps, though, they are not validated by the scientific community. For example, the virtual world Second Life has hosted a variety of sexual health and education programs over the years, including virtual clinics, workshops, and peer support groups. In addition, some organizations and individuals have developed custom educational programs using metaverse platforms like OpenSimulator (opensimulator.org), Sansar (sansar.com), and VRChat (hello.vrchat). One notable example is a branch of the "Sex Positive World" project (sexpositiveworld.org). Sex Positive World is an umbrella organization that encourages and supports worldwide sex positive communities. These communities hold an attitude or philosophy that regards all consensual sexual activities as natural and healthy, advocates for the acceptance, exploration, and celebration of sexuality in all its forms, and encompasses open communication, sexual diversity, consent, pleasure, and sexual education. This umbrella organization also includes virtual communities and worlds designed specifically for sexual health and education. The Sex Positive World project includes a variety of resources and activities related to sexual health, such as workshops, support groups, and virtual clinics. The project aims to create a safe and inclusive space for people to learn about and discuss issues related to sexuality and sexual health. Another example is the "Healthy Sexuality in a Digital World" project (share-netinternational.org), which includes a series of virtual environments that allow users to explore various topics related to sexual health, including contraception, sexually transmitted infections, and healthy relationships. These two metaverse sex education programs are mentioned because of the great educational potential they possess, and the useful resources and potential tools for researchers and educators they are, even if they do not meet traditional, peer-review standards of the academic community. In any case, it is important to ensure that virtual interventions for sexuality are evidence-based and culturally sensitive and prioritize informed consent and privacy. In terms of academic work, a study by Ahn et al. [33] did investigate the use of Second Life for providing sexual health education to college students. The authors found that students who participated in the program had greater knowledge gains and more positive attitudes toward sexual health compared to those who did not participate. And another study [34] explored the use of virtual environments to provide sex education and promote healthy sexual behaviors, specifically educating young adults about safe sex practices and contraception methods. Additionally, virtual support groups have been shown to increase social support and reduce feelings of isolation [35], which leads to thinking that online communities and virtual support groups could also be created to connect individuals who share similar experiences or concerns about sexuality. As more people become familiar with metaverse platforms and their capabilities, we may see even more innovative interventions developed in this space.

Sex education programs in metaverses are still relatively new, and more research is needed to fully establish the effectiveness of psychological interventions in these environments. That said, the reality is that metaverses have the potential to provide an engaging and immersive learning experience for students, and they could be a viable avenue for delivering mental healthcare to patients, including those with sexual problems. Below, this chapter broadens the literature by proposing an educational and clinical program designed to be delivered through a metaverse.

5. The virtual road to sexual recovery: a metaverse dual-program intervention for sexual issues

The proposed metaverse program consists of two distinct programs that can be combined to complement each other: one educational and the other clinical. Before describing them, there are a few key considerations to keep in mind when developing such programs:

- The first step in every metaverse program development process is to choose a suitable metaverse platform: as mentioned earlier, there are several metaverse platforms available, each with unique features and capabilities. It is important to consider the features needed for the educational program; for the case detailed below, Second Life (secondlife.com) was the best option.

- Within the design process, the features of the metaverse platform should be considered to create an experience for the users as engaging and interactive as possible (e.g., exploring different sexual health topics, exposure to anxiety-evoking stimuli, participating in role-playing scenarios, and engaging in group discussions).

- The creation of evidence-based, accurate, and suitable content, tasks, and challenges that are tailored to the target audience is a crucial component in the development of any VR or traditional program.

- Privacy and safety must be ensured. In order to address sensitive topics, it is imperative to ensure users' privacy and safety. While the use of avatars available within metaverse environments can assist in this regard, it is important to establish explicit guidelines for appropriate conduct within the metaverse.

- Finally, it is essential to test and evaluate the program to ensure that it is engaging for the users as well as effective for improving target variables (i.e., as programs address different issues, different target variables should be assessed to evaluate program effectiveness). Evaluation methods to gather feedback can include feasibility studies and user surveys.

The above are considered basic guidelines to consider when developing any metaverse intervention. The proposed programs consider every step described. Both the educational and the clinical programs presented below are based on prior research on FOD [36, 37] and were developed according to effective avatar-based interventions [16]. Similarly, the duration of both interventions was determined based on relevant literature [38].

In order to achieve the goals of each intervention (described below), a virtual environment was created inside the metaverse, in which the participants met virtually with the educator or clinician psychologist in chief. The following images (**Figure 1**) provide examples of how the metaverse space may be distributed; this space can be adapted to the preferences of each participant.

As shown in these images, metaverses currently provide a highly realistic representation of the physical world, allowing individuals to engage in similar activities, utilize familiar objects, and exhibit behavior comparable to real life. This enables educational and clinical intervention programs to utilize the same objects and spaces

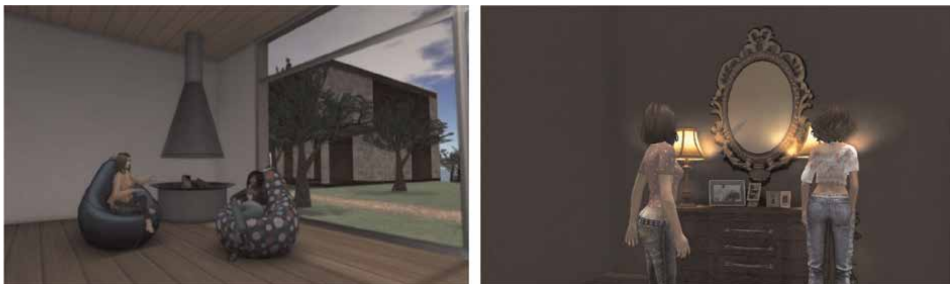

Figure 1.
A glimpse of two sessions.

Figure 2.
Participant accessing educative content through different electronic devices inside the metaverse.

as those found in real-world settings. Programming common stimuli for enhancing stimulus generalization is a strategy used to generalize behaviors. **Figure 2** demonstrates how educational content can be presented to participants in a familiar way within the virtual environment, thereby leading to greater generalization.

Both images in **Figure 2** display actual examples of how participants access educational content within a metaverse. Participants have the comfort of being at home, seated in front of their computer, and utilizing their online avatars to select the remote control of the TV or the stylus pen of the tablet to access the scheduled session. Regarding a clinical intervention, **Figures 3** and **4** illustrate how participants may confront various stimuli related to systematic desensitization (a prevalent psychological technique) within the metaverse. Prior to practicing in real life and without the need for attending a physical clinic, participants can use their avatars in a metaverse to confront stimuli.

5.1 The educational program for female orgasmic disorder

The majority of sex educational interventions are focused on improving the knowledge of young people on sexual health. Educational interventions typically consist of providing precise information about human sexuality (such as anatomy and human reproduction), teaching communication and assertiveness skills, and assisting young people in cultivating positive attitudes and making responsible decisions [39, 40]. Evidence has demonstrated that this type of intervention is effective in educating younger generations and promoting overall future sexual well-being [39]. However, what about those individuals who already have a sexual disorder? Those

Figure 3.
Participant exposing herself to the anxiety-evoking stimuli of a couple engaging in sexual stimulation.

Figure 4.
Participant exposing herself to seeing her own naked body, accompanied by her psychologist.

that, for example, have not had access to similar programs during their youth due to their age or other factors? Educational interventions can help no matter a person's age.

As mentioned before, FOD should be a matter of public concern due to its high incidence (i.e., prevalence rates are high) and the distress it causes for the individual and their environment. For these reasons, it is worthwhile to develop an educational intervention program designed explicitly for FOD and adapted to work on a metaverse platform, such as Second Life. The program presented here consists of four, weekly, individual sessions of approximately 60 minutes each. The aim of this educational program is to alleviate subjective sexual anxiety and enhance sexual satisfaction (both of which are significant factors related to the disorder) in women suffering from FOD.

The procedure for each session is uniform. Participants can conveniently access the program from their homes and engage in a secure virtual space. Sessions are scheduled

and have fixed durations, but participants are able to access the content and practice at their convenience. At the start of each session, there is a briefing to explain the session to the participant in order to reduce anticipatory anxiety. At the end of each session, there is a debriefing with two objectives: (1) evaluate subjective sexual anxiety and satisfaction levels, and (2) assess if any crucial information is missing from the session, if the participant has any questions, and if the program is achieving its overall objectives. The intervention's content for each session is presented in **Table 1**.

As depicted in **Table 1**, the different sessions discuss various aspects of sexual health and behavior. Sessions cover physiological and psychological aspects of orgasm and sexual response, including definitions, prevalence rates of difficulties in achieving orgasm, and the factors that may influence it, along with information about female genitalia and how to achieve pleasure. Sessions also delve into factors that affect desire and pleasure and explore misconceptions and myths surrounding sexuality. The topics covered aim to provide a comprehensive guide for individuals looking to explore and enhance their sexual pleasure. This includes the importance of focusing attention on one's body to experience pleasure during sexual activity, emotional management, and effective techniques for achieving these objectives.

In addition to what is summarized above and included in **Table 1**, the third session concludes by asking participants to recall the previous session's content. From there, a discussion is initiated on the topic of pleasure zones (e.g., their personal preferences, what they find enjoyable), providing participants with guidance on the most effective techniques for stimulating these areas. These steps, including the review and conversation about pleasure areas, result in a form of exposure to the anxiety held by participants with FOD. Here, and in the fourth session described below, the metaverse provides a secure environment for participants to practice techniques before attempting them in real life. During the exercises, it is common that different thoughts and emotions arise in the participant, diverting attention away from the body (something that commonly happens during sexual interactions and interferes with the ability to orgasm). Identifying these interrupting emotions becomes an opportunity to learn about the role of emotions in achieving orgasm and to understand the part emotions play in the participant's life.

The fourth session prepares participants to take their learning outside the educational intervention by working on communication with the participant's partner (not necessarily a romantic partner, but someone with whom the participant shares a sexual relationship). The goal is for the person to acquire a series of communication skills that culminate in two tasks: (1) informing her partner that she is going to therapy and asking for his/her cooperation, and (2) sharing with her partner a list of pleasure areas identified through the intervention. The session involves planning a conversation with the participant's partner to accomplish the final two tasks and provides psychoeducation on essential areas for communication, including individual communication and communication within a relationship. If the participant does not have any kind of personal relationship (e.g., a friend or familiar) with whom she can engage in the proposed activities, she can decide whether to discontinue the educational intervention at this point or continue to improve her assertiveness for future relationships.

Among the group of individual communication skills, participants learn about and develop clarity (i.e., being clear and concise in your message), confidence (i.e., speaking with conviction and assertiveness), active listening (i.e., paying attention to what others are saying and demonstrating understanding), empathy (i.e., putting yourself in the other person's shoes and understanding their perspective), adaptability

Session	Objectives	Content
1	Learn about FOD.	Characteristics. Prevalence rates of difficulties in getting orgasms. Causal factors.
	Learn about female sexuality.	Sexual cycle phases. Desire. Psychological variables. The reproductive system. Genitalia. Pleasure areas on the body. Facts and fallacies.
2	Learn information about female orgasm.	What is an orgasm. Neuronal orgasm. Factors that may influence consecution. Sexual response.
3	Learn about masturbation and masturbatory techniques.	Information about the female genitalia (vulva and clitoris' anatomy). Key elements to achieve pleasure. Information about pleasure areas, exploration of the main erogenous zones, and the best way to stimulate them. Information about the potential benefits masturbation has (e.g., happiness, increased self-confidence, and reduced impact of pain) to help normalize this activity. Tips on what to do before starting the process, as the environment is as important as the masturbation technique. This includes having the necessary time (having a time limit can generate stress, which blocks orgasm), a comfortable space (the feeling of being secure is a mandatory condition for cerebral endorphins to be released), the importance of position and posture (must be comfortable), and expectations. Breathing and relaxation techniques. Kegel exercises (muscle exercises that can enhance sexual sensation and involve repeatedly contracting and relaxing the muscles that form the pelvic floor).
4	Learn techniques to focus attention on one's body (i.e., an important factor for pleasure).	Information about effective techniques to be able to focus attention on one's body. Information about the importance of self-focus and the role it plays in sexuality. Information about the principles and the key elements of self-focus the participant should consider. Experiential practices to learn how to employ the techniques of self-focus.
	Psychoeducation about emotions, emotional management, and emotional regulation.	Training in emotional management, to aid in comprehending, embracing, regulating, and conveying emotions more effectively (this helps develop more optimistic and productive ways of responding to positive and negative stimuli in a participant's surroundings). Training in emotional regulation to impact which emotions a participant experiences in order to understand how they perceive and express their

Session	Objectives	Content
		feelings. Psychoeducation and management of guilt. Psychoeducation and management of embarrassment.

Table 1.
Content of the educational intervention in Second Life.

(i.e., being able to adjust communication style to different situations and audiences), and nonverbal communication (i.e., using body language, facial expressions, and tone of voice to convey meaning). In addition to these individual communication skills, there are unique skills for communication within a relationship. These skills are essential for maintaining a healthy and fulfilling relationship, helping to build intimacy and to overcome challenges together. In terms of communication skills within a relationship, the educational intervention reviews listening actively, expressing emotions in a nonjudgmental and supportive way, using "I" statements instead of "you" statements (i.e., can help to avoid blame and criticism in communication), and being open and honest. A series of role-playing exercises help achieve these objectives and serve both as experiential learning and as a way of exposing the participant to anxiety-evoking situations to reduce anxiety.

Every session tries to be interactive and engaging by including various challenges and games. Examples of the slides, tests, and games are included in **Figure 5**. The slides, adapted and prepared to be displayed inside the metaverse, are designed (using images from flaticon.com and slidesgo.com) to interact with the user. When participants get an answer right, they receive not only feedback and a brief explanation but also are awarded flags and earn points which can be used to check progress.

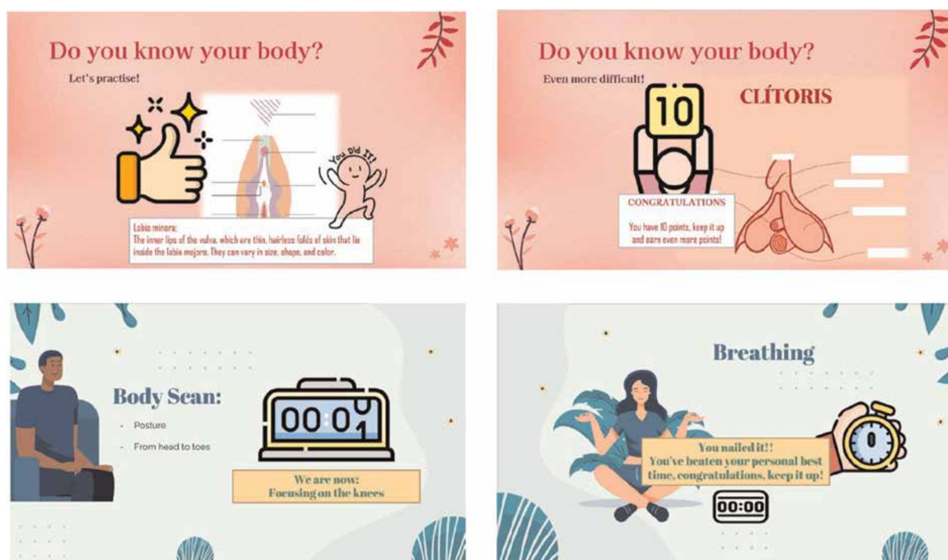

Figure 5.
Content examples.

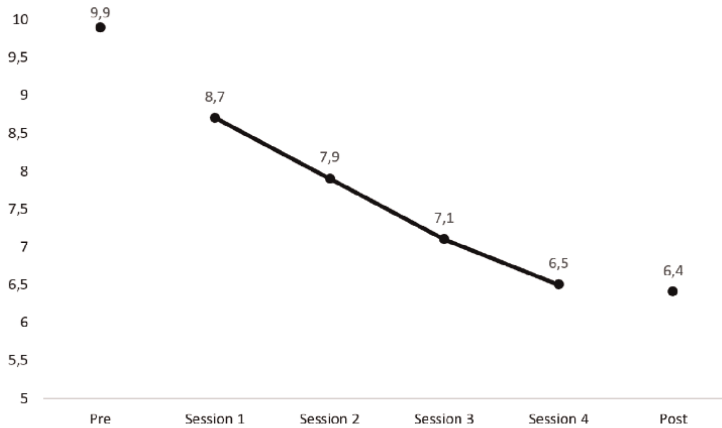

Figure 6.
Subjective sexual anxiety.

The efficacy of this educational program has been examined through a pilot study of 30 patients diagnosed with FOD. The efficacy was measured through two variables: (1) subjective sexual anxiety ("On a scale of 1 to 10, how much anxiety does this topic make you feel?"), and (2) subjective sexual satisfaction ("Of all sexual behaviors you had this week, how many of them were satisfactory?"). These two subjective variables were monitored every session. Before starting the program, a baseline was established for participants. After the program finished, participants were asked to answer the questions one more time in order to have a post-intervention measure. **Figures 6** and **7** show the preliminary results of the intervention achieved by 30 women with FOD. As the graphs show, average subjective sexual anxiety decreased from 9.9 before the intervention to 6.4 after the intervention. Average subjective sexual satisfaction increased from 0 satisfactory sexual behaviors before the intervention to 3.2 after the intervention. Even though future research is still needed, the current study suggests that this metaverse-based educational intervention could be effective for improving sexual well-being in patients with FOD.

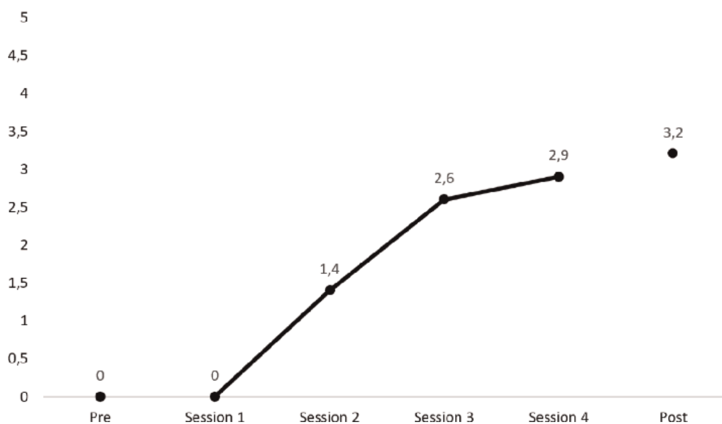

Figure 7.
Subjective sexual satisfaction.

5.2 The clinical intervention program for female orgasm disorder

As noted earlier, the proposed intervention consists of two distinct programs that can be combined: the educational program described above and a clinical program. While the two programs can be offered separately, merging them provides a complete intervention targeting every important aspect of FOD. The educational program should be completed before beginning the clinical program. This ordering ensures clinical participants have the information needed to confront personal sexual fears, as well as reduced anxiety and increased sexual satisfaction that can work as motivating factors for the clinical program. In this second program, the participant will continue to reduce sexual anxiety and increase sexual satisfaction. At the same time, she will learn how to manage her own dysfunctional thoughts and explores barriers to sexual well-being. Unlike the educational program, the clinical program's efficacy is yet to be proven, but the sessions described (see **Table 2**) are based on effective interventions and existent literature on FOD [16, 36–38].

Session	Main objective	Content
1	Assessment and introduction.	Discuss the goals and expectations of the program. Begin to explore irrational beliefs related to sexuality. Begin emotional management training.
2	Identifying and restructuring irrational beliefs.	Review the patient's irrational beliefs identified in Session 1. Discuss the impact of these beliefs on sexual well-being. Work with the patient to restructure irrational beliefs and focus on personal values. Introduce the concept of systematic desensitization and explain how it will be used in the program.
3	Visual desensitization.	Introduce the concept of visual desensitization. Patient exposes herself to anxiety-evoking stimuli by visually examining her body excluding genitalia and breasts. Work with the patient to restructure any irrational beliefs that arise. Begin to explore the barriers to sexual well-being that are preventing progress.
4	Tactile desensitization.	Introduce the concept of tactile desensitization. Patient exposes herself to anxiety-evoking stimuli by tactilely examining her body excluding genitalia and breasts. Work with the patient to restructure any irrational beliefs that arise. Continue to explore barriers to sexual well-being.
5	Visual desensitization.	Introduce the session, indicating what objectives are to be achieved. Patient exposes herself to anxiety-evoking stimuli by visually examining her genitalia and breasts. Work with the patient to restructure any irrational beliefs that arise. Continue to explore barriers to sexual well-being.
6	Tactile desensitization.	Introduce the session, indicating what objectives are to be achieved. Patient exposes herself to anxiety-evoking stimuli by tactilely examining her genitalia and breasts. Work with the patient to restructure any irrational beliefs that arise. Continue to explore barriers to sexual well-being.

Session	Main objective	Content
7	Pleasure.	Introduce the concept of pleasure. Elaborate a list with the pleasure areas identified in previous sessions. Plan a stimulation program for the week centered on finding pleasure, now that the anxiety has reduced/disappeared. Create a sketch of items for partner's desensitization. Continue emotional management training.
8	Partner involvement.	Systematic desensitization. Exploration with the couple in the following order: (1) visual examination excluding genitalia and breasts, (2) visual examination of the genitalia, (3) tactile examination excluding genitalia and breasts, and (4) tactile examination of the genitalia. Psychoeducation on sexual positions that guarantee clitoral stimulation. Work with the patient to identify and restructure any irrational beliefs related to partner involvement.

Table 2.
Content of the clinical intervention in Second Life.

6. Conclusion

In recent years, multiple technologies have been testing their potential to intervene in sexual issues and are showing promising results. Every intervention featured in this book chapter—including app-based, VR, and metaverse interventions—reports effective results across a wide range of sexual issues, from improving the sexuality of young people to fully treating a group of men with premature ejaculation. This chapter offers a metaverse-based, intervention protocol featuring both an educational and a clinical program for one of the most prevalent sexual disorders: FOD. By examining the previous literature about technology-based interventions, analyzing their comparative advantages and weaknesses, and proposing useful tools for educators and clinicians, this chapter extends our knowledge of using technology to effectively intervene in matters of sexual health. We believe that as more people become familiar with these types of interventions, we may see even more innovative interventions developed in the technology field.

Conflict of interest

The authors declare that they have no conflict of interests. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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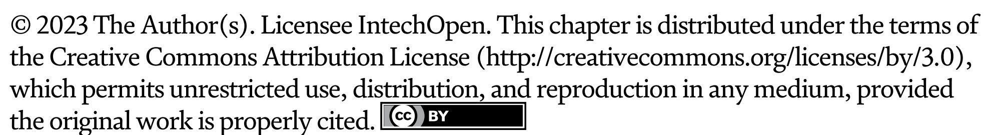
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Chapter 6

Sex Differences in Physical Attractiveness

Ray Garza

Abstract

This chapter provides an overview of the literature on the sex differences in physical attractiveness, and how it influences mate choice. More specifically, it investigates evolutionary perspectives on men and women's preferences for physical traits, such as ideal breast features in women, and masculine physical traits (i.e., muscularity, broad shoulders) in men. The chapter focuses on conditional (i.e., ecological/environmental) roles on mate preferences, in addition to examining possible individual differences, such as mate value. The chapter covers the following: (1) An overview of sex differences in attractiveness, including theoretical explanations, (2) A broad focus on women's ideal preferences, (3) A broad focus on men's ideal preferences, and (4) A discussion on conditional factors and individual differences influencing preferences for ideal traits.

Keywords: sexual selection, mate choice, physical cues, attractiveness, reproductive success

1. Introduction

Human attraction plays a fundamental role in mate choice, which may facilitate reproductive success. From an evolutionary perspective, attraction is an evolved psychological mechanism that is used to identify high-quality mates [1], such as detecting and evaluating cues indicative of fitness [2]. Indeed, attractiveness is an important attribute that both men and women find indispensable in mate preferences [3]. In the current chapter, the focus will be on sex differences in bodily attractiveness, and the perceptions that physical features convey in mate choice. It has been suggested in the literature that women may find men with physical features that convey high-quality genes and potential investment as attractive, while men may find features in women indicative of reproductive health as attractive. These sex differences in what is considered attractive may help elucidate their underlying evolutionary significance, in addition to considering how ecological constraints and individual differences are involved in those preferences.

Sexual selection is a mechanism of evolution that explains the traits important in mate choice (intersexual selection) and the traits that offer advantages in competing with members of the same sex (intrasexual selection) [4]. Darwin postulated that mating success is influenced by underlying factors that convey fitness benefits, such

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as physical cues that can serve as honest signals of reproductive potential and quality. According to Sexual Selection Theory, males and females should be sensitive to physical cues that advertise reproductive information, as this may potentially be beneficial for future offspring [4, 5]. For instance, in non-human species, such as the guppy, bright coloration advertises health and diet, and females show preferences for males with these color patterns and benefit from the heritable variation of such features [5, 6]. In ungulates, mate choice may be dependent on antler size, as large antlers that reflect good condition are preferred by females, and these high-quality traits are likely to be inherited by offspring [5, 7]. Antler size may also be considered an armament, signaling successful intrasexual competitive displays. In humans, there are known sex differences in mate choice, and this is influenced by what each sex considers physically attractive. It is suggested that variation in facial and bodily characteristics in humans may reflect underlying quality, such as indications of reproductive fertility, reproductive value, and an enhanced immune system [8].

Parental Investment Theory, as proposed by Robert Trivers [9] provides an understanding into the mechanisms involved in human mate choice. According to Parental Investment Theory, the sex that is more investing in parenting will be more selective in choosing a mate, while the sex with lower parental investment will compete with members of the same sex to obtain access for mating opportunities from the opposite sex. Parental investment refers to any investment in offspring that increases their reproductive success at the costs of investing in other offspring (i.e., foraging, gestation, protection) [9]. In humans, females are the more investing sex, while male investment is facultative [10]. Due to this asymmetry, the cost of selecting a wrong mate is higher for females compared to males, since females have an obligatory gestational period (i.e., pregnancy). Because male investment is minimal, it is suggested that females have evolved psychological mechanisms to be able to evaluate and detect males with cues that are associated with protection and investment, which are qualities that would enhance offspring survival. Since males are the least investing sex, and paternity is not always certain, it is in their interest seek out multiple mating opportunities and be attentive to features in females that signal reproductive capacity. This difference in sexual behaviors has fashioned evolved psychological mechanisms in males to evaluate and detect physical characteristics associated with reproductive value and fertility in mate choice.

2. Sex differences in physical attractiveness

There are known sex differences in physical attractiveness, as each sex may consider the importance that facial and bodily traits provide in reproductive success. For example, borrowing from Parental Investment Theory, it can be hypothesized that females may prefer traits in males that would be beneficial in maximizing offspring care, such as protection and increased paternal investment. Further, since males are the least investing sex, it can be hypothesized that males may focus on physical features that can maximize reproductive success, primarily by prioritizing cues associated with fecundity. Moreover, other theoretical frameworks, such as Sexual Strategies Theory [11], help elucidate the significance of prioritizing physical characteristics across temporal dimensions. Males and females throughout ancestral history have faced unique adaptive challenges and have developed a complex set of mating strategies to help solve those recuring adaptive problems associated with mating. For instance, females have faced the adaptive problem of finding and securing a mate and

evaluating whether that mate would be an investing partner in her and her offspring. Physical traits that may signal an increase amount of investment may be prioritized for long-term mating, while traits that signal good genes may be prioritized for short-term mating. Males have faced the adaptive problem of determining which females are fertile, therefore, developing a mating strategy that facilitates maximizing mating opportunities is ideal. It is known that some features in women may signal fertility, and men may prioritize those features when considering women for a short-term mating relationship. In the following sections, sex differences in physical attractiveness will be considered in the framework of Parental Investment and Sexual Strategies Theory.

2.1 Women's ideal preferences

Women's mate preferences are driven by physical characteristics in men that convey both indirect (i.e., genetic) and direct (i.e., resources acquisition, protection) benefits [12]. These preferences are used to assess men's overall quality and probability of investment. Research on female mate preferences has focused on the role of enhanced secondary sexual characteristics on physical attractiveness. In males, the role of androgens play a fundamental role in shaping facial features, such as pronounced eyebrows, enhanced cheekbones, elongated jawline, and in shaping bodily characteristics [13]. Since testosterone serves as an immunosuppressant, only high-quality men are able to withstand the immunosuppressant effects of testosterone while maintaining masculine characteristics, known as the immunocompetence handicap hypothesis [14]. It is suggested that women should prefer men with masculine features, as these features may be heritable and beneficial for reproductive success. Additionally, testosterone may also serve as a cue of overall effort dedicated to mating, as many perceptions of testosterone mediated features (i.e., facial and body masculinity) are perceived to be associated with male-male or intrasexual competitive displays.

2.1.1 Preferences for facial masculinity

Sexual dimorphism, or the degree in which males and females are different, is known to influence evaluations of attractiveness. The role of androgens during puberty shapes the degree of femininity and masculinity of secondary sexual characteristics, where males have much longer jawlines compared to females. Men with masculine facial features are said to be preferred because they have desirable traits that are indicative of good health and high-quality genetics. Sexual selection proposes that traits that advertise cues to health and reproductive quality in males will be selected for through female mate choice. Women who prefer men with masculine features may pass those desirable qualities to future offspring and enhance their overall viability. However, research investigating women's preferences for facial masculinity has been mixed. Some research has shown that women do prefer men with masculine compared to feminine facial features [15–18], possibly due to its association with immunocompetence [19, 20], disease resistance [21], and strength [22]. These perceptions of overall quality may influence women's mate choice in selecting a mate that has qualities that indicate 'good genes' or is perceived to provide protection and resources through successful intrasexual competitive encounters.

Other studies have not found support for women's preferences for facial masculinity. Morrison et al. [23] and Glassenberg et al. [24] showed that women

did not prefer feminine or masculine faces. Further, research has shown that there are slight preferences for facial femininity in men, perhaps due to the negative perceptions that facial masculinity may signal, such as increased dominance and dishonesty [25]. Facial masculinity can also be associated with lower paternal investment, aggressiveness, and being perceived as threatening [17], which are characteristics that are not desirable in a long-term partnership. One eye-tracking study showed that women preferred and viewed longer (i.e., increased visual attention) feminine compared to masculine faces [26], suggesting that cognitive processes may be involved in driving the expression of mate preferences. Therefore, in mate choice, women may make trade-offs in choosing a mate with high-quality features (i.e., facial masculinity) over a mate who is perceived to be higher in parental investment (i.e., facial femineity).

2.1.2 Preferences for upper-body strength

Upper-body strength in males provides both indirect and direct benefits in mate choice. It is suggested that women may prefer men with formidable features because they signal good genetics [27], and the ability to offer resources and protection to their partners and offspring, which are important in parental investment. Research has shown that women consider men that display cues of strength and formidability as physically attractive, [28–30] as they may be associated with the ability to provide protection, acquire resources, compete intrasexually, and form coalitions. Individuals also perceive stronger men as more likely to be able to offer protection to children compared to men with weaker physical attributes [31]. One method in which researchers have used to assess cues of upper body strength in men is by measuring the circumference of men's shoulders in relation to their hips, known as the shoulder to hip ratio or SHR. Men with higher shoulder to hip ratios (V-shaped bodies), indicative of broader shoulders in relation to their hip size, are considered more attractive by women [29, 30, 32–36], and women have reported an interest in engaging in sexual activities with men with more masculine body types [32]. Evidence from eye-tracking studies have shown that women spend a considerable amount of visual attention assessing men with formidable features [29, 33–35, 37] compared to men with more fat distribution. This may suggest that there are important cognitive mechanisms (i.e., automatic processing, attention) involved in women's assessments of men bodies when considering them for potential mates.

2.1.3 Preferences for height

Height is another sexually dimorphic trait that plays a fundamental role in mate choice. Taller men are often perceived as physically stronger, aggressive, dominant, formidable, and higher in social status [38], which are features important for successful contest competitions among members of the same sex [39]. It is reported that taller men have higher levels of self-esteem and self-confidence, and these psychological traits are critical in being successful in interpersonal relationships [38]. Research has shown that taller men are more successful in acquiring long-term partners [40] and sexual partners [41] compared to relatively shorter men. Women have reported that height is an important physical trait in rating men's attractiveness and in selecting them as a mate. Although both sexes prefer opposite sex mates that are taller than the average height, women's preferences for taller men are greater than men's preferences [42].

2.1.4 Preferences for facial and body hair

Facial and body hair are sexually dimorphic traits that are known to be associated with men's attractiveness. Beards are androgen-dependent traits and may serve as an honest cue to men's heritable fitness, as proposed by the immunocompetence handicap hypothesis [14]. As the most conspicuous secondary sexual trait in men, men with beards are perceived to be more masculine, dominant, aggressive, and threatening, compared to clean-shaven men. This may suggest that beards may function as an intrasexual competitive display, perhaps by enhancing masculine features such as the jaw line. In reference to physical attractiveness, research on beards enhancing men's attractiveness has been mixed. Research has shown that women rate men with full beards as attractive [43–45], while others have shown that men with a heavy stubble [46], light stubble [47], and clean shaven [48] are rated higher in attractiveness. Interestingly, men with beards are often rated higher in parental ability [49] and are rated higher in attractiveness for a long-term partnership [46, 47]. This may be due to the perceptions beardedness has on age, maturity, and ambition, which are attributes that are desirable in a long-term partner. Relative to facial hair, research on women's preferences for men's body hair has also been mixed. Some studies have shown that women rate men with considerable body hair as more attractive [50, 51], while other studies have shown that hairless men are rated higher in attractiveness [51–57]. The ectoparasite avoidance hypothesis proposes one reason why hairless men may be considered more attractive. Hairless men may be less susceptible to ectoparasites, which may serve as a cue that they are healthy and not transmitting unwanted parasites.

2.1.5 Women's mating strategies and attractiveness

Women obtain benefits from utilizing short-and long-term mating strategies. For a short-term mating strategy, women can obtain immediate resources, assess a partner for a potential long-term relationship, and obtain good genetics. For a long-term mating strategy, women can obtain investment, commitment, status transmission, and physical protection [11]. It is suggested that in order to obtain high-quality genes from a partner, women may prioritize physical attractiveness in mate choice for a short-term mating context, such as showing preferences for facial masculinity, body muscularity, and formidability. Short-term mating-oriented women, as measured by the sociosexuality orientation inventory (SOI), are more likely to engage in sexual activity with minimal commitment, and this may be calibrated to obtain genetic benefits from an attractive male. According to Strategic Pluralism Theory, some women may prioritize physical traits due to their genetic inheritance if they outweigh the cost of short-term mating (i.e., less paternal investment, partner desertion) [58]. Indeed, research has shown that short-term mating-oriented women find masculine faces [18, 59–62] and muscular body types [61, 63, 64] more attractive. This may translate to pursuing a mate that has ideal traits in order to maximize the genetic benefits that may be obtained from successful courtship. Women's preferences for men's physical traits as a function of mating strategy are also expressed at the cognitive and behavioral level. Behavioral evidence in the form of eye-tracking studies have shown that women pursuing short-term mating strategies view men with variable physical traits associated with muscularity differently. Short-term mating-oriented women are more like to view men's upper body regions longer compared to other regions of interest (i.e., waist, legs) [34], supporting the claim that cues to upper body strength are important in assessments of attractiveness. For long-term mating, women may prefer

men that are able to signal investment and commitment. Muscular men are perceived to be physically dominant, more likely to pursue multiple mating opportunities, and less committed in a relationship [65, 66], which might influence women's preferences for less muscularity in mates for a long-term relationship. Taken together, women's mate preferences may be based on mating strategies and possible trade-offs in choosing a partner for obtaining indirect or direct benefits.

2.2 Men's ideal preferences

According to Parental Investment Theory, the least investing sex will compete with members of the same sex to access fertile females [2, 9, 67]. In order to determine reproductively viable females, males must rely on key features of the female body to determine reproductive value (i.e., expected future fertility) and fertility (i.e., probability of present reproduction). Youthfulness is a feature that men find attractive in women and shows cross culture generality, where men are more likely to marry younger women, and consider attractiveness and youthfulness in a mate as indispensable traits [3]. Other bodily traits, such as women's breast morphology and waist to hip ratio, have received considerable attention in their perceptions of youthfulness and fertility, which contribute to men's ratings of attractiveness. It is also known that men pursue both short- and long-term mating strategies. Because of the asymmetry of parental investment, where men's investment is lower than women's, men will be more likely to pursue multiple mating opportunities and desire more interest for short-term mating [3]. Although an interest in short-term mating can increase a man's odds of maximizing reproductive success, there are benefits obtained from pursuing a long-term mating strategy. Human males are one of the small percentages of mammals (3–5%) [10] that contribute a considerable amount of paternal investment to their offspring. By pursuing a long-term mating strategy, not only do men monopolize their partner's reproductive resources, but increase the survivability of their offspring by providing investment from both parents.

2.2.1 Preferences for facial femininity

It has been proposed that facial femininity reflects underlying cues to women's reproductive health. Facial femininity may signal overall reproductive condition, as variations in fat distribution and ecological constraints (i.e., food availability) may affect levels of estradiol and progesterone [68]. Since estradiol is associated with facial femininity, femininity may serve as a cue to hormonal systems that are involved in reproductive effort and fertility, as hormones fluctuate across the fertile periods of the menstrual cycle. It could be proposed that men would prioritize facial femininity in mate choice to maximize their probability of reproductive success. Facial femininity has been associated with higher levels of circulating estrogen [69] which is an important biomarker in reproduction and may explain why some men consider women with more feminine faces more attractive. Research has shown that men consider facial femininity over averageness as physically attractive [25, 70]. Further, women with higher levels of late-follicular estradiol report more interest in ideal number of children, and women with facial features indicative of maternal features are rated as more feminine [71]. It is important to note that preferences for facial femininity in men declines with age, and it is a notably stronger preference for younger men. This may be because there are more costs associated for older men competing with younger men in order to access women with ideal traits [72].

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2.2.2 Preferences for ideal breasts

In human females, breasts are conspicuous secondary sexual traits that males find sexually attractive. Unlike other mammals, where breasts only enlarge around the time of lactation, female breasts stay permanently enlarged after puberty [73]. Breasts are considered sexually arousing and are thought to be driven by sexual selection, as variation in breast morphology alters perceptions of attractiveness, fertility, reproductive success, health, and age. According to the nubility hypothesis, female breasts are an indicator of age and reproductive value, as breast size varies considerably in their conspicuousness in pre-pubescent compared to young mature women [74]. Research examining preferences for women's breast sizes has been mixed and show considerable variation across cultures. Men have shown preferences for large breasts [75–77], medium-sized breasts [78–80], and small breasts [81, 82], in addition to other morphological features, such as pendulous breasts [83]. In line with the nubility hypothesis, breasts that are non-ptotic (i.e., firm) are associated with reproductive relevant information, such as fertility, health, reproductive success, and overall age. Compared to breasts that are high-ptotic (i.e., sagginess), men and women rate non-ptotic (i.e., firm) breasts higher in fertility, health, youthfulness, and attractiveness, while rating high-ptotic breasts higher in reproductive success (i.e., number of children) and older in age [76, 84]. Women with high-ptotic breasts are often rated higher in reproductive success since breast ptosis increases with each pregnancy [85]. Overall, there is much more consistency in ratings of women's breasts when it directly relates to features associated with reproductive relevance, such as breast ptosis compared to overall size. Men's preferences for women's breasts have also been elucidated by studies incorporating eye-tracking methods to highlight the important role of cognitive mechanisms. Eye-tracking studies have shown that men focus a considerable amount of visual attention to the chest region of women compared to other regions of interest [29, 30], such as waist to hip ratios, which is another reproductive relevant cue men find attractive in women.

2.2.3 Preferences for waist to hip ratios

Waist to hip ratio (WHR), or the circumference of a women's waist compared to her hips, is a sexually dimorphic feature that is associated with women's attractiveness. Waist to hip ratio has been considered a cue to reproductive capacity, and it has been suggested that reproductive hormones, such as estradiol, are higher in women with lower WHRs [86]. Given its importance as a reproductive cue, men should find women with ideal WHRs as physically attractive. Across research, men rate women with low WHRs as the most attractive [87–89]. This may be due to their perceptions of reproductive relevance, such as better health, fertility, reproductive value, and parity (i.e., number of previous pregnancies) [90]. Women with higher WHRs are often rated lower in attractiveness, and this may be due the association between higher WHRs and obesity [91]. Further, higher WHRs are associated with irregular menstrual [92] and fewer ovulatory cycles [93] compared to women with lower WHRs, which may play a role in men's ratings of women's attractiveness. Evidence from neuroscientific studies further highlights the importance of women's WHRs on men's cognitive processes in mate choice. Parts of the brain associated with reward processing and decision making are activated when viewing images of women with ideal WHRs [94]. This suggests that neuroanatomical regions are involved in identifying and detecting ideal features in women's bodies when making judgments of attractiveness.

2.2.4 Men's mating strategies and attractiveness

Short-term mating strategies in men are characterized by low commitment and a desire for multiple sexual partners. In order to maximize reproductive success, men pursuing short-term mating would have benefitted by being able to detect and identify women with physical features that may connote reproductive health. Although both sexes consider physical attractiveness important in mate choice, men prioritize physical attractiveness when utilizing a short-term mating strategy over a long-term mating strategy [95]. Short-term oriented men rate feminine faces [96], low WHRs and BMI's as more attractive [97], which are features that are associated with fecundity. In a study examining sociosexuality and preferences to women's breasts, men with a short-term mating orientation rated women with larger breast sizes, most notably C and D cup sizes, as more attractive [77]. Large breast sizes are associated with higher levels of estradiol [86], fertility and reproductive success [98], which may provide cues to reproductive potential in short-term mating.

3. Ecological conditions and mate choice

Human mate choice can also vary across ecological conditions, such as living in an environment with limited food supply or increased mortality hazards. The ecology provides individuals with cues of available resources, and this may influence which mating strategy is most optimal. In harsh environments, characterized by unpredictability of obtaining resources, there may be more advantages in adopting faster reproductive strategies by prioritizing good genetics [99], since the risk of mortality is high and finding a partner is not always certain. Some research has shown that women prefer men with masculine characteristics in environments of unpredictability (i.e., violence, resource scarcity, pathogen prevalence [100]. Although men with masculine characteristics are perceived to be less investing in a long-term relationship, they are preferred because they can provide protection and immediate provisioning to their partner and offspring in harsh environments [101]. One study showed that men with stronger body types are preferred over weaker body types when primed with resource scarcity [102]. Lyons et al. [101] showed that women primed with a resource scarce prompt viewed masculine faces longer, however, this was dependent upon their relationship status, where the effect was stronger in partnered women. Nonetheless, adopting a strategy that favors high investing men in harsh environments can also beneficial. Biparental care may be an optimal strategy for offspring if they are to receive resources from both parents instead of one [103]. Lee and Zietsch [104] showed that women preferred men with "good dad" traits when primed with an ecologically harsh prime. Another study showed that women who reported higher levels of fear of crime preferred formidable men as long-term partners, possibly due to these men providing increased protection [105]. Interestingly, safe compared to harsher environments may also influence women's preferences for masculine men. Little et al. [100] showed that women preferred masculine men in a safe environment for a short-term mating context, and Marcinkowska et al. [106] found that short-term mating-oriented women were more likely to prefer masculine men in ecologically safe countries. These studies suggest that in a safe environment there are fewer benefits obtained from an investing partner, therefore, women's mate preferences are centered around obtaining high-quality traits.

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Regarding men's mate choice across ecological conditions, some research has focused on the role of ecological harshness and men's perceptions of women's breasts. Aside from functioning as a signal of reproductive health, women's breasts may also serve as a cue to fat reserves. Men in harsh ecological environments may pursue faster sexual strategies that optimize reproductive output over parental investment. This may influence preferences that men show for women with differences in breast morphology. Some studies have found evidence that men find larger breasts more attractive in ecologically harsh environments [107, 108]. Larger breasts may signal cues of fat storage in environments of unpredictability, which is important in pregnancy and lactation. These findings may point to the role harsh ecologies have on driving mate preferences for physical traits signaling reproductive health.

The availability of resources has been thought to be a key component in men's preferences for women's waist to hip ratios. In societies where resources are not readily available and work is energetically expensive, men might prefer women with higher WHRs, as noted by research on the Hazda, a hunter-gather population from Tanzania. One study comparing U.S. and Hazda preferences for women's WHR showed that Hazda men preferred women with much higher WHRs, rated them healthier, and more desirable as a wife compared to U.S. men [109]. One possible explanation is that in environments of uncertainty, thinness may be associated with disease prevalence, malnutrition, and poor reproductive health. Indeed, thinness is associated with later menarche, irregular ovulatory cycles, and lower capacity to support pregnancy [110, 111]. In Peru, males from the Yomybato village considered high WHR women higher in attractiveness and desirable as a spouse, while males from Shipetiari, a more westernized population, considered low WHR women more attractive and desirable as a spouse [112]. Perhaps, as the food supply became more readily available and predictable, higher WHRs became associated with obesity, leading to an overall preference for women with low WHRs.

4. Mate value and preferences for ideal traits

Individuals also vary in what they prefer and find attractive in potential partners. Mate value, or one's own assessment of physical attractiveness and mating market value, can calibrate preferences to high-quality mates. Individuals high on mate value may be better able to obtain the desired features and mate with potential partners of similar levels of attractiveness [113]. Research on mate value and physical attractiveness has mostly focused on women's assessment of their physical attractiveness and preferences for ideal traits in men, such as indicators of masculinity [114]. Some studies have shown that women who rate themselves higher on physical attractiveness prefer men with masculine faces [112, 115], as masculine faces may be characteristic of high-quality men. One study demonstrated that women high on mate value rated men with low waist to chest ratios (broad shoulders relative to the waist) higher on attractiveness, and they were more likely to view them longer using an eye tracking device. Women high on mate value may also be better at matching their ideal preferences in a mate with their actual relationship choices [116], as well as being better at controlling their partner's behavior to prevent mate desertion [117]. Buss and Shackelford [113] showed that attractive women desire men who have indicators of good genes and parenting traits, suggesting that attractive women are able to raise their standards on these fundamental traits compared to women lower on attractiveness.

Men also calibrate their ideal mate preferences according to their own mate value and self-perceived attractiveness. Men who rate themselves higher on self-perceptions as a long-term partner are more discriminative in their mate preferences [118], such that men who rate themselves higher on the trait of physical attractiveness also considere physical attractiveness important in their mate preferences. Arnocky [119] found that men's facial attractiveness was associated with their preferences for good health in a partner. Further, men who rated themselves higher on mate value reported stronger preferences for a partner who desired children, had good social status, and had good looks. More research is needed in this domain of men's mating preferences, as most research has focused primarily on women's mate value and preferences for mates with similar features.

5. Conclusion

Attraction is an evolved psychological mechanism that aids in identifying and detecting traits in the opposite sex that indicate high-quality genes and reproductive health. Facial and bodily traits are used in this assessment, and there are sex differences in how they are prioritized in mating. In women, it has been shown that facial and body masculinity may provide indirect benefits, but at the expense of lower parental investment. In men, physical traits in women may signal reproductive health, which may explain why men value and find desirable women's breasts morphology and waist to hip ratios physically attractive. Mating strategies may also facilitate these preferences, as men and women may gain reproductive advantages from pursuing short- or long-term mating strategies. Moreover, it is important to consider that mate preferences vary across ecologies, as the availability of resources has been shown to drive what men and women prioritize in mating. Lastly, individuals differ in what they consider attractive, and they may choose mates who match their levels of attractiveness, which is in line with assortative mating.

Conflict of interest

The author declares no conflict of interest.

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Section 3

Sex Education in the Curriculum

Chapter 7

'Janet and John': Intersex Invisibility in the New Zealand Education Curriculum

Rogena Sterling

Abstract

When I entered the New Zealand schooling system, we only learnt about a social system including 'Janet' and 'John'—female and male. As far as the curriculum went, nothing else existed. Though the education system now includes 'rainbow education' under 'health' (sometimes tied into the physical education part of the curriculum), it does not extend beyond that. It continues to enforce Intersex as a pathology, an anomaly. Outside this very small component, Intersex does not exist. The Western education system has excluded Intersex and transgender existence and belonging in society even though historically they were part of society and still exist today, though largely invisible. The chapter will first explore the right to education and the importance of representation in the curriculum as a sense of belonging. After that it sets out how Intersex people have been restricted in the inclusion and predominantly are invisible in the curriculum overall. Later it will consider ways to improve how intersex can be better represented and included within the curriculum.

Keywords: curriculum, intersex, representation, and social belonging, sexual health education

1. Introduction

The first books in my hand at school had two characters—Janet and John [1]. Fifty years later the memories of those books and what they represented still sit with me. Those picture books with few words established for me, and society at the same time, the normative foundations of sex and its social functions.

Growing up in New Zealand in the 1970–1980s, I experienced the Aotearoa New Zealand (AoNZ) curriculum which represented society as either being 'Janet' or 'John'—male or female. Throughout the curriculum, be it science, literature, or any other subject area, there was no other understanding of any other possibility. Though I had no word for it at the time, I knew I was different and could not comprehend why. Intersex was not represented and as I have since discovered was intentionally erased from society. The education system has an important part to play in the process of this erasure.

The education system is more than a neutral place of factual education. Though education has a physical site, education itself is a 'site', a construct to administer and

optimise, that subjects students to precise controls and comprehensive regulations [2, 3]. Within such a site, students learn to construct their biopolitical realities of how they see themselves and the relationships that they will form [2, 3].

Michel Foucault points out in his many works that the administration of bodies occurred through the developed biopolitical institutions including universities, schools, barracks, and workshops and so on [2]. These institutions are the sites of normalisation and the development of a sense of self in the social realm. The normalisation and socialisation instilled that there are particular bodies, knowledges, ways of knowing, and ways of being which are valued above others [4]. The entire education system continues to be an instrument in the administration of bodies and their socialisation. The system validates the types of life that are validated and those they negate or indicate as abnormal [4].

Foucault, in *The History of Sexuality*, highlights how sex is an important site of biopolitics. Sex, or what has now been mainstreamed as gender, as a binary 'male' or 'female' has always been central to the site (place) of biopolitical administration. It has long been used to administer and normalise the sexed/gendered being [3]. However, the biopolitical mechanisms are often distributed unequally, and in different ways, across race, class, sex/sexuality [4]. They are sometimes implemented and applied overtly, but often covertly. The idea of 'Janet' and 'John' is an example of a site of covert normalisation. The core function is to maintain the institutions of social organisation of which sex, now gender, has been constructed as either male or female.

Given the biopolitical history implemented through the institution of education, it is no surprise that 'Intersex' is not represented in the education system or the curriculum. The enigma of Intersex people has always disrupted the notion that there are only males or females [5]. Despite existing in traditional societies including in Europe, since the Middle Ages, Intersex people have been denoted as monstrous and sub-human [6–8]. They were required to align with a male or female being with severe consequences if not adhering to that status [6, 9]. Since the eighteenth century, they slowly changed from monstrous, sub-humans to humans in need of medical help to finish what nature had not completed—the age of medicalisation [5].

Intersex people are those who have diverse sex characteristics not clearly definable as male or female (that is, they have genitals, reproductive organs, secondary sex characteristics, hormones and chromosomes that fall outside the common definitions of either male or female sex) [10, 11]. Intersex people should not be confused with sexual orientation or gender identity as doing so often leads to further prejudice and discrimination against Intersex persons [12]. Though for hundreds of years they were distinct embodied beings, today they are recognised, at most, as gendered beings with variations of sex characteristics.

Being included in the education system means being able to go to school, to be seen at school, be able to participate equally in activities—but also to exist in the curriculum. This chapter outlines the available work and provides a basis for more in-depth analysis in the future. In the field of education, including the curriculum, there is a significant study and changes required to ensure that education is inclusive and representative of Intersex people.

The chapter is a perspective piece considering the positionality and representation of Intersex people in the curriculum of AoNZ and more globally. It sets out some of the issues regarding the curriculum that would be appropriate to follow up with a qualitative study. As a perspective piece, it begins with the author's experience in childhood to set the scene. It then outlines the right to education with its basis in international human rights. It then follows on to indicate that the right to education requires representation of people in the curriculum to be represented and have a sense

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of belonging. After that it sets out how Intersex people have been restricted in the inclusion and predominantly are invisible in the curriculum overall. Later it will consider ways to improve how intersex can be better represented and included within the curriculum. It provides the background for further research and evaluation as to the inclusion of Intersex people in the curriculum and in the education system in general.

2. Right to education

Like all children, Intersex children have a right to education [13]. They also have a right to be seen within the education system and the curriculum itself. Much of the focus of human rights to education focuses on the right to access education, but there is also a specific right to human development within the right to education that is seldom enlarged upon in these discussions. Though the majority of Intersex people access education in AoNZ, they have impacts on their development as a human being due to their invisibility in the education system and in particular the school curriculum.

Article 26 of the Universal Declaration of Human Rights specifies the right to education. Sub-part (1) discusses access and equity to education and sub-part (3) enumerates that a parent has the right to choose where a child is educated. Sub-part (2) concentrates on the right to education and where and how it should be directed:

> *"Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace."*

This focus is reiterated in the *International Covenant of Economic, Social and Cultural Rights*. Article 13(1) states that "The States Parties to the present Covenant recognize the right of everyone to education. They agree that education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms."

Education must focus on preparing an environment for the development of a child's being and it must be towards a state of dignity. AoNZ, like the vast majority of countries around the world, is a signatory to the Convention. Though it has not ratified the Convention domestically, it still has obligations to uphold the Covenant and focus on the development of the personality, that is, to enable the development of the child in dignity.

So, what does this mean in relation to this chapter? The school or educational environment must enable a person to grow, development in their humanity. 'To freely and fully develop one's personality' requires first being recognised. Full development demands an environment that enables the recognised person to develop as their personality and then participate in society as a dignified person. The education system, its physical environment, curriculum, and materials must represent them appropriately and be culturally accountable. All of these factors are required to comply with the human rights article.

Despite signing up to the Conventions, not all populations in AoNZ enjoy the right to education in the same fair and equitable manner for example across class, race and sex/gender. Intersex people, in particular, have not enjoyed such a right to free and full development of their personality, especially not in dignity. For Intersex people, none of these requirements have been actualised within the school environment. The curriculum does not represent Intersex people and where it does so in a limited

way it is not socially or culturally accountable. The education system as a whole is not structured for anything outside of enabling a male-female mode of development.

3. Importance of being included and represented in the curriculum

Representation is being seen within the social and political environment. A lack of representation, being seen, portrays such groups or populations as their being is under threat, not valued, or part of the out group [14]. Representation makes them feel fully understood and considered rather than making them feel like they are part of a token inclusion initiative without authentic representation [15]. This is an important part of being human whether it is race, sex, ethnicity, disability, class, or other ways of understanding. Not seeing oneself within sociopolitical life inhibits the participation and dignity of people, and thus their human rights [13].

The curriculum is a site of biopolitical normalisation. It is the organising device within educational institutions for framing and classifying knowledge [16]. As Judith Butler notes it is a site of heteronormativity and socialisation [17]. Through critical analysis of the curriculum, it is possible to understand what worldview the children are learning within and how it becomes part of their development. The curriculum engages in normalisation and socialisation by framing particular knowledge, illustrating what is acceptable [16].

The curriculum has been critiqued as exclusionary, where people are not seen within it for various reasons. The curriculum is a representation of produced signs from other sources, but also a site of sign production in its own right [18]. The modern curriculum now attempts to represent people from different ethnicities, religions, and increasingly (dis)abilities. There is also a mainstreaming of gender in the curriculum. However, despite all the work to improve diversity and inclusion, Intersex people are still largely invisible, misunderstood with their needs not considered within the curriculum and the school environment [19–21].

Representation in the curriculum is indicative of a sense of belonging and safety. The AoNZ education system is based on a principle that every learner deserves to feel like they belong in their school and classroom [22]. The Ministry of Education in New Zealand states that children learn best when they feel accepted and enjoy positive relationships with their teachers and fellow students [23]. Most teachers and administrative staff wish to provide such an environment [24]. There is an overall attempt to provide a space where children can grow and develop to their potential, but lack meaningful insight.

It has long been recognised that for a child to feel like they belong, it is important that they see themselves represented in the education system at various levels including in the curriculum [25, 26]. Māori (the Indigenous people of New Zealand), for example, have not been well represented in the curriculum and evidence has shown that lack of representation results in limited development and failure to achieve potential [27]. As better representation in the curriculum occurred, greater learning outcomes for Māori students followed [25, 26].

For many years LGBT students have reported feeling less safe, less respected, and less valued in our schools than their heterosexual and cisgender peers, leading to lower engagement and achievement [24]. For at least the last 10 years, there has been a policy shift to ensure that LGBT students feel safe and comfortable within the education environment in Aotearoa as in many other nations [22, 28, 29].

Though Intersex are being included in the acronym LGBTI, the success in making Intersex people feel safe and comfortable is less successful than the other parts of the LGBT populations. As elsewhere, there has been varying success in making Intersex

children comfortable to develop into their potential [30]. Intersex people still feel insecure and uncomfortable in the education environment [31]. They need to have a positive experience and be able to positively participate [13]. Though some may have a positive experience at school, a significant number report a negative school experience [31, 32].

Another issue regarding Intersex students was participation at school and completion of their school studies or even moving to higher education. The shame and secrecy of being Intersex compounds the effects of medical treatment and has a direct impact on an Intersex student's participation [13, 31]. A significant number do not continue to higher education and many do not even complete secondary/high school [31, 32].

Representation in the curriculum is critical for the free and full development of the child in dignity [13, 33]. To have a full and free development, the child must be in an education environment where they feel safe and comfortable and have a sense of belonging. Without that, development is inhibited and impinge the child's dignity is impinged. The following section outlines a number of factors that are inhibiting Intersex people from being represented and having a sense of belonging within the curriculum in AoNZ.

4. Barriers to intersex inclusion in the curriculum

There are numerous barriers to Intersex inclusion in the curriculum. These include the heteronormative basis, the mainstreaming of gender, focus on sex (and relationships) education for diversity, the confusion of Intersex people with LGBT learning.

4.1 Heteronormativity basis

The education system overall represents a heterosexual social system that supports and upholds the heteronormative biopolitical institution as noted by Foucault [2] and Butler [17]. Even with so much discussion of diversity in the year 2022, the core base that Foucault outlines in society still predominates in the system and the curriculum.

AoNZ's educational curriculum remains heteronormative. It was established for, and centred on, a white, middle-class binary heteronormative person. It is a system of performativity as noted by Judith Butler and represented as such in the curricula [17]. The colonial construct that has been seen as ordinary, natural, and universal remains core to the heteronormative institution [34].

The idea of 'Janet and John' that was introduced in the early years of school life cemented in a child's mind that there are only two kinds of human—male or female. Janet and John became the representative heteronormative structures. Those ideas are embedded throughout all subjects and materials and throughout the education system and its curriculum. The curriculum does not state explicitly the embedded heteronormative nature but rather it is threaded through in subtle, and sometimes not so subtle, ways. Heteronormativity is socialised within the school community and the education system.

Students learn that there are 'opposite' sexes in line with a two-sex binary model of male or female [11]. Even with the growing acceptance of same-sex relationships, it has not removed the centrality of the binary sexes. The curriculum is a site of biopolitical enforcement of legitimate and normalised forms of sexuality, gender and sex characteristics [19].

The background of heterosexuality in the curriculum has led to vilification of LGBT students for deviating from the norm [19]. Even those do not come out are aware of how the curriculum frames those who deviate from the norm and how such people are marginalised. Butler notes the heterosexuality and its vilification of

those outside and societies focus on the performativity of gender [17]. However, her analysis is based on the social construction of gender, as opposed to Foucault who still considered it through the unified nature of sex. Butler's focus on gender has restricted the ability to include Intersex children (or people in general).

The heterosexual bounds of the curriculum leave little space for Intersex people. The core basis of the curriculum is biological determinism and as such has no space for the diversity of sex. The denial of diversity continues to make Intersex invisible.

4.2 Mainstreaming of gender in the curriculum

Heterosexuality was an important tool for maintaining the site of sex as a bio-political device. Covertly or overtly, sex continues to be a central mechanism in the socialisation and administration of bodies. This came under fire with biological determinism of sex and race falling out of favour. It was at the time of structural functionalism which is a theoretical framework that considered social order could be maintained through the socialisation of individuals into normative behaviours [35, 36] and the malleability of human beings [3, 37].

From the late 1970s, feminists began to introduce gender as a concept of understanding social sex organisation and relationships. It enabled an analysis of social and political inequalities without relying on biological determinism [37]. This was supported by works such as Butler on the performativity of gender [17]. This has led to a shift in concept and terminology in the curriculum which has shifted over time.

The introduction of gender did not remove the binary at its foundations [38]. The patriarchal base remained [3, 37, 39]. What did change was that biological connections were debased and the base was solely determined by social determinants (based on that male-female binary) and the psychological basis of 'I am who I determine myself to be' [3, 37, 40]. The patriarchal base has continued to maintain the biopolitical site of sex but reframed through gender.

The concept was introduced into the curriculum in a benign sense. Sex refers to biology while gender refers to how you identify and also the expression as masculine, feminine, both or neither [41]. Separating biology enabled the focus of gender rather than sex as the cause of social issues. Gender became the focus for teaching and since the 2000s, gender has been the mainstream construct to discuss social organisation and relationships. Children begin to learn the concept through infographics such as the gender bread person, the unicorn or the gender elephant [42]. They are taught the institution of gender as though it has existed since time began [37]. The reality is it does have a history and a disturbing one for Intersex people. Gender cannot be fully understood outside of why and how it was introduced [43].

The establishment of gender, mainstreaming and using it as an analysis is not benign and has a much more complex and destructive background for some people [44]. Children do not learn how and why we went from sex to gender and this extends into higher levels of learning. The mainstreaming of gender further dislocates Intersex people from social life. Not only was it established as a means to coerce their body and being into the binary of male or female (Janet and John), but also ensure that they were socialised as such. Intersex people, and the rest of society were not to know that people exist outside of the binary. This was not an accident, but a purposeful means of biopolitics in which the education system had a large part to play [3, 37, 44].

This further removes Intersex children from finding themselves in a curriculum. The curriculum implies that even if biology is taught as diverse, it is not the core

element of identity and is thus limited in relevance. The benign sense in which gender is taught denies the historical impact on Intersex people and continues to promote a simplistic surface level understanding [44]. This continues to make Intersex people invisible and, at best, ignores the erasure of Intersex in society—as it was designed to do.

4.3 Sexual health education—limited representation

The education curriculum overall situates students in an environment that remains predominantly heterosexual. They learn sex-based relational roles within the educational system through both the direct and hidden school curriculum as they relate to sex and puberty [11]. These more explicit details are covered in the curriculum areas of sexuality education.

Sexuality education has traditionally been thought of as teaching about abstinence and contraception [45]. Foucault outlines much of the basis behind such thoughts in the *History of Sexuality* [2]. Though there has been a change over time to healthy relationships, the AoNZ education system has had a shared history as Foucault describes and it is incorporated as such today [21].

Currently, sexuality education is much wider in what is included. It is defined as teaching about intimate relationships, human sexual anatomy, sexual reproduction, sexually transmitted infections, sexual activity, sexual orientation, gender identity, abstinence, contraception, and reproductive rights and responsibilities [46, 47]. Such inclusion attempts to ensure that young people have the information they need to make healthy and informed choices [47]. The current policy includes a wider framework based on "Te Tiriti o Waitangi (The Treaty of Waitangi), Indigenous knowledge and human rights; attention to issues of bullying and inclusion; and the responsibility of schools to address gender and sexual diversity" (p. 134) [48].

As sex diversity has become more accepted, understanding of LGBT issues have been incorporated in the sexual health curriculum. Though the education system now includes 'rainbow education' for LGBT under 'health', it does not extend beyond that. There is a visionary desire to be inclusive and supportive in sexuality education, but it is often limited. Sexuality education is still predominantly based in heterosexuality and it is also based in gender, even with the appearance of gender having may various expressions, has a foundation of male or female.

Intersex is seldom included in sexuality education. When it is included, it is the predominant focus highlighting the definitions and variations of what 'being intersex is'. It still isolates Intersex children from feeling normal [21] or embodied [49]. Sexuality education remains heteronormative in focus, privileges males and female people's bodies and experiences, and reinforces the 'feeling of shame, secrecy, not existing at all or being a fraud at a vulnerable age' [20, 50]. Students born with an Intersex variation face significant harm (e.g., are subject to ignorance, indifference, stigmatisation, discrimination, mistreatment, violence, abuse, shaming and denial of existence) in schooling spaces, including in sexuality education [20].

Teachers have a lack of understanding, competence, and confidence in sexuality education regarding Intersex people, their body, needs, impacts of medicalization [31]. There is also a need for teachers to be culturally aware and accountable to enable the reclaiming of the cultural identity as an Intersex person [21]. There needs to be an informed and supportive system with a whole of school approach to include Intersex discourses in sexuality education [20].

4.4 Confusion with LGBT

Where Intersex is included in education, it is predominantly in connection with the LGBT part of the curriculum, usually in conjunction with sexual health and relationships. The acronym is extending and now often includes the 'I" for Intersex. Any education in this space that incudes the "I" seldom does more than that and gives a false sense that it is a type of gender identity with the person also having 'variation of sex characteristics' [12].

The bulk of education revolves around gender identity and sexual orientation issues. There is an assumption that Intersex people may have variations of sex characteristics that differ from the normative, but have the same gender identity and sexual orientation issues as with the rest of the Rainbow community. This assumption disregards the impact of medicalisation and socialisation on Intersex people and operates to universalize them within the Rainbow community. It teaches diversity solely from a Western, liberal perspective and medical underpinnings [44].

Universalising Intersex people within the LGBT understanding of society has impacts including further discrimination, spiritual alienation, and entrenching social oppression [12]. Research suggests that such conflation and lack of clarity leads to further prejudice and discrimination against Intersex persons [10, 12]. Rather than helping to overcome Intersex discrimination, it enhances misinformation, stereotypes and myths circulating about Intersex People and the violence they face [10].

The confusion that universalizing within the LGBT community creates is the reduction of being Intersex to just a 'sex characteristic' (though varied from the norm) and that the importance is in their identity as a gender identity. It leaves Intersex people in a vulnerable position with some advocates arguing that Intersex is not a gender identity and not a third sex [20]. In this context, Intersex children have difficulty in coming to terms in who they are and how they fit into society.

4.5 Current curriculum and intersex people

The current curriculum continues to make Intersex people largely invisible. As the core curriculum is still based on a heterosexual order, the 'Janet and John' ideas of society still penetrate student's mind. Students absorb the assumption that bodies still come in two types—males and female. When students hear about Intersex variations and bodies, they interpret them as states of abnormality and difference that translate as non-humanness. Even where, though rare, a students knows of their Intersex variation, they feel the shame and stigmatisation of their bodies that does not fit what is portrayed in the curriculum or demonstrated in the bodies of the children around them.

Even where Intersex is included in the sexual education curriculum, it still enforces the medicalised understanding of being that was created through gender and gender identity and denies any sense of embodiment as Intersex people. Young Intersex people have come to adopt the language of Western medicalisation socialised by feminists as that is all that they know. It is long enough for invisibility and is it not time for change? It is time to start representing Intersex people in the curriculum so that Intersex children can see themselves as part of society.

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5. Including intersex representation in the curricula

AoNZ requires the curriculum to ensure diversity of representation, but 'Janet and John' are still the story the children learn at school. Diversity still remains an add-on rather than core to a diverse curriculum. As an Intersex person, I was never represented or felt included in the curriculum and not much has changed today.

AoNZ is not alone—Australia has no policy providing guidelines on how to make education accessible for people with Intersex variations [51]. Inclusion of 'Intersex' that is informed and supportive in curriculum and pedagogy is generally lacking [20]. Such a lack translates into and maintains Intersex invisibility in school settings and means that the needs of students with an Intersex variation are not addressed [20]. Despite the promotion of affirmative gender and sexual diversity, there remains an uncomfortable silence on Intersex bodies [19].

When including Intersex in the curricula the first point is to remember that due to the historical treatment, not all Intersex people will understand themselves in the same way. The term 'Intersex' is contested [52]. Some see themselves today as men or women who have a medical condition (referred to as a 'difference or disorder of sex development' or DSD). Others see themselves as a person with a gender identity (male, female, non-binary) and having a variation of sex characteristics. There are others who see themselves as Intersex, neither male nor female, some even reclaiming the cultural notion of hermaphrodite. As with males and females who have complex notions of how they see themselves and their place in society, Intersex people do too. However, for Intersex people, it is far more complex as there are more than a thousand years of socio, legal, and medical erasure from Western history and social environment. Given that history, it is understandable why there is so much division and contestation over how Intersex people refer to themselves.

At present, even if 'Intersex' is included in the curricula, it is in a way signalling it as abnormal or unusual. Often it is referred to as in abstract, medical and mythological ways in which their bodies are presented as examples of 'abnormality', 'disorders' and 'pathology' without lived experience being included or talked about [20]. It is even portrayed as a mythical basis of self-reproduction which is dehumanising. Western conceptualisation has described being intersex "an animal comprising both sexes, male and female, but always unperfect" (sic) [53]. Such positioning not only dehumanises what it means to be Intersex, but creates an intentional environment where Intersex people disassociate themselves from who they are. A child hearing such notion in school would not want to so associate, thus enforcing a self-denial of their being (even if that *is* how they see themselves).

Another important point is to indicate that Intersex variations are not medical per se. Like all people, Intersex people may have some medical issues associated with being Intersex, but being Intersex is not medical. Natural sex variations are innate and not clearly definable as male or female, but they are not abnormal, just different. Intersex students may need different needs from other students but these have been little studied [19]. Given the medicalisation of Intersex people, many students find they have to take many days off school for medical treatment which disrupts their learning [31]. As they are not represented, it is difficult for them to explain to friends why they were away from school which leads to shame and distress. More understanding of difference and diversity throughout the curriculum would relieve much of that shame and distress.

Sexism or gender diversity is inherently excluding. The Western notion of sexism is still based on ideas of 'Janet and John'. These have not changed. Intersex is not included within gender equality and diversity because the constructs were established to erase it. Sex and gender or sex/gender diversity must be used to ensure that Intersex people are recognised in any diversity captured in the curriculum or in the education system generally.

Another important inclusion is cultural understandings and views of the world. Inclusion of Intersex will improve understanding of diversity in other societies. Western societies were distinct in denying the existence of Intersex people. Most traditional and Indigenous society recognised Intersex people. They had a place and function in society as did all other members of society. Pre-modern traditional European societies also recognised sex diversity which was only lost as Western worldviews became established.

Another important inclusion for Intersex people in the curriculum is ensuring the realities of gender being taught in the curriculum. There are other realities that are taught in school such as the holocaust, slavery, and the impacts of derogatory terms (and concepts) on peoples and populations. 'Gender' is such a term for Intersex (as distinct from transgender) people. It was never intended as simply a benign descriptor. It was a means of ensuring that society remained as a binary, that biological sex could no longer be used to categorise as male or female. It has denied Intersex people the sense of who they are and a comfortable relationship with themselves and society. Even when teaching a 'Gender and Sexuality' course at university I noticed how benign most of the materials are glazing over the real history that Intersex people have faced. It fails to note the reason why gender was introduced into the medical and social environment and the public arena. Though 'gender' and 'gender identity' are a important understanding for transgender and some feminists, it must not be generalised for the whole of humanity. For some sex identity and the embodiment that derives from it is critical to who they are.

A vital part of inclusion and belonging is how a population is represented. People with Intersex variations report that schools particularly fail to include Intersex conversations in a welcoming way when promoting positive diversity messages in educational spaces, guidelines, policies or the curriculum [42]. For so long intersex people were either not represented or represented as monstrous, or medical abnormalities. Such representations of Intersex people continue to perpetuate much harm and stigmatisation. Despite existing since time immemorial, the existence of Intersex people still is portrayed as invisible, non-existent, or at best that there are some people who have some abnormalities (have a variation of sex characteristics), but are still a male or female gender.

Sexism has been inherent in the education system. But often when people think of sexism, they automatically consider sexism against females/women. However, sexism against Intersex people run very deep in the education system and is evident by their invisibility. Discussing the implications of sexism—medical practices, and binary body-sex-and-gender norms have on Intersex individuals students—from their perspective is empowering [42]. These discussions would allow students to learn about the complex realities of sex (and gender) identities with the self and what it means to be and function in society [19].

6. Conclusion

It is about time to discuss Intersex in an empowering way that enables the free and full development of Intersex children and upholds their dignity. The curriculum is

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a vital step in this process to the right to education. Not only do they have a right to access education, they also have a right to see themselves represented positively and embodied and part of the curriculum itself.

For hundreds of years, Intersex, previously referred to as hermaphrodites, have been invisible within the curriculum. There is seldom, if ever, a reference to Intersex in the curriculum in New Zealand. Until the last few years, representation was absent in curriculums in New Zealand and the vast number of countries around the world.

It is time that the 'Janet and John' based curriculum was ended and real diversity inclusive of intersex instigated. This is a human right that all Intersex people deserve. Society has a duty to enable all children the means to freely and fully develop as human beings. The education environment is a key site that can either be enabling or inhibiting.

I started the chapter with an observation from a personal perspective. This opened the realities of how the education system portrayed society, as male and female, and the invisibility of Intersex people. Introducing with a personal experience identified or made more personal the impact of being invisible is in the curriculum.

It is time that the curriculum in AoNZ and other around the world be inclusive of Intersex people and representative of their as beings, and not abnormalities or just 'sex characteristics'. This continues the sexism of the system and enforces the (biological) determinism whether it is referred to under sex or gender. The points raised in this chapter form a foundation for further analytical research in the curriculum to ensure equity of representation and inclusion for Intersex people. They have a right to education and the human rights to free and full development in personality as a dignified being of which the education system plays a significant role.

Notes/thanks/other declarations

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Conflict of interest

The author declares no conflict of interest.

Positional statement

The author of the chapter is coming to this chapter as an Intersex person, and academic researcher specializing in human rights and has taught in the areas of gender and sexualities and social policy. The author grew up in Aotearoa New Zealand and lives on the lands of Waikato-Tainui in Aotearoa. They have ethnic (traditional) roots in Stirlingshire in Scotland. The author's background helps to set the scene for the basis and the discussion of the chapter.

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Sexual education is a worldwide concern that intersects with various attitudes, values, and cultural norms. It is an area of life that has for many years been kept private, but now there is recognition that there is a need to support people, especially young people in modern societies. The way sexual education is taught and applied within institutions shapes the way we understand and approach human sexuality. Various societies have chosen various means to provide sexual education both at school and to the wider society. There is still much more development and support needed, however. We can begin to identify strategies for overcoming challenges in sex education, promoting healthier attitudes, and empowering individuals to make informed decisions about their own bodies and relationships. This book is organized into three sections. The first section focuses on issues in sexual education, such as sexual harassment, sexuality and relationship education and advocacy by people with disabilities, future challenges, and sex differences in physical attractiveness. The second section focuses on the means of sexual health education interventions, including the use of technology. The last section includes a chapter on sex education and the invisibility of intersex people in the curriculum.

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