



Toward an ethics of curiosity? The role of cinema in medical education on variations of sexual development

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ABSTRACT

Objective: Although it is not uncommon to be born with an intersex condition or difference of sexual development (DSD), it is a topic which is still relatively unknown. The aim of the present paper is to explore the extent to which fiction movies on DSD/intersex can be used to help medical students to gain more experiential knowledge, enhance their empathic abilities, and facilitate self-reflection on this issue.

Methods: A systematic film review was conducted to identify and critically review relevant fiction movies on intersex or DSD. For this purpose, an online database research was performed in the internet movie database.

Results: Recent films refrain from conveying a stereotypical image of intersex persons (e.g., freaks, villains, criminals, and femme fatale) but tend to focus on young adults' journey to self-discovery. Still, the many close-ups of the body of the character with DSD might be interpreted as a kind morbid curiosity for a body that is considered "different".

Conclusions: Although in some ways reductive, guided discussions on coming-to-age stories can be used in the medical curriculum to offer an insight in the lived experiences of DSD and to allow future healthcare professionals to turn the medical gaze upon themselves.

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Introduction

An unexamined medical life is not worth living

Sixty years ago, the physicist and novelist Charles Percy Snow gave a provocative talk at Cambridge on the relationship between the sciences and the humanities. *The Two Cultures and Scientific Revolution* [1] presented a harsh critique on the content and structure of education in the West, especially on its obsessive focus on specialization. Snow was concerned about the increasing cultural divide between scientists and what he called literary intellectuals. He argued that the education system in the UK had over-rewarded the humanities and asked for more respect for science in the curriculum and society, in general.

Now, so many years later, the humanities are said to be dying as they are subjected to a progressive marginalization both in the public sphere and academia [2,3]. At the same time, there are also signs of a

revival. The humanities, in fact, are increasingly integrated into medical education, to overcome the shortcomings of evidence-based medicine and to improve patient care [4,5]. The medical humanities (MH) are commonly defined as "an interdisciplinary field concerned with understanding the human condition of health and illness in order to create knowledgeable and sensitive healthcare providers, patients, and family caregivers" [6]. MH has three aims: (1) to encourage a better understanding of human experiences of illness, (2) to create a unique space for questioning the clinical practice and fostering critical self-reflection among healthcare providers, and (3) to promote medical students' and healthcare professionals' personal well-being [4]. The ultimate goal of MH is, therefore, to improve medical practice.

Within MH, cinema is increasingly being used as a teaching resource to deepen the ethical and

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psychosocial aspects of medicine [7–9]. This choice should not come as a surprise. We should not forget that we are a very visual society: rather than being rational animals, we are visual animals who orient themselves in the world through their eyes [10]. This makes images more powerful and engaging than words. Like novels, fiction movies can expand our empathy and knowledge insofar they give us access to thoughts, feelings, and dreams of those different from ourselves; they offer us an endless amount of stories and lives to experience [11]. Furthermore, the act of watching and listening to audiovisual media is said to be similar to medical practice, where healthcare professionals examine and listen to patients [12]. The attention given to cinema in medical education reflects the focus on the use of the arts in general (e.g., literature and theater) to promote clinical skills and humane medical practice [11,13,14].

A recent systematic review of arts-based medical education shows that the arts are believed to enhance learning because of some unique characteristics, such as their representational power (i.e., they do not aim to reflect reality but show aspects of it), subjectivity (i.e., they are open to interpretation), ambiguity (i.e., they lead to uncertainty because they do not have a clear-cut meaning), and universality (i.e., they transcend linguistic and cultural barriers) [13]. These distinctive qualities of the arts allow different types of student engagements, both cognitive (e.g., critical thinking, self-reflection, and self-assessment) and non-cognitive (e.g., affective experience and empathic imagination) [13]. Still, these unique features only create the necessary conditions for reflection to take place; student engagement is not an automatic process. Teachers, therefore, need to employ the effective educational strategies to help students to gain new insights and to translate these in daily medical practice [13]. Despite increased interest, skepticism about the benefits of integrating the arts in medical education continues to persist due to the lack of robust evidence of its long-term impact on clinical practice [4,7]. Nevertheless, the question poses whether such a request for objective assessment is not misguided: how can we measure “soft” skills such as empathy, imagination, self-reflection, and critical thinking quantitatively without depriving them of their original richness [4,15]?

In this paper, we adhere to the view that the arts, and in particular, cinema add substantial value to medical education as they allow to question practices taken for granted and to stimulate students to

think critically about themselves, their profession, and medical culture in general [4]. Furthermore, compared to a direct confrontation, cinema allows for a safe place to process and think about ethically delicate issues [15]. At the same time, films can enable students to question their position as spectators and the unconscious biases that underpin their observations [15]. In this manuscript, we aim to propose a selection and discussion of a series of fiction movies on intersex or difference of sexual development (DSD) that teachers can use to call attention to certain ethical issues when caring for patients with a variation of sexual development.

Intersex or DSD: a change of approach?

Intersex or DSD (difference of sexual development)¹ are variations, in which the development of the chromosomal, gonadal, or anatomical sex is deemed atypical [16]. The diagnosis of DSD can occur at birth, in early childhood (due to atypical genital appearance), or during adolescence (in the absence of “normal” puberty changes) [17]. Although it is not that uncommon to be born with such a variation², intersex is a topic, which is still relatively unknown to the general public [18]. Recent data seem to suggest an increase of DSD on a global scale, and the existing estimates may be conservative, given that not all variations are apparent without testing [19–21]. This widespread ignorance on this topic among the general public is not at all surprising considering that, in the past decades, physicians

1 The terminology is a debated issue among scholars, health professionals, advocates, and affected persons. DSD has been widely accepted among health professionals to replace older terms such as hermaphroditism and intersex since 2006. The acronym is contested [25,26] because it risks stigmatising intersex persons and turning bodily variations into pathological conditions requiring medical intervention [27].

2 The prevalence of DSD is difficult to quantify due to a lack of accurate recording of data on intersex diagnoses and disagreements about how to define intersex/DSD. It is estimated that 1.7%–4% of people have intersex variations (and thus accounts for a higher number of cases than cystic fibrosis). Frequency also varies with the type of sexual development variation, for example from 1:600 for Klinefelter syndrome to 1:5,000 for congenital adrenal hyperplasia [19–21].

used early hormone and surgical treatments to “fix” intersex infants and encouraged parents to withhold the truth from their children. Throughout the greater part of the 20th century, in fact, the prevailing medical approach was influenced by the “optimal gender policy” of the sexologist John Money [22,23]. According to Money, gender identity does not directly arise from biology but rather from parental and social conditioning during the first 2½ years of life. To ensure a stable gender identity and a consistent upbringing, Money believed that children must have unambiguous genitalia matching their (assigned) gender identity [24]. For the majority of infants with ambiguous genitalia, this meant that they were subjected to (cosmetic) feminizing operations—“it is easier to dig a hole, than to build a pole”—without much regard for the mutilating and traumatizing effects of the treatment [24,27]. Money’s paradigm was endorsed by the American Academy of Pediatrics until the late 1990s. At the end of the twentieth century, efforts of advocacy groups led to a major change in the care of intersex persons [28]. With the convention statement of Chicago (2006) patient-centered interventions, full disclosure and postponement of irreversible esthetic surgeries until the age of informed consent increasingly became the recommended approach. Despite growing skepticism about early interventions, however, there is little evidence that (involuntary) operations are *actually* postponed [29,30]. This does not mean that all medical treatment is harmful—in some cases, surgeries might be *medically* appropriate. Besides surgery, medical photography is another medical practice which has often been criticized for being ethically problematic [27,31,32]. Although medical photographs seem objective, they are situated in a culture of surveillance that flattens human experience into diagnostic categories [33]. They can be taken not only for therapeutic reasons but also for textbooks (education) and publications [33]. Photographs of intersex persons usually take two forms: close-ups of genitals or full body shots of naked children whose eyes are obscured by a black line [33]. In their autobiographies, many intersex persons describe their experience with medical photography as dehumanizing, as a violent intrusion of their bodily integrity: they are reduced to objects of the medical gaze without the capacity to reciprocate [27,33]. For many of them, the exposure to medical photography has led to long-term psychological stress [32,33]. Responsible practice for the use of clinical images requires the fully informed consent of the patient but is not

always obtained. The Consensus Statement of 2006 (and the updated version of 2015) has remained silent about the issue of clinical images of intersex persons’ bodies [33].

Cinema, a medium for critical reflection on intersex or DSD

A guided viewing of films on intersex/DSD can help students to gain the experiential knowledge on this complex topic while at the same time allowing them to cast a critical view on the history of the medicalization of intersex bodies. Although it is common for film-based learning to take a content-based approach [15], we consider it equally important to also focus on the form, i.e., on the way in which intersex characters are visually portrayed or represented on screen. We should keep in mind, in fact, that although fiction movies may hold up a mirror to society, they are also a product of that society and, therefore, might unwittingly perpetuate the stereotypical frames of representation [15,34].

The problem of stereotyping confronts us with an important question: can fiction ever be used to represent the plight of intersex persons? A similar concern has been raised by other minority groups with regard to fictional accounts. In *The Cinema of Isolation* [35], Norden urged the audience to reflect on the negative portrayal and misrepresentation of people with disabilities and argued that these stereotypes are at once the result and the cause of society’s negative attitudes toward disabled persons. Hence, why then focus on the fictional representation of intersex or DSD instead of on documentaries or non-fiction novels? Autobiographical narratives are often confined to particular facts, whereas—to rely on Aristotle’s ideas—fiction tends to provide universal truths and allows us to explore ethically demanding situations from a safe place [36–38]. Personal experiences are often too intimate to be discussed, and intersex persons and their families might feel vulnerable and exposed by doing so. Fiction could, therefore, play an important role in raising awareness about intersex and contribute to the empowerment of intersex persons, given that visibility has become an important gateway to acceptance [39].

Methods

To compile a list of fiction movies on intersex, suitable to be used in the context of medical education, we conducted a systematic film review in September 2018, which was updated in June 2019.

For this purpose, an online database research was performed using the IMDb, which is a well-established online database that provides information related to films, television programs, and video games. Intersex, DSD, and difference or disorder of sex development were used as search terms, with only intersex providing any results. Although intersex activists and medical professionals no longer use the nomenclature “hermaphrodite” as they consider it stigmatizing and misleading, it was suggested as a relevant keyword by IMDb and the search query added some interesting research results. The database also recommended androgen insensitivity syndrome, five alpha reductase deficiency, and Klinefelter syndrome. Since the key terms are related to a specific type of DSD and thus pertinent for our review, they were systematically searched for.

The inclusion criteria were: (1) fiction movie, (2) feature movie, (3) film that deals with the topic of intersexuality or DSD, and (4) intersex character/theme which plays an important role in the plot. No restriction was placed on the language of the movie as long as English subtitles were available. Documentaries, animation movies, pornographic movies, short films, and episodes in TV-series were excluded.

As IMDb does not allow for advanced searches using Boolean logic but only for single keyword searches (or searches based on genres, quotes, plots, film locations, soundtracks, etc.), we searched separately for each identified keyword (i.e., intersex, hermaphrodite, ambiguous genitalia, androgen insensitivity syndrome, five alpha reductase deficiency, and Klinefelter syndrome). Combined, this resulted in 139 movies. After manual deduplication, 118 titles remained. During the first phase of the review, the authors screened the film genre, plot summary, and trailer of the 118 movies (if available), to verify whether they responded to the selection criteria. In total, 100 movies were excluded: 60 films were discarded because of the genre (short movie, documentary, TV episode, and pornographic movie), and 40 were excluded because they did not contain any plot reference to intersexuality. One film was added based on a suggested film list of the OII Intersex Network. Overall, the sample at this stage included 19 films which were ordered on DVD or accessed online (free access streaming) in order to screen the full movies. After watching the full-length movies, 12 films were excluded because they were not considered useful to inform medical students about the lived experience of being intersex. Some of these

films did not cover the intersex subject, whereas, in others, the intersex character played only a small supporting role (limited to one or two scenes) or was represented in a very discriminatory way (e.g., as a freak, criminal, or hypersexualized being). There was one older movie (1970), which we were unable to find (Distribution Company unknown). The updated review in June 2019 added one new film (Venezuelan) which was, however, impossible to find because it was not distributed internationally (Fig. 1). To qualitatively assess the remaining seven movies, we created a data extraction framework with the following information: title, director, year, country of production, target audience, type of intersex variation, used terminology, storyline and narrative portrayal (including medical world, society, and parents or friends), visual language, and happy ending.

Results

All the selected movies take the form of a coming-of-age story, in which the main character undergoes substantial internal changes that are crucial for the overall plot development. Although four of the seven selected films name the intersex variation, they provide little or no information on what these conditions actually entail and some details (e.g., cause, symptoms, and gender expression) are imprecise (see Table 1). For example, the assigned gender identity of the main character in *XXY* is a girl. However, *XXY* or Klinefelter is a syndrome associated with young boys who start feminizing (e.g., smaller testicles, reduced muscle mass, body and facial hair, and enlarged breast tissue). The variation is usually not diagnosed until adulthood. As stated above, in this paper, we focus both on the narrative portrayal and the visual language used to represent characters with intersex variations. We refrain from giving a detailed reading of each singular movie and prefer to look for commonalities and differences.

Narrative representation of intersex conditions

Most of the films focus on the psychological growth of the main (intersex) character from adolescence/youth to adulthood. This growth is either symbolized by a gradual acceptance of the character’s “difference” (by themselves and by the people close to them) and/or by the protagonist’s discovery of their intersex variation. All intersex characters are white, and the majority of them are lower class. The most commonly assigned gender is girl/woman. In

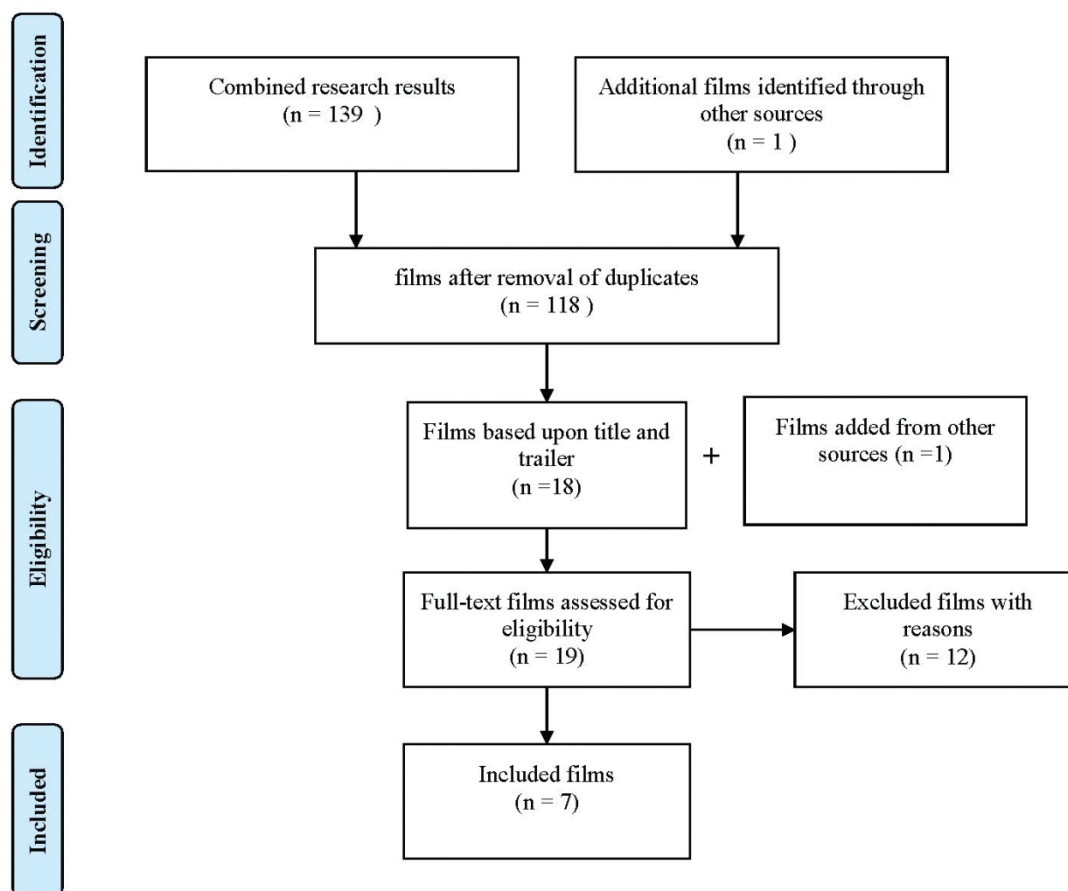


Figure 1. Search process IMDb.

Table 1. Selected films (1).

	Film title	Director	Year	Country	Genre	Term
1	Arianna	Carlo Lavagna	2015	IT	Drama	Intersex & hermaphrodite (intersex variation mentioned: 5α-Reductase deficiency)
2	Both	Lisset Barecellos	2005	USA	Drama	Hermaphrodite
3	Bruno & Earlene go to Vegas	Simon Savory	2013	UK/USA/FR	Drama	Intersex variation mentioned: PAIS
4	Hermafrodita	Albert Xavier	2009	Dominican Republic	Drama	Hermaphrodite
5	Spork	J.B. Ghuman	2010	USA	Comedy/drama	Hermaphrodite
6	The Last Summer of la Boyita	Julia Solomonoff	2009	Argentina	Drama	Hermaphrodite
7	XXY	Lucia Puenzo	2007	Argentina, Spain, France	Drama	Intersex variation mentioned: XXY

the movies, the main character’s personal growth is often linked with typical adolescent and young adult life challenges: upsurge of sexual feelings, experimenting with sex, body alterations and body image issues, intimate relationships, growing independence from parents, peer relationships, work

situation, etc. The magnitude of these challenges is often amplified: the intersex character feels isolated and abnormal (a “freak”) due to the presence (e.g., micropenis) or absence (e.g., breasts) of certain bodily features or processes (e.g., menstruation), the inability to reach sexual pleasure, or the

uncertainty regarding their sexual orientation. In *XXY* and *Hermafrodita*, the main character is sexually assaulted because of their presumed sexual ambiguity. In two movies (*Spork* and *The Last Summer of la Boyita*), the topic of sexuality remains undiscussed, presumably due to the young age of the protagonists.

Similarly for many adolescents and young adults, the protagonists have a rather conflictual relationship with their parents. In some films, this relationship is further strained due to the parents' decision to withhold information from their children or their inability to accept their child's bodily variation (see Table 1). The parental role touches on some important "intersex specific" themes, such as secrecy (the intersex character is unaware of their condition or is urged to keep it hidden), overprotection (the parental instinct to shield children from physical and psychological harm), medical treatment (the intersex character has been subjected to surgical treatment as a child or is taking or refusing to take hormone treatment), medical decision-making (the non-involvement of the intersex character in their medical treatment), medicalization (pervasive medical photography and the medical gaze), or reproductive potential (the preservation of fertility is often a major consideration for girls).

Apart from the parents, another character which often appears in the plot is that of the surgeon-physician who has either "fixed" or wants to "fix" the variation. Two out of six intersex characters underwent surgery at an early age (*Both* and *Arianna*), and two other characters were saved from the "scalpel" by their parents or friends (*XXY* and *Bruno & Earlene go to Vegas*). In all four movies, doctors are portrayed as cold-hearted health professionals, driven by a morbid scientific curiosity for the intersex body (e.g., medical display and photography). In one movie, the

parents resisted the medicalization of their son's body because they wanted to preserve his masculine status (*The Last Summer of la Boyita*). The doctor in this film is caring and concerned but unable to think outside a clinical framework. In *Spork*, the topic of surgical intervention is not addressed.

A common trait of all films is the emotional and reciprocal support and acceptance between the intersex character and a close friend (who, in some cases, is also considered "outcast" due to their sexual orientation or ethnicity). Most of the movies have a happy or open ending (see Table 2).

The visual portrayal of intersex conditions

Since watching a film is primarily a visual experience, it is important to analyze not only the narrative (content) but also the visual (form) representation of intersex on screen: how do visual moving images communicate meaning? The focus is again on common visual features across the films.

Liminal spaces

The term liminality (from Latin *limen*, meaning "threshold") was used by the anthropologist Arnold van Gennep in his seminal work *The Rites of Passage* [40] to indicate a phase of transition between two life stages (e.g., adolescence). The notion was further popularized by Victor Turner [41] to designate a change of condition that disrupts the individual's life and that of society because traditional norms no longer apply. Similarly, a liminal space is a kind of no man's land (e.g., a border), a place of transition, of in-between-ness. In almost all the reviewed films, the story is set in such liminal spaces (e.g., countryside, suburbia, desert, and small village). These borderline places often function as a metaphor for the sexual ambiguity of the intersex character and for their marginal position in society. There is a strong

Table 2. Selected films (2).

	Film title	Age	Social class	Assigned gender	Gender identity	Parents	Close friends	Happy ending
1	Arianna	YA (18)	MC	Girl	Non-binary	Secrecy	Yes	Open
2	Both	YA	MC	Girl	Uncertain	Secrecy	No	Open/yes
3	Bruno & Earlene go to Vegas	YA	LC	Boy	Uncertain	"Terrified"	Yes	Yes
4	Hermafrodita	YA	LC	Girl	Girl	Rejection	Yes	Yes
5	Spork	TA (14)	LC	Girl	Uncertain	Protection (brother)	Yes	Yes
6	The Last Summer of la Boyita	TA (14)	LC	Boy	Boy	Secrecy rejection	Yes	Open
7	XXY	TA (15)	MC	Girl	Non-binary	Protection	Yes	Open/yes

YA = (young adults); TA = (teenagers); ML = (middle class); LC = (lower class)

analogy between the intersex character's own perception of their "otherness" and the liminal place. The decision of the protagonist to move beyond these threshold spaces is often accompanied by an inner (e.g., acceptance of one's true self) and external (e.g., discovery of the truth) change.

Focus of the intersex character's body

Various films place a great emphasis on the intersex character's body throughout the entire storyline. This is evidenced by the presence of shower, swimming, sex, and masturbation scenes and the use of rivers, swimming pools, bathrooms, and bedrooms as staging scenes. In *Arianna*, for example, the camera insists on the difference between Arianna's body and that of her cousin Celeste who, despite her younger age, shows the nascent curves of puberty. *Both* contain various shower and sex scenes, in which we get a close view of Rebecca's very feminine looking body (e.g., hips, breasts, and vagina). In *Bruno & Earlene go to Vegas*, there is a tendency to focus on the sexual attractiveness and the beauty of the intersex character and their naked body. Nevertheless, the "contentious" body parts are never explicitly shown, at least not to the spectator. In some movies, however, they are revealed to other characters in the film. This was, for example, the case in *XXY*, where Alex is first approached by a group of boys which pull down her pants to see her genitals and then again in one of the final scenes; when Alex shows her genitalia to Alvaro, the boy she made love to (by penetrating him) earlier in the story. However, we, the viewers, are not allowed to gaze. Something similar happens in *Hermafrodita* when Maria's boyfriend, in an attempt of raping her, finally discovers her secret and castrates her.

Water as threat and rebirth

Water is a recurrent visual motif in five of seven coming-of-age films. Its meaning often changes together with the storyline. At the beginning of the film, water often represents a threat. This is apparent in scenes, where intersex characters are invited by friends to swim in the sea, a river, or a pool and are somehow forced to undress and expose their bodies. At the end of most movies, however, water takes on a more positive meaning. The final immersion of the intersex character's body usually represents a kind of rebirth, and water becomes a liberating force, a symbol of acceptance. In some cases, water is also a pathway for self-discovery. This happens, for example, in shower scenes, in

which intersex characters explore their own maturing and desiring bodies.

Discussion

Cinema is increasingly used as a learning tool for medical students as is evident by the growth of the literature on this topic [8–9,11,15,42–44]. For cinema education to have an impact on medical practice, teachers need to employ educational strategies to foster learners' critical thinking skills. Various pedagogical strategies have been proposed in the literature [8–9,11,15,42–44]. Our recommendations draw on this existing body of research.

We suggest that films are viewed and discussed in a group and as a whole, rather than each student analyzing isolated segments on their own [42]. We also recommend inviting discussion facilitators with a different background, such as a healthcare professional (e.g., surgeon, endocrinologist, and gynecologist), a filmmaker or film critic, a philosopher or ethicist, and a person or a parent (ideally) with lived experience of DSD. If the group is big, we recommend to divide the students into small groups of five to eight persons and to give them a series of open-ended questions to discuss first in groups and then together with the facilitators in a plenary session. A list of potential questions can be found at the end of this article (Appendix 1). This will expose participants to different interpretations of both the content and the form of the film. Another strategy to improve teaching outcomes is to ask students, after having watched the film, to do research on medical approaches of DSD throughout history, to read autobiographical accounts of intersex persons, to listen to Technology, Entertainment and Design (TED) talks of young adults with DSD, or to follow one of their social media profiles online (Appendix 2). As a next step, students can write a reaction paper about the movie, in which they reflect on their change of perspective on DSD and their own role as future physicians (Appendix 3).

The desired outcome of these exercises is to change the way, in which the future healthcare professionals engage with intersex people. In what follows, we present and discuss a selection of films that we consider appropriate to address the topic of intersex in the classroom. We also suggest discussion themes for facilitators to use for the plenary sessions.

From diagnosis to lived experience

Intersex or DSD is a physical condition with not only medical consequences but also important personal

and social implications. Many of the coming-of-age films do not give a name to the intersex variation, and when they do, the “diagnosis” [e.g., XXY and 5 α -Reductase deficiency (5-ARD)] is not represented in a realistic way. Although this choice has been criticized by some for potentially compromising the psychological well-being of patients and their families [45], in many cases, this choice might be motivated by the intent to avoid medical realism [46] and to make us reflect on the constructed notions of these diagnoses. We should not forget, in fact, that the recent medical classification system of DSD, which is based on genetics, is not beyond discussion [47]. Moreover, as shown by a recent study on terminology preferences [48], young intersex persons and their families often use the various terms in a rather flexible and pragmatic way. Discussions on what constitutes the proper terminology, therefore, risk constraining self-expression. Still, this does not mean that the recurrent use of the mythological term “hermaphrodite” in the various films should not raise concern. Fictional portrayals of intersex characters do shape popular understanding, for better or worse. They change the way that people are talked about, treated, and understood in the “real” world [49]. For this reason, we aimed to focus on both the narrative and visual representations of intersex/DSD in contemporary cinema.

The coming-of-age stories refrain from portraying intersex persons in stereotypical ways by focusing on the teenager’s or young adult’s journey to self-discovery. The narrative plot is supported by the visual portrayal. Border spaces seem to symbolize the secrecy and the restricted mindset of those surrounding the intersex character. Such an interpretation is reinforced by the fact that, at the end of the story, the intersex character often abandons the liminal space (e.g., return to the big city) and has to overcome both internal and external obstacles to find and show their true selves. In some of the movies, the visual theme of liminality is coupled with that of water, which seems to fulfill a similar function: the transition from trauma to rebirth.

Returning the medical gaze?

Although the coming-of-age stories refrain from representing the intersex character in a negative way, questions can be raised about whether they focus too much on the intersex character’s personal struggle instead of criticizing society’s obsession with a binary sex system. They are all drama movies, tackling recurrent challenges that intersex youth face

(e.g., medicalization, gender violence, and secrecy), and their personal journey out of these problems.

Although many of these issues are mostly unknown to the mainstream public and, therefore, certainly merit attention, it might be equally important to focus not only on the trauma they go through but also to de-dramatize and show that intersex persons are “just living their lives like everyone else,” to avoid reducing them to a prop.

Much the same as for other minority groups (e.g., transgender people or persons with a disability), the representation of the intersex character’s body is another delicate issue due to issues of body shaming and objectification. Although on a narrative level, the coming-of-age stories refrain from portraying intersex persons as freaks or hypersexualized characters, on a visual level, they somehow continue to perform a kind of violence of representation. The many close-ups of the intersex character’s body seem to betray almost a morbid curiosity about those considered “different” from the norm. This raises a number of questions. For whom are these films made (i.e., who is the audience?) and for what purpose? Do they want to satisfy the mainstream public’s scopophilic interest or do they want to empower intersex persons themselves? Does cinema merely perpetuate the clinical practice of medical photography? It is important to consider these issues, particularly in the light of the long-standing objectification of intersex bodies by the medical world. On the other hand, we should not forget that films, in general, rely heavily on the representational power of the actors’ bodies and that this is certainly the case for drama movies whose success depends on their capacity to evoke strong emotions [34]. Moreover, in the coming-of-age stories, the viewers’ desire to know or their curiosity is somehow frustrated insofar they never actually see any “ambiguous” body parts. This frustration might encourage the audience to reflect on their own objectifying gazing practices (and that of the medical gaze) [50]. When this happens, the violence of curiosity might turn into a curiosity of care, understood here, following Foucault, not as a curiosity that seeks to accumulate knowledge but one which enables to unsettle us and to free us from our own preconceptions [51,52]. Visual representations of intersex persons can, therefore, also be empowering, especially if the intersex character reciprocates the gaze. Such an interpretation might find support in the fact that the medical profession is depicted in a very negative light. In most films, the inquisitive

look of physicians is portrayed as very intrusive and as a threat to the intersex character's physical and mental integrity. Finally, it should be noted that the attention on the body might be motivated by the filmmakers' intent to show that intersex bodies not only merit respect but are also desirable.

Sex, gender, gender identity, sexual orientation, and intersectionality

In some films (e.g., *Arianna* and *Both*), the main character's bodily variation is associated with confusion and insecurity regarding gender identity and sexual orientation. Discussion facilitators need to clarify that although intersex young adults, such as adolescents and young adults, in general, might face such doubts, intersex is not—at least not primarily—a matter of identity or sexual orientation [53]. What links lesbian, gay, bisexual, transgender (LGBT) communities and intersex persons is the normative understanding of sex, gender, and sexuality, which lies behind the discrimination they encounter [53]. Although not all intersex persons wish to be seen as a separate group and/or feel insecure about their identity or sexual orientation, for some, the alliance with LGBT community might be a sensitive issue [18].

Finally, facilitators can also critically point out that most of the intersex characters in the selected films are white, young, and able-bodied and belong to the middle or lower class as if only parents from this social stratum have difficulties dealing with their child's variation.

Conclusions

The persistent disconnect in research between scholars in the humanities and those in the field of medicine, focused on the health of people with intersex variations, is a missed opportunity for improving the latter's well-being. The present manuscript aims to bridge this gap by offering a contribution to medical education on intersex from a MH perspective. Although in some ways reductive, facilitated discussions on the coming-of-age stories portrayed in film can play an important role in the medical curriculum. Coming-of-age films do not confine the topic of intersex to a purely medical perspective (e.g., diagnosis and treatment) nor do they focus exclusively on the hotly debated topic of surgical outcome. Instead, they offer an insight in the lived experiences of intersex adolescents and young adults, and they allow future healthcare professionals to turn the medical gaze on themselves.

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Appendix 1. Questions for group discussions.³ Assign a representative for each group. Group representatives provide a summary of group discussions for the plenary debate. Others students can make additional comments to complete the discussion.

1. Briefly discuss the plot of the coming-of-age story. What experiences or changes do the intersex character in the film face? What kind of support network (if any) is available to them to address these changes?

2. What do you think was the intent of the film director when making this film? What narrative and visual motifs support such an interpretation?

3. As a spectator, did you feel uncomfortable during certain film scenes? Briefly explain the scene(s) and why you felt uncomfortable.

4. Were there ethical dilemmas presented in this film? Briefly explain. Can you relate it to any ethical challenge that you have personally experienced during your training?

5. How is the medical profession represented in the film? How did this make you feel?

6. Imagine one of the intersex characters is your patient, how could you as a physician advocate for these patients both at an individual and community level?

³ The discussion questions above are inspired by the lesson plan for movies on patients with aids, mental illness and homeless persons developed in Leonard, E. and Tau, M. *Redirecting the Clinical Gaze: Films as Tool of Critical Reflection in Residency Training.* Health Humanities in Postgraduate Medical Education. Oxford, Oxford University Press, 2018.

7. Do you think your medical training has influenced your impressions of the film? Please briefly explain.

8. Do you think the film adequately represents the lived experience of adolescents and young adults with DSD? Or do you believe some parts of the film (content or form) risk to stereotype them?

9. Do you think fiction movies in general can represent the plight of those who are often discriminated in society?

10. Apart from watching fiction films on intersex, can you think of other ways in which medical students can learn about the subjective experiences of young intersex persons?

Appendix 2. Further sources to gain insight in adolescents and young adults experiences with DSD/intersex.

1) Website of InterACT, an organization of and for young intersex persons which uses innovative legal and other strategies, to advocate for the human rights of children born with intersex traits. It contains also a blog and guidelines for how the media can cover an intersex topic or issue in a respectful way: <https://interactadvocates.org/>

2) TED talk by Emily Quinn, intersex artist, animator, and adventurer in which she challenges binary notions of sex and gender. https://www.youtube.com/watch?v=stUl_OapUso

Emily Quinn has also her own YouTube channel dedicated entirely to showing intersex experiences and telling intersex stories: <https://www.youtube.com/channel/UC4BoG-tk8pSitMQvWH2iJYw>

3) TED talk by Alice Dreger, historian, bio-ethicist, author, and former professor of clinical MH and bioethics at the Feinberg School of Medicine, Northwestern University (Chicago). In her work she advocates for the rights of intersex persons: https://www.ted.com/talks/alice_dreger_is_anatomy_destiny

4) Website of intersex activist and film maker Pidgeon Pagonis (which contains a lot of information on intersex but contains also a link to her personal blog where she shares her personal experiences): <http://www.pidgeonismy.name/>

5) Video made by a young woman born with a DSD variation who tells how her dream of getting into the military is smashed when she is disqualified because of her condition: <https://www.youtube.com/watch?v=SkzTjD1ihoI>

6) 'The Intersex Diaries' of Annick born intersex. In the video he talks with the BBC about his life, meeting other intersex people and his final surgery: <https://ihra.org.au/16163/anick-intersex-diaries/>

7) Edition of TeenVogue dedicated to intersex (interesting the episode on periods and dating):

<https://www.teenvogue.com/story/intersex-video-periods-genital-mutilation-surgery-identity>

Appendix 3. Reaction paper assignment.

For this assignment, students are required to view a film on intersex or DSD. You are asked to write a response paper to the movie. The assignment should not merely be a report or summary of the chosen film, but should also contain a personal and critical view on the topic under discussion. Thus, in this reaction paper you need to do two things (1) write a short informative summary and (2) give a detailed account of your reaction to it.

Some issues you might want to think about for part 2: (a) did the movie help you get a better sense of the lived experience of adolescents and young adults with intersex/DSD and if so why? (b) how is the film related to ethical challenges in healthcare? (c) how is the movie related to your life, experience, ideas? (d) has your viewpoint on the film changed, after listening to the Ted talk of X or the YouTube video of intersex activist X? (e) what role can cinema play in medical education?