

Teaching Puberty for LGBTQIA + Diversity, Inclusion, and Beyond: A New Model of Expansive Pubertal Understanding

Maya A. Poran

To cite this article: Maya A. Poran (2022): Teaching Puberty for LGBTQIA + Diversity, Inclusion, and Beyond: A New Model of Expansive Pubertal Understanding, American Journal of Sexuality Education, DOI: [10.1080/15546128.2022.2053259](https://doi.org/10.1080/15546128.2022.2053259)

To link to this article: <https://doi.org/10.1080/15546128.2022.2053259>



© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC.



Published online: 31 Mar 2022.



Submit your article to this journal [↗](#)



Article views: 759



View related articles [↗](#)



View Crossmark data [↗](#)

Teaching Puberty for LGBTQIA + Diversity, Inclusion, and Beyond: A New Model of Expansive Pubertal Understanding

Maya A. Poran

Psychology Program-SSHS, Ramapo College of New Jersey, Mahwah, NJ, USA

ABSTRACT

The following article presents a paradigm shift in order to engage in more expansive pedagogy in the teaching of puberty; specifically, to create a more inclusive and affirming space for LGBTQIA + youth. Attention to LGBTQIA + populations has slowly been integrated into many areas of research, theory, and teaching in psychology and related disciplines. While positive strides have been made, lessons on adolescent psychology, and puberty specifically, remain stuck in older binary models. The following is an examination of the dominant approach utilized for teaching puberty in senior-level high school and early undergraduate adolescent psychology courses, a critique of that model, as well as a presentation of a new model for teaching pubertal development. A proposed Model of Expansive Pubertal Understanding is shared here, and allows for a fuller, more accurate, and more positive, approach to pubertal development. It is further proposed that the information shared in this model be infused much earlier in youth education, and through a breadth of disciplines, to effectively promote psychological and physical wellbeing among children and youth of diverse genders, sexes, and sexualities.

KEYWORDS

Puberty; LGBT; adolescence; sexuality; intersex; gender; transgender; intersectionality

Inclusion of diverse sexualities, genders, and to some extent sexes, has been a relatively recent focus for many in education, psychology, health services, and public policy. In this moment of both historic progress, and extreme backlash, marked by both pro and anti LGBT legislations, and simultaneous increases in bias-motivated violence (Gitari & Walters, 2020; Human Rights Campaign, 2020), it is important to strengthen the wave of expansive education regarding sexes, sexualities, and genders (Blum et al., 2019; Kågesten et al., 2016; Kosciw et al., 2014). While there are particular areas of psychology and related disciplines in which sex, sexuality and gender have often found a home (such as

CONTACT Maya A. Poran  mporan@ramapo.edu  Psychology Program-SSHS, Ramapo College of New Jersey, 505 Ramapo Valley Road, Mahwah, NJ 07430, USA.

© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

research on bullying, harassment, and discrimination), it is especially important to move beyond these for fuller information, representation, and education. In the spirit of the American Psychological Associations' recent Resolution on Gender Change Efforts (APA, 2021)—which recommends psychologists treat gender diversity as normative in all areas of practice, including clinical, supervision, research, and teaching—as well as the 2020 National Academies of Science, Engineering, and Medicine's Consensus Report on understanding the status and well-being of sexual and gender diverse populations (2020), and the additions of sex, gender identity, and sexuality to the 2nd edition of National Sex Education Standards for k-12 (2020), the following piece offers a new paradigm and model through which to teach about pubertal development.

In the realm of Adolescent Psychology, there have been slow drips of inclusive information regarding sex, gender, and sexuality in adolescent psychology texts. Lessons in gender socialization, sexuality, and life stressors, are mostly where one finds LGBTQIA+ information (Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, and more: LGBTQIA+). One is more likely to find inclusion of LGBTQIA+ youth regarding pubertal development in the texts for Psychology of Women courses, Gender Studies, or other variations of Feminist Psychology and Sexuality studies in undergraduate and graduate-level courses. When included, LGBTQIA+ development often centers on lessons regarding health dangers due to the high rates of suicidal ideation, suicidality, depression, anxiety, and substance use due to social hostility, harassment, and bullying and stressors associated with pubertal growth (D'augelli, 2002; Institute of Medicine (US) Committee on Lesbian Gay Bisexual & Transgender Health Issues & Gaps & Opportunities, 2011). While these are important issues and areas to discuss, it certainly should not stop there. Lessons on primary elements of development, such as processes and experiences of puberty, have been woefully barren in attempts at full inclusion for sex, gender, and sexual minority youth (Deardorff et al., 2019). There is a need for infusion beyond inclusion; For LGBTQIA+ issues to be more fully integrated into the life of subject areas. In addition, there needs to be a shift to the paradigmatic approach of LGBTQIA+ as the outliers, the anomalies, or the people in duress, which prevents a fuller and true new starting point.

Students are coming into college classrooms with greater readiness to discuss LGBTQIA+ issues, as their mainstream lives have greater representation, both in mainstream media, social media, and interpersonal lives (GLAAD, 2021; U.S. Institute of Medicine, 2011). As a driving force for social change for LGBTQIA+ people, many youth are ready to learn and discuss LGBTQIA+ issues in many subject areas (i.e. sexuality, beauty, stereotypes, or gender norms), however, educational approaches to adolescents going through puberty have remained unchanged. A closer look at the earlier lessons that

prepares students for this, such as children's books on human anatomy, pubertal development, and even higher-level psychology texts themselves, indicate clearly why students are under false impressions. Information pertaining to pubertal development focus on a binary sex/gender model of human development and growth, a binary examination of the psychological relationships to pubertal growth, as well as an unquestioned focus on heterosexuality.

Puberty seems "objective" and untouchable to LGBTQIA + teachings. The lesson is essentially presented as follows: (1) bodies going through puberty change by sex (female/male). (2) These changes are for the development of the ability to procreate. (3) Sexual differentiation and pubertal development, as an objective category, is then experienced either "on time" or "off time." (4) Being on time or off time with peers creates stress, but this stress will be temporary as bodies will eventually reach the sexual maturity of adulthood. Lesson concluded.

In this model, if intersex individuals are included, it is as an anomaly. If transgender people are included, it is with brief mention of their suffering because of their difference, and their very significant struggles with pubertal change (Mirabella et al., 2020; Turban et al., 2020; van de Grift et al., 2016). One would be hard pressed to find any information on pubertal development that communicates overt lessons on sexual minorities. LGBTQIA + sexualities are not discussed and are left possibly to a chapter on sexuality itself. These lessons (overt and absent) communicate a clear "normal" and clear outliers.

Importantly, it is not just inclusion into existing frameworks, and not just full infusion into existing curriculum, but a revisioning and refashioning of the main frameworks of discussion that is necessary. For a more expansive, inclusive, and grounded approach, all sexes, sexualities, and genders must be learned and understood together, not in opposition; Not the normal, and the aberration.

The following is a fuller communication of the dominant model utilized to teach the psychology of puberty, a critique of this model, and a proposal for a new paradigm which shifts conceptual images to learn puberty in a new way; To understand the vast experiences, shared and different, among all sexes, sexualities and genders. It is hoped that the model proposed will become a new normal to teach pubertal growth and development, for LGBTQIA + equality and empowerment of people of all genders, sexes, and sexualities.

The unassailable objectivity of puberty

The dominant model and the creation of pathologies

Puberty seems an objective physical transformation, simply a bodily change for sexual differentiation among the human species. As stated above, the

dominant model of teaching puberty is dispassionately presented as follows: there are two biological sexes, female and male, and they differ. Those differences are amplified in puberty through sexual developmental and maturational changes that further sexual differentiation. This occurs through a surge of hormonal influence. Males experience a surge of testosterone, becoming more of what is socially defined as masculine: penises will grow, spermatogenesis takes place, and they will experience a major increase in hair growth over all areas of the body. Muscularity and deepening of voice are also highlighted. For females the surge of estrogens is emphasized, and that these are responsible for changes which manifest contrary to those of males. Female physical maturation is presented with a focus on what is socially defined as feminine: the stages of breast development, menarche, fat distribution and curves. Hair growth is generally not discussed, but for acknowledgement of the development of pubic and axillary hair. These differentiations between female and male bodies occur and culminate in the ability to procreate (for examples see sections on puberty in contemporary adolescent psychology textbooks Dolgin, 2018; Santrock, 2019, Steinberg, 2020). Most texts will also utilize particular diagrams based on “The Tanner Stages” (a scale developed in 1969 that defines stages in pubertal development based upon measurements of external sex characteristics) to represent the main physical changes for females and males; these tend to be represented by showing only female breast development, and male penis development with pubic hair (Santrock, 2019; Steinberg, 2020).

From early teachings on puberty in preschool and elementary school, to the classrooms of college, this presentation encourages students to think of puberty as “just the objective physical,” and as the obvious oppositional sexual differential between female and male people (the “opposite sexes”). In addition, this differentiation is communicated as occurring for one primary “biological goal”: procreation via heterosexual sexuality. When discussing puberty in relation to psychology, the level of analysis generally centers on the experiences of these changes in the context of treatment by others, on or off time maturation, and how girls and boys experience the changes that are typical for their developmental trajectory (such as menstruation and breast development in girls, and penis size and hair growth in males) (Marceau et al., 2011).

This model is standard and appears to have remained static. Even contemporary LGBTQIA+ discussions are grounded and examined through this primary model. In this approach, there are essential elements omitted which not only exclude sexual and gender minorities, but also create (or build upon) a mindset of differentials which tend to *amplify difference* and make most *typical* development seem (and feel) *atypical*. Those considered “outliers” (namely intersex individuals, sexual minorities, and transgender

people) are treated as such: an aberration or oddity in the otherwise normal pathway of pubertal development, and at best an “add on” to the discussion. Those who are “normal,” (traditionally/cis-gendered females and males) are also set up to experience their growth negatively.

A foundational problem: gender masquerading as sex

Generally, students learn about psychological experiences in relation to pubertal development through the eyes and lives of traditionally gendered females and males (often referred to as cisgender). It is a given that normal pubertal development will occur, and that even if one is a “late bloomer,” one will get there eventually. One can find this language in texts for children, college students, and even on online sites for parents and youth. Even if one is “behind,” they will “catch up” and everyone will “even out” eventually and in due time (Dowshen, 2015). While “on time” or “off time” maturation is important to examine, the base on which it stands needs to be examined first. The present models of pubertal growth and development rest on the underlying assumption of normative gender appearance roles, not just normative physiological development.

Dominant gender norms of physical appearance, and of stereotypical physical attractiveness, infiltrate the pubertal lesson, and so influence not only misunderstandings of sex and pubertal development, but further set the stage for creating gender normative pressures through gender normative imagery. In addition, dominant norms simultaneously communicate preference for lighter skinned or White-typed beauty norms, further marginalizing young people of color (Poran, 2006). Dominant racialized gender norms in pubertal lessons themselves then contribute to adolescent developmental struggles among all sexes, sexualities, and genders.

The areas of emphasis are not only physiological changes, but they are shared as if they are biological rules of order. Students learn that “girls will”: develop breasts, menstruate, get wide hips for childbirth and the capacity for childbirth, and they will get more body fat and become curvy. These are the primary areas of emphasis. (Note: Only two of these are primary sex differences). “Boys will”: get lower voices, their penises grow, they will generate sperm, they will get tall and muscular, they will get hairy all over their body, and grow beards. These are the primary areas of emphasis. (Note: Only two of these are primary sex differences).

In most texts and lessons there is an emphasis on some primary sex differences, and a couple of secondary sex differences presented *as if they are primary*: namely, breast development and hair growth. Anecdotally, it is evident from over 26 years of teaching that many college students believe breast development in females, and hair and voice changes in males, are

primary sex differences. Relatedly, many believe that estrogen is the “female hormone” and that means that only females have it, while of course simultaneously believing that testosterone is the “male hormone” and so only males have it.

This is not only a fundamental a misunderstanding of biology on their part, but a full understanding of the lessons they have learned and the approach to sexes as the “opposite sexes,” in which one form of physical being is presented as completely in opposition to, and mutually exclusive of, “the other.” These teachings and gender lessons co-create the myths and pressures on youth to develop in a particular way. They tell us: this will happen to you (and this will not) and this should happen to you (and this should not). As extensive research on gender stereotypes indicate, such visions are not just descriptive, but prescriptive (Eagly et al., 2019). This creates not only hopes, but fears: hopes to become what one “is,” and fears of becoming what one is “not.” These fears will loom large for people of all genders, trans and cis. With this notion of the naturalness of gendered = sexed physical changes, we create expectations of the norm, and of course difficulties when appearing not to fit the norm.

The oft-examined struggle of “on time,” or “off time,” maturation, is indeed not just a matter of timing. These struggles are primarily in regard to physically manifesting *what is anticipated to be the normative development for a sexed/gendered body. On time or off time is actually code for fitting gender norms in a particular time frame.* Importantly, while most “late bloomers” are assured that they will “become a woman” or “become a man” one day, some actually never will. Some males will never grow beards, some females will never grow breasts, and some intersex girls will never menstruate, and so on. In addition, most humans who grow and develop *will grow elements of what appears to be “the other sex,” since so much of pubertal development is actually shared* (for example, extensive hair growth).

Students learn to comprehend normative sex development as non-normative (again, this is gender in disguise) and so these lessons participate in the creation of many of the sufferings which we study in adolescent psychology such as: cisgender girls and body image (Suisman et al., 2014), or hair disgust (Fahs, 2014; Tiggeman & Lewis, 2004), trans individuals and body dysmorphia (Martinerie et al., 2018; van de Grift et al., 2016), cisgender males and pressures of athleticism and muscularity (Carlson & Crawford, 2005; Ricciardelli & McCabe, 2004), intersex individuals not fitting dominant gender norms (Lee & Houk, 2008; Posch, 2019), and the lessons of veiled compulsory heterosexuality which can occur in an environment of school, family, and peer life that is often hostile to notions of sexuality and gender diversity (D’augelli, 2002; Kosciw et al., 2014).

In the current, dominant model of teaching puberty and the psychological experiences of puberty, gender is quietly framing the discussion. Developing “other gendered/sexed” traits becomes a great fear. All are set up for exclusion or failure in the following ways.

Exclusions, impossibilities and pathologies

In this model of binary polarity, there are populations of human youth who are missing in the pubertal discussion through misinformation, omission of factual information, and the creation of cognitive schema that prevent understanding the range of pubertal physical development and psychological possibilities.

Intersex youth

Intersex individuals (people whose bodies are unique in their configuration of anatomical, hormonal, and/or chromosomal sex) (APA, 2020) and their experiences of puberty are omitted in most texts and conversations about pubertal development. This absence creates a space in which intersex individuals do not know what will happen to them, or why something is or is not happening (Lee & Houk, 2008; Posch, 2019). In addition, if they are included, they are often shared as oddities or outliers, or under the terminology of Disorders of Sexual Development (DSD) that immediately indicates pathology. In addition, most intersex individuals have been assigned a gender and are often learning the pubertal lessons for their gender. They may be keenly aware of not fitting in with girl or boy body types, and the corresponding gender appearance norms for that which they were assigned (Jones, 2018). It is apparent to any professor teaching about intersexuality that most students in college have not learned about intersex people in their formal education.

Importantly, the solution is not just to include more information on intersex youth and puberty, but to reorient the discussion from the start. The first point of misinformation is the absence of understanding biological sex itself. “Sex” is presented as a particular version of female and male, as a complete and singular construct in itself, and only those two types are presented in pubertal information. This misrepresentation of sex as a simple binary in the human species creates problems of many types, primarily exclusion (intersex youth are erased and receive the implicit message that their bodies are abnormal). Furthermore, this erasure occurs in the essential setting of the normalized school space, where information and attitude can actively assist them in their development. Even if intersex youth are receiving health information in a medical setting by health care providers,

the validation, affirmation, and social well-being that comes from a sense of belonging is curtailed by the exclusion from the curriculum. Furthermore, for those who are sexed female and male, there is no learning about people with diverse body types, and so there is also the creation of false dichotomies and stigma.

Transgender youth

Transgender and gender diverse young people are likewise left out of the puberty conversation. If they are included, it is primarily to emphasize transgender youths' psychological sufferings in regard to pubertal development, and the question of taking "puberty blockers" to help them get through this time as they make further decisions regarding their gender and bodily development (Martinerie et al., 2018; Rew et al., 2021; Turban et al., 2020) and struggle through exclusion (Ryan, 2016). Importantly, it highlights the gender binary and fear. Transgender youth are left out of the pubertal conversation altogether unless they are included in terms of pathology or psychological difficulties with their changing bodies.

The conversation on transgender and gender diverse youth (if discussed at all) centers on the individual in relation to their body, which is experienced as changing without their consent in a direction that affirms a "gender" they do not experience as the self. Importantly, trans youth are presented as experiencing something radically different than their traditionally/cis gendered peers, since they do not identify with the sex and gender they were assigned at birth. As will be further noted below, in many ways these experiences of puberty could be discussed as shared, since most youth of all sexes and genders are experiencing psychological struggle as their bodies do things they did not give permission for them to do; including manifesting elements of the "wrong gender." In the model as it stands, trans youth are supra othered, as the pubertal layout all but guarantees their stigma.

Sexual minority youth

Sexual Minority youth are likewise ill served by the present approach to pubertal growth. Sexuality is often implied, but not directly discussed, in relation to pubertal maturational change. It is discussed in a sideways fashion, since puberty centers on sex development that is supposed to culminate in the physical ability to procreate. When sexuality is discussed in psychological texts and pubertal lessons, the emphasis is on heterosexuality, behavior, and desire. Bodies are often discussed as sexual signifiers that indicate readiness for heterosexual mating.

While many try to separate pubertal information from sexuality information, especially in the earlier years of education, when looking closely one finds that pubertal discussion is the groundwork for sexuality discussion, as puberty is discussed in regard to physical growth toward the ability to procreate. If puberty is for the ability to procreate, then there is no need to discuss anything other than heterosexual sex. This is often shared much earlier in elementary school curricula, before the “sex talk” in sex ed. This early education in part creates mental schemas and experiences of unquestioned heterosexist ideology attached to the body itself.

Sexual desire is often discussed in this context of pubertal development and heterosexuality. Often it is written that there is an increased desire for the “opposite sex,” or amusing anecdotes are shared of the things that boys or girls do to get one another’s attentions. It is not only a lesson on the physiological changes that may foster a sexual awakening or surging desire, but there are linked lessons which communicate that ones developing body will be desirous *of* specific people, and desirable *to* specific people. In doing so, and focusing it on human mating, it becomes part of the normalization of heterosexuality and the stigmatization of homosexuality, bisexuality, pansexuality, plurisexuality, asexuality, and so on.

In summation, pubertal lessons are teaching difference and divergence of particular forms. First, students learn that there are only female and male sexes, that are completely discreet and opposite. It is often a non-question that gender identities naturally flow from their bodies (vaginas are females, and females “feel like,” or view themselves and identify as, girls; penises are males, and males “feel like,” or view themselves and identify as, boys). Next students learn that these natural developments in bodies are indicators of what they will do with those bodies; and that they are not only opposites, but opposites attract: girls and boys are naturally attracted to one another for mating (Butler, 1990; Rich, 1980).

The above highlights how notions of normative physical pubertal development, which has considerable shared overlapping processes, is learned to be perceived and experienced as atypical by anyone who does not perfectly match the model which, in actuality, is just about everyone. Traditionally gendered girls and boys themselves will naturally show characteristics of the “opposite” sex and experience the development of those characteristics with worry and psychological stress in part due to the learned misunderstandings of sex as well as the norms of gender. We know that most all girls grow extensive body hair, up to 70% of boys experience breast development (Lee & Houk, 2008), everyone’s voices will deepen. While these changes are normative, they are perceived and experienced as abnormal as they were learned as physical indicators of the “wrong” sex. The pressures to maintain the differential by gender appearance norms are paramount,

and work with misconceptions regarding biology to strengthen these negative experiences.

It is then through these pubertal lessons that students learn difference from each other, rather than learning a shared base, in a cultural context, in which they develop differently together. The binary polarity of the framing of bodies and development sets the stage for not being able to perceive natural variation and what is shared. A new starting point, and areas of emphasis, can create a more inclusive experience for all growing people. To that end, the model below calls for a recasting of the normal as one that expands and includes all sexes, sexualities, and genders.

Model of expansive pubertal understanding

Based on the issues stated above, it is proposed here that one starts at the beginning with a model which is grounded in the context of both the variability within biological sex, and the dominant context of gender norms. The following is a Model of Expansive Pubertal Understanding, developed over 26 years of teaching. The essence of the lesson is as follows:

Physiological sex development as context

Sex is multilayered, not unitary; sex is variable, not binary; sex is homologous, not anachronous; sex is a process, not a static thing.

Social gender norm expectations as context

Dominant western gender norms are binary; gender intensification pressures youth to adhere to dominant—and “sub” cultural, co-occurring or competing—appearance norms of gender; bodily developments are then measured and experienced in relation to those norms.

Sexual function and desire

Function and desire are not the same; development of sexual anatomy often, but not always, allow for procreative physiology; desire may or may not increase, and the focus of desire may be self or other; others may be of any sex or gender.

Similarity and variability (in body and mind)

Based on the previous 3 steps of the model: all physiologies and all psychologies grow; all humans share physiological sex similarities as all originate from similar embryonic sex beginnings/homologues; variations will also

occur in body and in psychological relationship to the body; all growths and relations are possible and the goal should be on health and wellbeing.

A detailed view of this expansive model of pubertal growth incorporates the following:

Full discussion on physiological sex and contexts of gender

Starting at puberty, in the discussion *of* puberty, is starting too late. To ground the conversation, and to disrupt and reorganize schematic information, one must begin earlier in the physiological sex conversation. The discussion must begin with two foundational understandings: the context of origins of biological sex development in utero, and the context of gender norms that frame our understandings of sex development. These will give students the ability to understand pubertal changes, to see similarities as well as diversity, (diversity and not just “difference”), and comprehend how the experiences of these changes are framed in the context of a gendered society. This will help with understanding of physiological information, as well as self-understanding, understanding others, and help to create a pedagogical space for full inclusion. It lays the groundwork for many bodies, many trajectories, and many psychological relationships to those bodies.

Sex

First students need to learn that sex is not a unitary “thing” but a layered part of the human body and a condition that changes over time in many ways; it is not just something, but it is a process (Fausto-Sterling, 2000, 2013; Preves, 2016). Students are often surprised to learn of the sexual pathways and transformations in utero, or that puberty is not the “end” of sexual development, and that elements of human sex (e.g., hormones, hair growth, body composition, fertility, libido, and more) transform and change over the lifespan. Exceptionally surprising to most students is that everyone has phalluses and they all grow during puberty (students have, for example, learned that the “opposite” of a penis is a vagina, and have never thought of a clitoris as a phallus). Informing of the multilayered and transforming qualities of sex allow it to be a dynamic system in itself, a dynamic part of the self, and one that is marked in part by its changes. This allows it to be part of the growing self, not just a “thing” that we “are” or “are not.” This provides a welcome space for all sexes and experiences of ones sex.

These reframings, seeing the connections of the labia and scrotum, the clitoris and the penis, the ovaries and the testes, and so on, helps to inscribe a new image in the mind to prepare it for the understanding of

puberty. Here, many forms of sex development are automatically a part of the conversation, rather than an “add on.” Intersex people are a normative part of the sex spectrum and possibility, as are all forms of sexed bodies. In order to learn the variations, we must first understand the similarities. These similarities will help to teach, and learn, puberty and adolescent psychology in a comprehensive way for all sexes.

Gender norms

For true transgender inclusion, as well as a more expansive understanding of traditionally gendered people, a focus on gender as context for puberty is essential. Importantly, it should be noted that ultimately it is gender norms that create a paradigm of pubertal strain for all genders, as people of all genders (trans and cis/traditionally gendered) are afraid of manifesting the bodies of the “wrong” gender. Many trans masculine young people experience body dysmorphia, and gender dysphoria with the onset of breast development (Pulice-Farrow et al., 2020; van de Grift et al., 2016), many traditionally cis-gendered girls experience body image disturbance and disgust with hair growth perceived as masculine and unhygienic (Fahs, 2014; Tiggeman & Lewis, 2004), trans feminine young people may experience dysphoria with the development of facial hair, and traditionally gendered cis-males will likely feel such strain with normative breast development (Lemaine et al., 2013). All of these are bodily developments which have been presented as separators by gender normative body expectations, and so are experienced in particular ways. While it is often seen as a “separator” by gender/sex, it can ultimately be understood as shared and discussed together.

In order to understand the body, and experiences of the body, one needs to discuss the context(s) in which bodies grow, and the norms and expectations for physical appearance by gender. These are the contexts that give meaning to the changes and create, and highlight, the psychological experiences of them. Menstruation taboos, penis size, hairlessness, breast size and shape, all of these and more, can be understood from this vantage, and for all genders. In addition, dominant cultural and “sub” cultural norms should be part of this conversation. The dominant power of “normative” imagery creates unique challenges for all youth, though the nature of these challenges may vary depending on the individuals’ culture, race and ethnicity, socioeconomic status, and/or dis/abilities.

Discussing misconceptions, binary gender stereotypes, expectations, and gender intensification pressures, helps to further set grounding context from which to understand experiences of puberty. To restate from earlier: Such expectations are even part of the form of textual expressions on

lessons on puberty: Girls “will” develop breasts in the breast-bud to breast stage (with diagram), boys “will” develop strong musculature and body hair (with diagram). “Will” implies a fait accompli, or something one will absolutely experience depending on ones’ sex. This has implications for experiences of sex, gender, and sexuality. These “wills” create an image of what constitutes normal bodies, as well as bodies in opposition: that which one has, the other lacks (and should).

A gender conscious perspective then provides a fuller space to talk about gender pressures and gender identities, and to discuss *that bodies do not mean how one relates to that body and/or that one must identify as the culture expects one*. This also creates a space to look at physiological transformations through a more interrogative lens, supporting fuller understanding and conversation on cultural framing of bodily changes and how we personally experience it. Again, this allows everyone to learn together, from a shared grounding, rather than girl/boy being the normal genders, and the others as add-ons and oddities.

Sexuality

Many misconceptions of sex and puberty, pressures and gender norms, center on beliefs about sexuality and heterosexuality. Pubertal development itself may manifest a body capable of sexual reproduction, and that is of course something that needs to be discussed in any lesson on pubertal development. While this is so, the physical ability itself clearly does not signify sexuality.

It is also essential to discuss the various levels or forms of desire. Desire itself is variable, not only between people (such as asexual individuals or people with high levels of sexual drive), but also within people (and over the life span). It is important that these are overtly recognized, and that an increase of sexual desire that is often accompanying pubertal physical transformation is not given a “target”. Sexual desire may be strong or light or not present, sexual desire may be focused on the self and self-pleasure, or relating to others. Those others may be of diverse bodies and genders. Just because the body can procreate, does not mean that it is heterosexual in desire. For example, when talking about lubrication from the Bartholin glands, one cannot assume that that lubrication is preparing the vagina for a penis. Similarly, when talking about ejaculation, one does not assume that it is occurring inside a vagina. The conversation on sexual ability, desire, and direction, allows for a much richer and more inclusive conversation; also one that is better framed for discussions about sexual consent. This new conversation can welcome many sexualities into a positive

discussion on puberty, and one which puts health, physical, and psychological wellbeing, at the forefront.

Similarity and variation

Pubertal development is then presented from a shared starting point, and one from which students can connect through similarity, and grow in understanding of variation. It is a body in context of itself, and from where it originates. It is a body also in context of a culture in which it grows, learns, knows, and expresses itself. The direct integration and examination of the gender normative framework helps students to explore and grow with greater confidence, and hopefully in greater solidarity and connection with one another. A place of belonging, rather than a place of alienation.

Sexes can be understood in development much more holistically, and all sexes become conceptually clear when being aware of origins. Human sexuality is recognized as having tremendous variation in regard to presence or level of desire, forms of attraction, and orientations. Genders are expansive, and can be perceived together, rather than in opposition. Traditionally gendered women with much body hair may learn that element of self as normative, and not “manly.” Traditionally gendered males may learn that breast development does not make them a “freak,” but is actually experienced by a large majority of males. Such an examination of body development, and body image issues and struggles related to pubertal development can then, for example, be examined as forms of gender dysmorphia and dysphoria similar in origin for all genders, and perhaps similar even in kind but diverse in degree. Dominant sexes, genders, and sexualities are understood from the same frame as intersex, trans individuals, and people of varying sexualities. Such equal footing allows for new views and voices to meet at the center. This framework also welcomes fuller intersectional understanding, and opens welcome spaces for discussions of similarities and variations in relation to dominant gender, sex, and sexuality norms and ethnicity and race(ism), diverse dis/abilities, classes, and so on. Who knows what insights are to come. Wherever the thinking will go, there is opportunity for fuller understanding from a core starting point, from which all can grow together, even in different directions.

Conclusion: moving forward

Pubertal growth and development has been marked by deep psychological pain and struggle for all sexes, genders, and sexualities. It is proposed that these struggles are not just naturally occurring responses to bodily changes, nor only evoked by culturally imposed expectations represented in

dominant forms of popular media or social norms, but are also grounded in the very lessons taught to young people through academic, medical, and psychological educational sources. It is therefore further proposed that it is the responsibility of these educational sources to provide accurate information that allows for knowledgeable and affirming experience of development. The model shared does so through the primary lenses of gender, sex, and sexuality, grounded through emphases on similarity and variation. In addition, in order for the Model of Expansive Pubertal Understanding to be truly expansive, thoughtful approaches to language, visual imagery, and intersections of experiences should guide and frame these lessons.

Words and pictures matter. As we assist youth in understanding their experiences of growth and development, we must share these lessons through thoughtful and accurate information via considered and concise language and visual representation. One of the first steps in thought is the language we learn to think with, and the images we use to represent and understand concepts. Language such as “opposite sexes,” or “female hormones” may be laid to rest and replaced with more accurate verbiage. “Disorders of Sexual Development” may be replaced perhaps by “Diversity in Sexual Development.” In addition, creative language to emphasize uniqueness rather than anomaly can be helpful. For example, using the term “distinctive” or “unique” genitals rather than “ambiguous” or “anomalous” can share the same information without contributing to (or creating) stigma.

Similarly, visual imagery may be drawn afresh to share diverse representations of the pubertal body, and transformations from the body of a child to the body of an adult. New diagrams can be more inclusive and showing much fuller variation: with diverse bodies by size, shape, dis/ability, ethnicity and race, alongside actual accurate and diverse representations of sexes and characteristics such as body hair, breast shapes, phalluses of many types, and so on. It is a profound opportunity to show true diversity in imagery, and to discuss full diversity in the psychological experiences of pubertal transformations. It is a reorganization of the mind through words and pictures, allowing and preparing the ability to cognize, and even be capable of perceiving, variation; To know that these variations are part of the norm, and that the struggles with variations are a socially created struggle in which all are a part.

Lastly, for the model to be truly expansive, it is proposed that an intersectional approach be taken in relation not only to sex, gender, sexuality and pubertal growth, but how they are intertwined with race/ethnicity, socioeconomic status, dis/ability, and other forms of status and power. Intersectional analyses further empower when moving beyond mere inclusion of diverse identity categories, but also integrate, examine, and give

voice to the complex relationships to the norms, statuses, and power structures that we experience, inhabit, and embody in relation to those identities (Fine et al., 2021; Mareck, 2016).

Experiences of, and responses to, puberty vary by culture, ethnicity, dis/abilities, and status. One cannot disconnect pubertal development from, for example, racism and other forms of discrimination (Seaton & Carter, 2019; White et al., 2012). Similarly, when discussing gender norms as framing notions of normative sex development, White-typed ideals of what constitutes a normative masculine or feminine body would need to be part of the discussion (e.g., skin color, hair texture, and other phenotypes) (Poran, 2006). Discussions within the frame of this model can pursue a variety of intersectional trajectories, so that the similarities and variations of pubertal development may be examined and understood through diverse lenses. Doing so will allow the conversation to continue and provide a fuller and more empowering space for youth to name, to know, to declare their growth experiences, and engage positively with their fuller more holistic selves, and with each other.

While the present model has been generated primarily from work and teaching at the college level, the model can (and should) be implemented in younger grades. An obstacle for teaching at the higher levels, such as later high school and early undergraduate courses, is that years of misinformation must be undone before the more accurate and expansive model can be taught. In addition, of course, most traditional college age students have already gone through pubertal growth and development, and have personally struggled with what such misinformation has wrought. Ultimately, youth would benefit from a developmentally appropriate tiered model, in which the foundations of early learning can be accurate and grounding, creating a clear path into later teachings and understanding of diverse personal experiences.

A general view of a tiered age-graded model could be approached as follows: First, in the early primary school age, children can be grounded in three basic yet essential foundational pieces of information: (1) sex and gender are not the same, (2) sex is not binary (there are more than two), and (3) sexes are not opposites, but share similarities. This basic and simple factual information can then be built upon in the first lessons on puberty, often introduced in schools in the 4th–5th grade. Teachings on puberty can revisit and restate these basics, which provide a foundational framework through which to learn about normative and similar bodily changes (such as body hair growth, breast development, and so on), as well as areas of greater distinctions (spermatogenesis, menarche, and so on). These teachings can also emphasize that genetically there is significant and natural human diversity with regard to how and when secondary sex characteristics

develop. Such a presentation allows youth to conceptualize greater complexities, and learn the fact that sex is not a “yes or no” question, or a simple “check of the box,” but rather is comprised of many components (chromosomal, anatomical, hormonal, and so on).

In an ideal world, classes would be gender and sex blended, but even if they presently remain segregated, one can still impart this information. Clearly high school and college lessons will be able to examine and present this model in greater detail. Importantly, by the time a student would reach the more complex lessons, as well as deeper conversations on gender and sexuality, the tiered approach has laid the groundwork so that they do not have to first unlearn an inaccurate binary model in order to progress in a more expansive direction. There are wonderful starting points for such inclusive curricula, such as New Jersey’s mandate for inclusive sex education (SIECUS), the Real and Healthy Youth Act legislation (2021), and the recently revised national standards for sexuality education that includes attention to sex, gender, and sexuality (National Sex Education Standards, 2020) and it is hoped that the current wave of progress will continue and open further opportunities for such educational opportunities.

In conclusion, it is overdue time for a re-creation of the approaches to teaching, and learning, puberty. Longstanding models have rested upon the misapprehension of gender norms as signifying sex, and sex as an opposing binary foundation. Lessons on pubertal development “other” every sex, gender, and sexual orientation in their experiences of developmental transformation, casting normative growth and development into the realms of oddity. The reorganizations outlined in the proposed model allow puberty to be taught through more accurate and inclusive physiological information, through emphases on similarity and variation, in a way that is also positive and affirming.

It is a small set of steps, to share accurate information on biological development, which can radically alter not just the teaching of, but the individual psychological experiences often associated with, the fascinating and gut-wrenching processes of growth and development: To go beyond post hoc “inclusion” and to instead normalize all bodies, identities, sexualities, and struggles *from the start*. Teaching the expansive and connected range of normality can eventually supplant, rather than support, the very cultural pressures that have thus far made them so obscure. What a gift that would be, for everyone.

Acknowledgment

Deepest gratitude to Dr. Avy Skolnik for extensive and exceptional feedback and genuinely enthusiastic support of this work, special appreciation to Dr. Michelle Fine for support and encouragement, and much thanks to student Juheui Lee for her assistance.

Funding

The author(s) reported there is no funding associated with the work featured in this article.

References

- APA. (2020). *Answers to your questions about individuals with intersex conditions*. <https://www.apa.org/topics/lgbqt/intersex.pdf>.
- APA. (2021, February). *Resolution on gender identity change efforts*. <https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf>.
- Blum, R. W., Boyden, J., Erulkar, A., Kabiru, C., & Wilopo, S. (2019). Achieving gender equality requires placing adolescents at the center. *Journal of Adolescent Health, 64*(6), 691–693. [https://www.jahonline.org/article/S1054-139X\(19\)30110-7/fulltext](https://www.jahonline.org/article/S1054-139X(19)30110-7/fulltext).
- Butler, J. (1990). *Gender trouble: Feminism and subversion of identity*. Routledge.
- Carlson, J. D., & Crawford, J. K. (2005). Adolescent boys and body image: Weight and muscularity concerns as dual pathways to body dissatisfaction. *Journal of Youth and Adolescence, 34*, 629–636.
- D’augelli, A. R. (2002). Mental health problems among lesbian, gay, and bisexual youths ages 14–21. *Clinical Child Psychology and Psychiatry, 7*(3), 433–456. <https://doi.org/10.1177/1359104502007003010>
- Deardorff, J., Hoyt, L. T., Carter, R., & Shirtcliff, E. A. (2019). Next steps in puberty research: Broadening the lens toward understudied populations. *Journal of Research on Adolescence, 29*(1), 133–154. <https://doi.org/10.1111/jora.12402>
- Dolgin, K. G. (2018). *The adolescent: Development, relationships, and culture* (14th ed.). Pearson.
- Dowshen, S. (2015). *Kidhealth: All about puberty*. <https://kidshealth.org/en/kids/puberty.htmInl>.
- Eagly, A. H., Nater, C., Miller, D. I., Kaufmann, M., & Sczesny, S. (2019, July 18). Genderstereotypes have changed: A cross-temporal meta-analysis of U.S. public opinion polls from 1946 to 2018. *American Psychologist, 75*(3), 301–315. <https://doi.org/10.1037/amp0000494>.
- Fahs, B. (2014). Perilous patches and pitstaches: Imagined versus lived experiences of women’s body hair growth. *Psychology of Women Quarterly, 38*(2), 167–180. <https://doi.org/10.1177/0361684313497924>
- Fausto-Sterling, A. (2000). *Sexing the body: Gender politics and the construction of sexuality*. Basic Books.
- Fausto-Sterling, A. (2013, July 31). The five sexes, revisited. *The Sciences*. <https://doi.org/10.1002/j.2326-1951.2000.tb03504.x>.
- Fine, M., Torre, M. E., Oswald, A. G., & Avory, S. (2021). Critical participatory action research: Methods and praxis for intersectional knowledge production. *Journal of Counseling Psychology, 68*(3), 344–356. <https://doi.org/10.1037/cou0000445>
- Gitari, E. M., & Walters, M. (2020, March). *Hate crimes against the LGBT community in the commonwealth: A situational analysis*. Equality justice alliance, human dignity trust. https://www.humandignitytrust.org/wp-content/uploads/resources/2020_Hate_Crimes-against-the-LGBT-Community-in-the-Commonwealth_A-Situational_Analysis.pdf.
- GLAAD (2021). Where we are on TV report 2021-2022. GLAAD Media Institute. <https://www.glaad.org/sites/default/files/GLAAD%20202122%20WWATV.pdf>.
- Human Rights Campaign. (2020). *An epidemic of violence: Fatal violence against transgender and gender non-conforming people in the U.S. in 2020*. <https://hrc-prod-requests>.

- s3-us west-2.amazonaws.com/FatalViolence-2020Report Final.pdf?mtime=20201119101455&focal=none.
- Institute of Medicine (US) Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Gaps and Opportunities. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*. National Academies Press.
- Jones, T. (2018). *Intersex studies: A systematic review of international health literature*. Sage Open, 1–22.
- Kågesten, A., Gibbs, S., Blum, R. W., Moreau, C., Chandra-Mouli, V., Herbert, A., & Amin, A. (2016). Understanding factors that shape gender attitudes in early adolescence globally: A mixed-methods systematic review. *PLOS One*, 11(6), e0157805. <https://doi.org/10.1371/journal.pone.0157805>
- Kosciw, J. F., Greytak, E. A., Palmer, N. A., & Boesen, M. J. (2014). *The 2013 National School Climate Survey: The experiences of lesbian, gay, bisexual, and transgender youth in our nations schools*. GLSEN.
- Lee, P. A., & Houk, C. P. (2008). Disorders of sexual differentiation in the adolescent. *Annals of the New York Academy of Sciences*, 1137, 67–75.
- Lemaine, V., Cayci, C., Simmons, P. S., & Petty, P. (2013). Gynecomastia in adolescent males. *Seminars in Plastic Surgery*, 27(1), 56–61. <https://doi.org/10.1055/s-0033-1347166>
- Mareck, J. (2016). Invited reflection: Intersectionality theory and feminist psychology. *Psychology of Women Quarterly*, 40(2), 177–181.
- Marceau, K., Ram, N., Houts, R. M., Grimm, K. J., & Susman, E. J. (2011). Individual differences in boys' and girls' timing and tempo of puberty: Modeling development with nonlinear growth models. *Developmental Psychology*, 45(5), 1389–1409. <https://doi.org/10.1037/a0023838>
- Martinerie, L., Condat, A., Bargiacchi, A., Bremont-Weill, C., C de Vries, M., & Hannema, S. E. (2018, Nov). Approach to the management of children and adolescents with gender dysphoria. *European Journal of Endocrinology*, 179(5), R219–R237. <https://doi.org/10.1530/EJE-18-0227>.
- Mirabella, M., Giovanardi, G., Fortunato, A., Senofonte, G., Lombardo, F., Lingiardi, V., & Speranza, A. M. (2020). The body I live in. Perceptions and meanings of body dissatisfaction in young transgender adults: A qualitative study. *Journal of Clinical Medicine*, 9(11), 3733. <https://doi.org/10.3390/jcm9113733>.
- National Academies of Sciences, Engineering, and Medicine. (2020). *Understanding the status and well-being of sexual and gender-diverse populations*. <https://www.nationalacademies.org/our-work/understanding-the-status-and-well-being-of-sexual-and-gender-diverse-populations>.
- National Sex Education Standards. (2020). Core content and skills, k-12 (2nd ed.). <https://siecus.org/wp-content/uploads/2020/03/NSES-2020-web-updated-1.pdf>.
- Preves, S. E. (2016). Unruly bodies: Intersex variations of sex development. In N. C. Fischer, & S. Seidman (Eds.), *New sexuality studies* (3rd ed., pp. 115–123). Routledge.
- Poran, M. A. (2006). The politics of protection: Body image, social pressures, and the misrepresentation of young Black women. *Sex Roles*, 55(11–12), 739–755. <https://doi.org/10.1007/s11199-006-9129-5>
- Posch, M. (2019, February 11). *My experience of puberty as an intersex person*. LGBT + Voices. <https://hellocue.com/articles/culture/what-puberty-is-like-as-an-intersex-person>.
- Pulice-Farrow, L., Cusack, C. E., & Galupo, M. P. (2020). Certain parts of my body don't belong to me": Trans individuals' descriptions of body-specific gender dysphoria.

- Sexuality Research and Social Policy*, 17(4), 654–667. <https://doi.org/10.1007/s13178-019-00423-y>
- Real education and access for healthy youth act legislation. (2021). <https://www.congress.gov/bill/117th-congress/house-bill/3312>
- Rew, L., Young, C. C., Monge, M., & Bogucka, R. (2021). Review: Puberty blockers for transgender and gender diverse youth—a critical review of the literature. *Child and Adolescent Mental Health*, 26(1), 3–14. <https://doi.org/10.1111/camh.12437>
- Ricciardelli, L. A., & McCabe, M. P. (2004). A biopsychosocial model of disordered eating and the pursuit of muscularity in adolescent boys. *Psychological Bulletin*, 130(2), 179–205.
- Rich, A. (1980). Compulsory heterosexuality and Lesbian existence. *Signs*, 5(4), 631–660. <https://www.jstor.org/stable/3173834>.
- Ryan, J. R. (2016). From transgender to trans*: The ongoing struggle for the inclusion acceptance and celebration of identity beyond the binary. In N. C. Fischer & S. Seidman (Eds.), *New sexuality studies* (3rd ed., pp. 124–135). Routledge.
- Santrock, J. W. (2019). *Adolescence* (17th ed.). McGraw Hill.
- Seaton, E. K., & Carter, R. (2019). Perceptions of pubertal timing and discrimination among African American and Caribbean Black girls. *Child Development*, 90(2), 480–488. <https://doi.org/10.1111/cdev.13221>
- SIECUS (2021) SIECUS NJ state profile in sex education. https://siecus.org/state_profile/new-jersey-fy21-state-profile/
- Steinberg, L. (2020). *Adolescence* (12th ed.). McGraw Hill.
- Suisman, J. L., Thompson, J. K., Keel, P. K., Burt, S. A., Neale, M., Boker, S., Sisk, C., & Klump, K. L. (2014). Genetic and environmental influences on thin-ideal internalization across puberty and preadolescent, adolescent, and young adult development. *International Journal of Eating Disorders*, 47(7), 773–783. <https://doi.org/10.1002/eat.22321>
- Tiggeman, M., & Lewis, C. (2004). Attitudes toward women's body hair: Relationship with disgust sensitivity. *Psychology of Women Quarterly*, 28(4), 381–387. <https://doi.org/10.1111/j.1471-6402.2004.00155.x>
- Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal suppression for Transgender youth and risk of suicidal ideation. *Pediatrics*, 145(2), e20191725. <https://doi.org/10.1542/peds.2019-1725>
- van de Grift, T. C., Kreukels, B. P. C., Elfering, L., Ozer, M., Bouman, M., Buncamper, M. E., Smit, J. M., & Mullender, M. G. (2016). Body image in Transmen: Multidimensional measurement and the effects of mastectomy. *The Journal of Sexual Medicine*, 13(11), 1778–1786. <https://doi.org/10.1016/j.jsxm.2016.09.003>
- White, R. M., Deardorff, J., & Gonzales, N. A. (2012). Contextual amplification or attenuation of pubertal timing effects on depressive symptoms among Mexican American girls. *Journal of Adolescent Health*, 50(6), 565–571. <https://doi.org/10.1016/j.jadohealth.2011.10.00>