

Chapter 19

Asexuality: When Sexual Attraction Is Lacking



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Abstract In the past decade, human asexuality has garnered much attention and emerged as an empirically documented sexual orientation. Asexuality is generally defined as an absence of sexual attraction and approximately 1% of the general population report not feeling sexually attracted anyone. In this chapter, we examine the evolving definition of asexuality and diversification of individuals who identify as asexual. We provide an overview of gender differences and review the extant literature on human asexuality, which has mainly focused on exploring how to best conceptualize asexuality. Various theories have been proposed to classify asexuality as a mental disorder, a sexual dysfunction, or a paraphilia. However, we challenge these speculations and pose that asexuality may best be thought of as a sexual orientation as it is likely a normal variation in the experience of human sexuality. We discuss factors that make the study of asexuality challenging and propose possible solutions for researchers to consider. Future research into asexuality is necessary and might inform our understanding of sexuality in general. Researchers need to examine and understand the biological correlates of asexuality and directly test asexuality as a sexual orientation.

Keywords Asexuality · Sexual attraction · Sexual desire · Sexual orientation · Romantic attraction

In recent years, interest in human asexuality has increased among lay individuals, popular culture, and researchers alike. Prior to 2004, asexuality was a term that was

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mainly used to describe the reproductive patterns of many single-celled organisms. Since then, academic attention on the topic of human asexuality has burgeoned. The development of the largest international online community of asexual individuals, known as the “Asexuality and Visibility Education Network” (AVEN), in conjunction with the publication of a large, population-based study ignited interest in the construct of asexuality from theoretical, academic, clinical, and feminist perspectives. Despite the upsurge of interest in the topic, which has led to a flurry of empirical research, much remains unknown about factors contributing to the development of asexuality and how to best classify this phenomenon or people who identify as asexual.

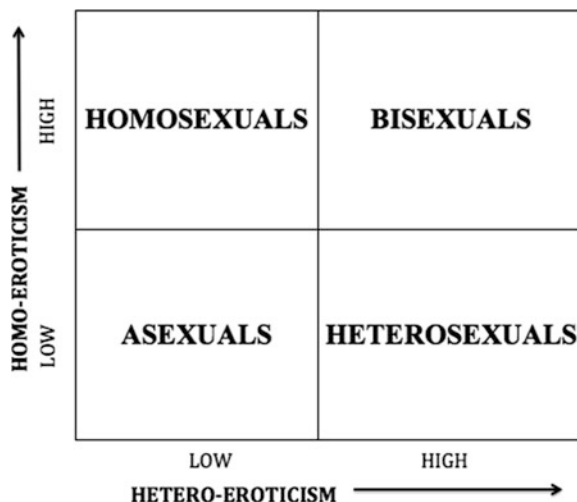
In this chapter, we start by providing an overview of the most commonly used definitions of asexuality and we review literature that has sought to conceptualize asexuality and characterize those who identify as asexual across a variety of online and face-to-face studies. Where possible, we speculate on the developmental issues that may pertain to different facets of what is known about asexual persons. We conclude this chapter by discussing the implications of conceptualizing asexuality as a sexual orientation and suggest a number of future research directions necessary to advance the science of understanding asexuality. Among those directions is a grave need to explore and understand the developmental pathways that lead to a lack of sexual attraction and pave the way for an asexual identity.

19.1 What Is Asexuality?

19.1.1 Definition

Asexuality was first reported in 1948 by Alfred Kinsey and colleagues when they recognized the existence of asexual (or nonsexual) people and included a category “X”—defined as having no socio-sexual contacts or reactions—to the Kinsey one-dimensional model of sexual orientation. In 1980, Storms described asexuality using a two-dimensional model of erotic orientation and his definition focused on the absence of sexual orientation. According to Storms’s model (see Fig. 19.1), asexuality is characterized by low homoeroticism and low heteroeroticism; thus, asexual individuals lack a basic attraction towards others (Storms, 1980). Because of its emphasis on sexual attraction/eroticism over behavior, along with its ability to accommodate asexuals when two dimensions are utilized, Storms’s model has been argued to be an advance over Kinsey’s traditional, one-dimensional model. It is important to note that a lack of sexual attraction does not necessarily imply a lack of sexual experience, as there is evidence that some asexuals engage in sexual intercourse and many masturbate (Brotto et al., 2010; Yule et al., 2017). Others, however, have employed differing definitions that have either focused on behavior and characterized asexuals as individuals who engage in few or no sexual behaviors (Rothblum & Brehony, 1993), or used a model of sexual excitation and inhibition

Fig. 19.1 Storms model of sexual orientation



and characterized asexuals along these two dimensions as having low levels of sexual excitement (Prause & Graham, 2007).

Although a variety of definitions are proposed, asexuality is defined by AVEN as “a person who does not experience sexual attraction” (AVEN, 2018). Nevertheless, as awareness about asexuality has grown, the definition of asexuality on AVEN has evolved over time and there is increasing recognition that there may be variations such that each asexual individual experiences relationships, attraction, and arousal somewhat differently. This recognition has brought forth new terminologies. For instance, “gray-asexual” (or gray-A) refers to an individual who may experience sexual attraction in isolated instances, or only under specific circumstances; whereas, “demisexual” refers to an individual who can only experience sexual attraction or desire after an emotional bond has been formed (AVEN, 2018). The term asexual umbrella, or “Ace,” is used broadly to include asexuality and identities similar to asexuality (i.e., demisexuality or gray-A) that are affiliated within a broader community. “Ace” is the asexual parallel to “queer” used among sexual minority classifications. Researchers have generally used the term “asexual person” to refer more narrowly to the individual who identifies with a lack of sexual attraction. For the purposes of this review, we will adopt the most commonly used definition—that of lack of sexual attraction—however, we acknowledge that this definition is not universally accepted, nor employed in the entire body of research that follows.

19.1.2 Prevalence

The lack of a universally agreed upon definition of asexuality poses a challenge to research seeking to establish its prevalence. The most widely cited prevalence estimate of asexuality originates from a large, national probability study of

$n = 18,681$ individuals in the United Kingdom, indicating that approximately 1% of the population reported never feeling sexually attracted to anyone (Bogaert, 2004). When Bogaert repeated this analysis in the second wave of the British national probability study, the prevalence of asexuality was found to be 0.5% (Bogaert, 2013). In a different sample using data from high school students in New Zealand, 1.8% reported a lack of sexual attraction (Lucassen et al., 2011). A more recent study found 3.3% of women and 1.5% of men from a Finnish population had not experienced sexual attraction within the past year (Höglund et al., 2014). Because the latter two studies are limited in the age range of participants and in the time span of interest, respectively, 1% appears to be a reasonable estimate of the prevalence rate of asexuality.

Difficulty determining a precise prevalence rate is potentiated not only by the evolving definition of asexuality and diversification of individuals who identify as Ace, but also by sampling and recruitment complexities. As of December 2015, there were approximately 120,000 registered members on AVEN from around the world, and AVEN has been a central source for recruiting asexuals to research. While there are many advantages to having such a platform with a large number of individuals who fall under the asexual spectrum, using self-identified asexuals recruited from AVEN alone for research that is aimed at better understanding asexuality draws from a very select segment of the asexual population (i.e., those who have already adopted the asexual label), and inadvertently ignores the experiences of those who have yet to identify with the asexual label. Nevertheless, recruiting asexual participants can be challenging for reasons such as: a lack of motivation and interest for asexual individuals to participate in sexuality-based research, asexual individuals wanting to keep their identities secret due to perceived societal disapproval, and individuals not self-identifying as asexual either because they are not familiar with the concept or they use a different label.

A 2010 study based on a sample recruited from AVEN found that a sizeable proportion of the sample indicated “other” instead of “asexual” when presented with a forced-choice question about their sexual orientation (Brotto et al., 2010). Of those who self-identified as asexual, 73% had never engaged in sexual intercourse and the other 27% maintained that they lacked sexual attractions despite engaging in sexual intercourse (Brotto et al., 2010). Interestingly, the majority of asexual men and women (80% and 73%, respectively) reported engaging in masturbation and there was a strong sentiment that “sex with oneself” can exist without sexual attraction, and is therefore different from sex with another individual (Brotto et al., 2010). Taken together, the above estimates further elucidate the degree of variability in identification and behavior among this population, which can consequently impact prevalence rates more generally. Chasin (2011) cautions us from taking existing prevalence figures as conclusive given that most of the research has been based on providing respondents with a fixed definition of asexuality. Chasin argues that research must allow for the self-identification as asexual, which may or may not map nicely onto those who endorse “yes” to a categorical option of asexuality on a questionnaire. Nonetheless, as indicated by Hinderliter (2013), the definition of asexuality forwarded by AVEN is broad enough to be inclusive of people who

lack sexual attraction but who may still have other experiences that may be considered sexual, such as sexual behavior, masturbation, and nonsexual attractions.

19.1.3 *Gender Differences*

In Bogaert's (2004) analysis of the National Survey of Sexual Attitudes and Lifestyles-I ($n = 18,681$ respondents obtained from national probability sampling, aged 16–59), participants were asked about their gender and provided the binary options of male and female. A total of 70.8% of the asexual participants endorsed female versus 56.8% of the sexual participants. Bogaert speculated that women's tendency to have a more flexible sex drive, and men's higher likelihood of internalizing sex role stereotypes may be contributing to these findings. Bogaert also speculated that compared to men, women's less frequent conditioning experiences (e.g., masturbation frequency and awareness of sexual arousal), which are relevant to sexual orientation development, may result in women being more likely to identify as asexual.

Bogaert repeated these analyses 10 years later in the second wave of the National Survey of Sexual Attitudes and Lifestyles-II study (Bogaert, 2013), this time based on $n = 11,080$ individuals aged 16–44. This time, a gender difference (in male vs. female) did not emerge even though only 32% of the asexual sample identified as male. When the analyses were weighted due to the sampling method, the previously found gender difference, with women being more likely to be asexual than men, emerged. Prause and Graham (2007) examined a convenience sample recruited based on their self-identification as asexual (not on the basis of a fixed definition provided by the researchers) and did not find any gender differences in the prevalence of asexuality.

As demonstrated by the longitudinal and developmental research by Diamond (2012), a larger proportion of women, compared to men, exhibit fluidity in their sexual orientation. Although Diamond did not include the category of asexual in her research, future research should examine whether asexual persons identifying as female remain in that category over time or move to another sexual orientation category.

Anecdotal reports and online discussions on AVEN suggest that Ace persons reject sex and gender binaries at rates higher than the general population and, therefore, male-versus-female comparisons within asexuals might be viewed as an artificial endeavor. In the 2014 Asexual Community Census of $n = 10,880$ Ace survey participants, only 75% identified as “woman/female” or “man/male” (Ginoza et al., 2014). Another study of $n = 66$ asexual persons found that 27% identified as non-binary, gender-neutral, androgynous, or genderqueer (MacNeela & Murphy, 2015). Approximately 12% of 214 participants in yet another study declined to provide information on gender, suggesting that the options “male” or “female” did not fit for them (Brotto et al., 2010), and 20% of participants in a smaller study reported gender identities other than male or female (Gazzola & Morrison, 2012).

This finding that there may be a sizable proportion of asexual-identifying persons who reject the gender binary deserves further understanding. For some, it may be that they identify with genders other than male/female, and including: trans*, genderqueer, agender, two-spirit, or non-binary. Support for this stems from the AVEN Census Project (Ginoza et al., 2014) which found that 28% of respondents endorsed a current gender identity that did not align with their assigned sex at birth. However, only 11% of the total respondents identified as trans*, and an additional 8% reported that they were “unsure” whether they were trans or cis. Of those who identified as a non-binary gender, 31% self-classified as trans, 41% did not identify as trans, and 28% were unsure. Examining this relationship between transgender identity and asexuality from a different perspective, one study of transgender identified individuals found that 11% identified as asexual (Bockting et al., 2005). Only associations between these diverse gender categories and sexuality have been documented to date; no research exists on the causes of this overlap.

Given that research methodologies often provide fixed gender categories based on a binary norm, researchers likely have not adequately captured the diversity of gender identities/expressions among Ace-identified individuals. As a consequence, studies have been essentializing gender, reinscribing the gender binary, and excluding individuals who do not fall under traditional gender categories (Lorber, 1996), including in some cases significant proportions of participants who identify as asexual but who do not identify as male or female (Chasin, 2011). Future research on asexuality should ask about both current and birth-assigned gender over two questions (Tate et al., 2013). Instead of focusing research on comparisons of male versus female asexuals, and in the spirit of not contributing to the rampant problem of missing data, researchers should seek to provide inclusive category options, including an option for free response, in asexuality research. Moreover, almost nothing is known about the possible developmental trajectories that give rise to a higher proportion of asexuals who identify as women over men (if, indeed, this gender difference is true), and to the sizable proportion of asexual persons who identify as trans (if, indeed, this higher proportion relative to the sexually identifying population is true).

19.1.4 Sexual Activity and Asexuality

As introduced earlier, a lack of sexual attraction is not synonymous with a lack of sexual activity, and there is considerable evidence that asexual individuals engage in both partnered and solitary sexual activity (Brotto et al., 2010; Yule et al., 2014). Indeed, asexual individuals described feeling like they “could not relate” to friends during discussions about sexual activity in adolescence (Brotto et al., 2010). Among romantically identifying asexuals, some do engage in sexual activity, but most of their relationships do not include sex (Brotto et al., 2010). Over 85% of asexuals in the study by Brotto et al. (2010) indicated that their ideal intercourse frequency was less than twice per year, and over 75% had never engaged in kissing or petting. In

contrast to asexuals, sexually identifying individuals who meet criteria for a sexual desire disorder, like *hypoactive sexual desire disorder* (American Psychiatric Association [APA], 2000), continue to engage in sexual activity despite their distressing low desire (Brotto et al., 2015). The motivations behind sexual activity may have nothing to do with sexual attraction, and may relate to being in a romantic relationship with a sexually identifying partner (Van Houdenhove et al., 2015). Moreover, there may be developmental pressures among younger asexual persons to engage in culturally-sanctioned sexual activity as a “rite of passage” into adulthood, even in spite of their lack of attraction to or wanting of such sexual activity.

19.1.5 Romantic Attractions

Brotto et al. (2010) found that asexual participants described their relationship orientations as either hetero-romantic, homo-romantic, a-romantic, or bi-romantic, and this finding raised the possibility that the development of sexual and romantic attractions may be independent processes. Asexuals who experience romantic desire are generally termed “romantic asexuals” and include a variety of romantic orientations (e.g., heteroromantic, panromantic), reflecting the gender of the person to whom they experience romantic attraction. By contrast, those who do not experience romantic attraction self-identify as “aromantic asexuals.” AVEN’s 2014 census found that 22% of asexuals identify as heteroromantic, 5.1% homoromantic, 32.2% bi- or panromantic, 19% aromantic, and 21.7% selected other options (Ginoza et al., 2014). A recent study conducted in China found a similarly broad distribution with 31.7% of asexuals identifying as heteroromantic, 14.1% homoromantic, 26.0% biromantic, and 28.2% aromantic (Zheng & Su, 2018). The finding that sexual attraction is distinct from romantic attraction among asexuals is in line with Diamond’s (2003) theory of romantic attraction, which posits that the genderedness of attraction stems purely from sexual orientation while romantic attraction only appears gendered as romantic bond formation is facilitated by sexual desire and encounters.

Within her theory, Diamond (2003) concludes that there are independent underlying processes that lead to the development of sexual desire and affectional bonding. There is evidence for different underlying systems giving rise to sexual desire (the sexual mating system) and romantic love (attachment or pair-bonding system), and there are countless examples in the human as well as nonhuman animal literature of pair bonding in the absence of mating (and presuming sexual desire and attractions). From here, Diamond posits that individuals are capable of loving someone they are not sexually attracted to, and provides the example of a heterosexually identifying person who is able to fall in love with a same-gender partner, and a lesbian or gay identifying person who is able to fall in love with an opposite-gender partner. Though Diamond does not mention whether this theory would extend to an asexually identifying person falling in love, the existence of

independent sexual and romantic identity development suggests that this possibility is entirely feasible.

Only three studies have explored the prevalence of romantic versus aromantic attractions among asexual persons, and none of those have sought to compare the distinguishing features between the romantically inclined versus aromantic asexuals. In a recent analysis across seven asexuality studies (Brotto et al., 2020), 26.6% of $n = 1229$ asexual participants identified as aromantic and the remaining identified with a romantic orientation. They found no differences between the romantic and aromantic asexuals in gender identification, levels of solitary sexual desire, or on measures of depression. However, romantic asexuals were 6.4 times more likely to report being in a relationship than the aromantic asexuals, and to have significantly more past romantic and sexual partners. Romantic asexuals kissed significantly more often than aromantic asexuals when controlling for demographic variables but there were no group differences on frequency of sexual fantasies, or in the frequency of masturbation (Brotto et al., 2020).

Chasin (2011) emphasizes the importance of paying attention to the sexual attraction versus romantic attraction dimensions of asexuals and notes that people may identify not only by the gender of the person to whom they are attracted, but also the degree to which they experience this attraction and the ways in which they do. Chasin goes on to urge the field to consider sexual and romantic attractions separately in broader approaches to measuring sexual orientation.

19.2 Overview of Alternative Explanations

Given that asexuality challenges the ubiquitous notion that sexuality is a universal human experience, early reactions to this surge in attention to and the existence of asexuality ranged from curious to highly skeptical. Opinions of some sex therapists insinuated that asexuality was nothing more than an extreme version of a sexual desire disorder (Asexuality on 20/20, 2006). Public media figures teased asexual spokespeople that they must want to have sex when they see an attractive person walk by (e.g., Carlson, 2006; Williams, 2007). These criticisms have generally fallen into three broad themes: (i) asexuality is a manifestation of underlying psychopathology (Johnson, 1977); (ii) asexuality represents an extreme variant of sexual desire disorder (Childs, 2009; Pagan-Westfall, 2004); and (iii) asexuality is a variant on the spectrum of paraphilia (Bogaert, 2006). In this section, we review the relevant data that support or refute each of these hypotheses.

19.2.1 *Asexuality as a Mental Disorder*

Although there is evidence that certain mental health issues, such as anxiety and interpersonal problems, are elevated among asexual individuals, the association

between asexuality and psychological symptoms is ambiguous because the causes of such elevated rates are unclear and debated. A large quantitative study found that self-identified asexuals had the same rates of depression as population norms (Brotto et al., 2010), but were more likely to endorse symptoms of social withdrawal, anxiety, suicidality, and report more interpersonal difficulties compared to sexual participants (Yule et al., 2013). Social inhibition and withdrawal are elevated among asexuals, and Schizoid Personality Disorder, characterized by emotional coldness, limited capacity to express warm feelings towards others, and lacking desire for close, confiding relationships (APA, 2000), may be associated to asexuality (Brotto et al., 2010). An online study exploring mental health correlates and interpersonal functioning found significant differences between asexual, nonheterosexual (bisexual and homosexual), and heterosexual men and women on multiple psychological symptoms (Yule et al., 2013). Compared to their nonheterosexual counterparts, asexual men scored higher on measures of somatization, depression, and psychoticism (Yule et al., 2013). Asexual women scored higher on measures of phobic anxiety and psychoticism than heterosexual women and had scores similar to nonheterosexual women (Yule et al., 2013). On items assessing suicidality, asexual men and women scored significantly higher than heterosexual individuals (Yule et al., 2013). This study further corroborates previous research with the finding that asexual men and women endorsed several interpersonal problem domains, including cold, socially avoidant, and non-assertive personality styles compared to their heterosexual counterparts (Yule et al., 2013). The latter association coupled with the fact that one-third of asexual individuals have never engaged in a relationship suggests atypical social functioning appears to be more widespread than just related to sexual relationships.

There is also some support for an association between autism spectrum disorder (ASD) and asexuality. In semi-structured, in-depth interviews, 7 out of 15 asexual individuals from AVEN discussed the potential relationship between Asperger Syndrome and asexuality, and felt that they personally met the criteria for Schizoid Personality Disorder (Brotto et al., 2010), which resembles ASD with respect to traits such as social withdrawal, and difficulty with social skills and relating to others. Additional evidence for this potential relationship is bolstered with higher rates of asexuality reported among autistic participants compared to community control groups. Ingudomnukul et al. (2007) found that 17% of women with ASD reported they were asexual compared to none of the women in the control group. Data presented by Gilmour et al. (2012) further shows that approximately 6% of autistic men and women reported having no sexual interest for anyone. As pointed out by Pecora et al. (2016), it may be that individuals on the autism spectrum show a more diverse range of sexual interests (homosexual, bisexual, and asexual) as well as having a higher representation of gender dysphoria than in the general population. There is ongoing research aimed at exploring whether and how asexuality and autism spectrum may be related to an underlying neurodevelopmental process, and in so doing, we need to pay attention to what such findings mean, if anything, to persons on the autism spectrum (Chasin, 2017).

Despite evidence for higher rates of psychopathology in asexual individuals, asexuality should not be classified as a mental disorder, nor conceptualized as a psychiatric condition. It has been suggested that at least some of the symptoms described above may be explained by the stigmatization and dehumanization experienced by asexual individuals (Scherrer, 2008). Membership in a sexually marginalized group and the associated experiences of prejudice and discrimination may account for the elevated rates of mental health issues found among asexuals. In fact, those who identify as asexual may experience more stigma than other nonheterosexual orientations because they experience a lack of sexual attraction in a society that is arguably dominated by sexuality—that all people experience sexual desire is one of the most pervasive assumptions of our society (Cole, 1993; Przybylo, 2011). For example, college students provided the most negative evaluations for asexual individuals compared to other sexual orientation groups and viewed asexuals as least likely to possess “human nature traits” (MacInnis & Hodson, 2012). Thus, the contention that asexuality may be an expression of a psychiatric illness is not supported and should not be used to pathologize asexual individuals and asexuality more broadly. Evidence for asexuality as a mental disorder is equivocal at best and additional research further elucidating this relationship is required.

19.2.2 Asexuality as a Sexual Dysfunction

Given that asexual persons report a lack of sexual attraction, and relatedly, a lack of sexual desire, often for the entire duration of their lives, there has been a reasonable speculation that asexuality represents an extreme end of the low desire continuum, thereby suggesting asexual individuals experience disorders such as Hypoactive Sexual Desire Disorder (HSDD) and Sexual Interest/Arousal Disorder (SIAD) included in the fourth and fifth editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; APA, 2000, 2013), respectively.

One key difference between asexuals and those with a sexual desire disorder is the experience of distress. A diagnosis of HSDD or SIAD requires the presence of clinically significant levels of distress, in addition to the symptom(s) of low sexual desire. On the other hand, asexuals maintain that they do not experience personal distress nor do they want to be “fixed” (Brotto et al., 2010; Pagan-Westfall, 2004). In a recent study, Brotto et al. (2015) used measures of sexual desire and behavior, distress, personality, and psychopathology to explore similarities and differences between an asexual group, which included individuals who scored above the cutoff on the *Asexuality Identification Scale* (AIS; Yule et al., 2015), and sexual groups, which contained a control group, a HSDD group, and a group with symptoms of low desire that were non-distressing. Not only did their findings indicate that those with HSDD had the highest levels of sex-related distress, but many of those with HSDD (93.2%) and those in the control group (96.4%) also reported that they wanted to engage in sexual intercourse and other sexual behaviors, while 83.9% of asexuals reported that they would prefer not to engage in sexual activities (Brotto et al., 2015).

This is not surprising given that those with a sexual desire disorder continue to experience sexual attraction for others, are distressed by their low desire, and often continue to engage in sex in spite of their low desire; asexual persons, however, do not have the same motivations to engage in sex. Interestingly, sexual desire and sexual distress were positively correlated for asexual men and women such that distress increased with increasing desire scores (Brotto et al., 2010). This paradoxical correlation suggests that the presence of desire is distressing for asexuals, whereas the lack of desire is distressing for those who have a sexual dysfunction. Compared to those with HSDD who had a higher frequency of seeking treatment for their sexual difficulty, asexual individuals unanimously rejected the option when asked whether they would accept an effective treatment for improving their sexual desire (Brotto et al., 2010).

Another notable difference is the duration of the low or absent desire between those with HSDD or SIAD and asexual persons. Although HSDD and SIAD are formally categorized as either lifelong (existing for the entirety of the person's sexual life) or acquired (a change from a somewhat higher to a somewhat lower or absent level of desire), most of the literature has focused on the acquired subtype of HSDD or SIAD. Similarly, in the clinical setting, most people seeking treatment for low or absent desire have experienced it in the past. On the other hand, there is evidence that asexual persons report a lifelong pattern to their absent sexual attractions.

Another lens through which to test the prediction that asexuality is a type of sexual dysfunction is to examine genital sexual arousal patterns. The devices researchers use to measure male and female genital arousal are a penile plethysmograph (Janssen, 2002) and a vaginal pulse amplitude (VPA; Laan et al., 1995), respectively. Penile plethysmography uses a mercury-in-rubber strain gauge to measure changes in the circumference of the penis as erection develops, and VPA provides a measure of vaginal vasocongestion specific to sexual response (Chivers et al., 2004). One study carried out with asexual women attempted to explore sexual arousal patterns by measuring genital sexual response as participants viewed sexually explicit erotic films (Brotto & Yule, 2017). The authors found no evidence of differences in genital sexual arousal response between the asexual and sexual groups of women (Brotto & Yule, 2017). Although there are no published data available on genital arousal patterns in asexual men, there is one completed study which found, consistent with predictions, that men in the study showed a pattern of genital arousal response that was concordant with their self-reported sexual preferences. In other words, heterosexual men showed the highest penile arousal response to erotic films depicting an opposite sex couple, and gay men showed the highest response to erotic films depicting two male actors. On the other hand, asexual men showed a reduced genital arousal response to all sexual stimuli, consistent with the predictions of target specificity (Chivers et al., 2004; Chivers et al., 2015), which suggest that men will show a genital arousal response consistent with their self-reported erotic preferences. Taken together, asexuality should be differentiated from a diagnosis of sexual desire disorder, and as such, the DSM-5 makes this distinction clear and explicitly requires that asexuality be ruled out when one is considering a diagnosis of HSDD or SIAD (APA, 2013).

Despite findings that clearly separate these two constructs, there appears to be a potentially large amount of overlap and the conflation between asexuality and sexual dysfunction is problematic because the asexual community's goal is, in part, for asexuality to be viewed as a normal variation on the spectrum of human sexuality (Hinderliter, 2013). The implications of this conflation are significant given the increase in focus on sexual pharmaceuticals, as well as diagnosing, treating, and curing low sexual desire. From a clinical standpoint, it is notable that level of engagement in sexual behaviors and age of first intercourse do not differentiate these groups (Brotto et al., 2015); thus, when classifying between asexuality and a sexual dysfunction, a clinician must assess a broad range of sex-related domains and not focus exclusively on the frequency of sexual behavior. The extent of the overlap between these groups requires more research and needs to be investigated further.

19.2.3 Asexuality as a Paraphilia

Another hypothesis places asexuality within the realm of paraphilias, which are defined as atypical or non-normative sexual attractions (APA, 2013). A paraphilia itself is not considered a disorder. According to the DSM-5, an individual's atypical sexual interests must cause significant personal distress or create distress for someone else in order to meet criteria for a paraphilic disorder (APA, 2013). Given that paraphilia without human interest is rare (but asexual individuals do not experience attraction towards others), and paraphilic tendencies more frequently occur in men (whereas asexuals are more common among women), how can asexuality be classified as a paraphilia?

Evidence that approximately 50% of asexuals masturbate monthly (Yule et al., 2014) suggests that asexual individuals might possess a non-partner-oriented sexual desire underlying their masturbatory behaviors, and that this may be understood to be a paraphilic sexual interest. An in-depth exploration of masturbation and contents of sexual fantasy among asexual and sexual individuals found that asexual women were significantly less likely to masturbate at least monthly than sexual women and asexual men (Yule et al., 2017). Asexual men and women were also significantly more likely to report that they had never had a sexual fantasy than their sexual counterparts (Yule et al., 2017). Of those who indicated having had a sexual fantasy, asexual men and women were more likely to report that their fantasies did not involve other people compared to sexual men and women (Yule et al., 2017). Notably, asexual women had higher rates of reporting never experiencing a sexual fantasy compared to asexual men, but they were also more likely to report having sexual fantasies involving fictional characters (Yule et al., 2017).

A type of paraphilia known as autochorissexualism was described by Bogaert (2012), and defined as a perceived "disconnect between an individual's sense of self and sexual object/target" or "identity-less sexuality." Those who experience autochorissexuality view their identity as being separate from sexual acts that they might engage in or fantasize about. Hence, that 33% of asexual women and 19% of

asexual men reported that their sexual fantasies do not depict images of themselves supports this overlap between asexuality and autochorissexualism (Yule et al., 2014). Asexuals are also more likely to report feeling disconnected and/or dissociated from the contents of their fantasies (Brotto & Yule, 2017).

It is notable to mention that asexual men and women were significantly less likely to report masturbating for sexual pleasure or fun than their sexual counterparts (Yule et al., 2017). Thus, masturbation is a physiological act unrelated to sexual pleasure for some asexual individuals who indicated their motivation for masturbation is more functional in nature, such as to relieve tension and “clean out the plumbing” (Brotto & Yule, 2017). Nevertheless, the presence of masturbation coupled with sexual fantasies, which characterizes at least a subgroup among asexuals, raises the possibility that there is a great deal of variability across asexual individuals in their motives for masturbation, with some potentially having a paraphilic component. Additional research is required to examine the existence, persistence, and pervasiveness of paraphilic fantasies with respect to asexuality.

19.2.4 How Is Asexuality Different from Celibacy?

Some religions view complete sexual abstinence as a virtue, preventing some religious individuals from developing a strong attraction to others and giving in to arousal. Although asexuals may find acceptance in certain religious communities that value restricted sexuality, religiosity is not necessarily a causal factor in the development of an asexual identity, and asexuality (defined by lack of attraction) is not synonymous with those who are chaste (waiting for marriage) or celibate (actively eschew sex). Studies have found strong associations between lifetime abstinence and religiosity (Eisenberg et al., 2009; Haydon et al., 2014). A study examining sexual inactivity in the general population found that sexlessness was more prevalent among those who were religiously observant compared to their sexually active counterparts (Kim et al., 2017). That the proportion of long-term sexlessness among those who had never been married was much higher (8.7% for men and 11.3% for women) than prevalence estimates reported for asexuality suggests that the avoidance of sexual activity has strong sociological dimensions beyond lack of sexual attraction towards others (Kim et al., 2017). Celibacy among these individuals is a religious choice supported by a unique set of religious community norms and expectations (as well as consequences). The sexual inactivity experienced by (some) asexual persons likely represents an innate characteristic stemming from a lack of sexual attraction (Brotto & Yule, 2017). Whereas asexual persons do not desire sex, a celibate identity implies the presence of sexual desire that is repressed and not acted on. As such, asexuality and sexual inactivity/inexperience are not one and the same and this provides further evidence of the complex relationship among sexual identity, sexual attraction, and sexual behavior, as previously mentioned in this chapter.

19.3 Challenges in Asexuality Research

It is generally agreed upon that asexuality is currently not a comprehensively understood entity and research on asexuals' experiences is nascent. Despite a generally accepted definition of asexuality as a lack of sexual attraction, much diversity exists and asexuals derive different meaning from being asexual. This leads to considerable nuance and variation in what it means to be a part of the asexual community and makes efforts by researchers who are attempting to achieve a more rigorous definition of asexuality more challenging. In this section, we will discuss factors that complicate the study of asexuality and propose possible solutions for researchers to consider.

19.3.1 *Developing a Validated Measure of Asexuality*

Much more attention to how we are measuring and classifying asexuality needs to be undertaken by researchers and, as noted by Hinderliter (2009), there are potentially serious limitations in using existing measures of sexual desire/attraction/function that were developed for and validated among sexually identifying individuals. Specifically, existing measures tend to assume that sexual attraction and desire are universal, and they tend to devalue low or absent sexual desire. Yule et al. (2015) sought to develop a validated measure of asexuality over a series of stages that included initial item development, factor analysis, and validity and reliability testing. The resulting *Asexuality Identification Scale (AIS)* is a 12-item brief self-report measure that captured 93% of asexuals by using a cutoff score of 40 out of 60, while 95% of non-asexuals scored below this cutoff. Although the development of this measure may get around the problem of self-identification and may allow for standardization across different studies of asexuality, unfortunately it is not routinely used in asexuality research. We recommend, therefore, that in addition to other methods of identifying asexuals—such as self-identification—researchers employ the AIS, which may contribute to additional data on how well this validated measure maps onto the diversity of self-identified labels expressed by asexual individuals. Moreover, how the AIS fits for romantically oriented versus aromantic asexuals is a future area of research that is needed.

19.3.2 *Capturing Sexual Orientation and Gender Identities*

That self-identified asexuals are a heterogeneous group with respect to sexual attractions and gender identities poses a challenge for researchers and encourages us to be mindful about the groups researchers are recruiting—whether they are recruiting a broad group of “Ace” persons, or a more specific subgroup of

demisexual, gray-A, or purely asexual individuals. Moreover, the growing recognition that a sizable number of asexuals identify as trans*, non-binary, or agender (AVEN, 2015) suggests that researchers need to be inclusive of these categories. It is important to recognize that some asexuals can experience sexual attraction to varying degrees. We encountered the fluidity of sexual attraction when we previously defined Gray-A and demisexual, yet there are still other terms that might be used within the asexual community to classify a person who experiences very little sexual attraction, such as “semi-sexual,” “asexual-ish,” and “hyposexual.” Thus, depending on the circumstance, individuals may not consider themselves strictly asexual. Across these categories, it is also important to bear in mind that asexual persons may or may not engage in a range of sexual activities and masturbation. Thus, researchers should seek to include measures of sexual activity, and yet not falsely assume that the presence of activities typically classified as sexual undermine one’s identification as asexual. The category coined “libidoist” has been used to describe asexuals who still have a libido for masturbation, yet beyond this description, little is known about asexuals who adopt that label.

As Chasin (2011) notes, it is not sufficient to compare sexual to asexual persons given the diversity of romantic and sexual orientations among asexual persons. Chasin goes on to recommend that asexuality be considered as a continuous variable, not a categorical one, and that conceptualizing asexuality as categorical may have significant implications; in this way, asexuality might be conceptualized as a meta-category, just as sexuality is. For instance, depending on the nature of the generalization being sought, categories of representation may include either two relevant sub-samples (e.g., asexuals who experience romantic attraction and those who do not) or four relevant sub-samples (e.g., asexuals who have engaged in sexual behaviors with men, with women, with both, with neither). Chasin (2011) recommends that asexuality research should always seek to include self-identified asexuals regardless of how closely they align with available definitions. We agree with Chasin and recommend that research should also seek to characterize demographic similarities/differences between the self-identified asexual and the potential asexual populations.

As introduced earlier, an increase in the diversity of gender expressions also brings challenges to this line of research. As terms such as agender (without gender) and non-binary (identities which are outside the gender binary) become increasingly used to describe gender identity, the question of gender differences in the prevalence of asexuality is more complicated than simply assessing men versus women, and should be taken into account.

19.3.3 Measuring Sex-Related Distress

Researchers need to carefully distinguish between lack of sexual attraction/desire with or without the presence of personal distress. As reviewed earlier, a sexual desire disorder hinges upon the presence of clinically significant personal distress, whereas

asexuals do not experience such distress. However, we also cannot rule out the possibility that at least some individuals who are diagnosed with a lifelong sexual desire disorder may be better classified as asexual or vice versa, but are incorrectly classified due to insufficient measurement steps in research. One potential solution to this is including a measure of sex-related distress such as the *Female Sexual Distress Scale-Revised* (DeRogatis et al., 2008), which has also recently been validated in men (Santos-Iglesias et al., 2018).

19.4 Where the Research on Asexuality Needs to Go

19.4.1 *Is Asexuality a Lifelong Pattern?*

Similar to the often-reported sense among many gays and lesbians of always “being different” from the heterosexual majority, a high percentage of asexual individuals reported that they have “always felt different” (Van Houdenhove et al., 2015). Brotto et al. (2015) compared 14 individuals with lifelong lack of distressing sexual desire to 193 asexual persons and found that the asexual group scored significantly higher on the validated measure of asexuality (AIS) and significantly lower on a measure of sexual distress. However, the two groups did not differ on measures of sexual behavior or desire. They concluded that these two groups share more overlap than do the individuals with more recent loss of low desire and the asexual participants, and they speculated that some individuals with lifelong low desire may in fact better fit within an asexual identity. This area of distinction versus overlap has clinical implications given that a person who may better fit within asexuality conceptualization may find themselves in a therapy room at the request of a distressed (sexual) partner. In such cases, the source of the distress (whether it belongs to an individual versus the couple) needs to be explored and clinicians need to be armed with the information to be able to differentiate these groups. Much more research is therefore needed on how lifelong low sexual desire may or may not be different from asexuality, and what developmental pathways may lead to the concurrent experience of distress (among those with a desire disorder) versus no distress (among those identifying as asexual).

19.4.2 *Understanding the Biological Correlates of Asexuality*

Several researchers have noted that asexuality is likely the result of early, potentially prenatal, influences. Initial evidence for this stems from the finding by Bogaert (2004, 2013) that asexual men and women have, on average, a shorter stature relative to sexual individuals, and asexual women have, on average, atypical menstrual characteristics compared to sexual women (Ingudomnukul et al., 2007). Furthermore, non-right-handedness in both men and women and the number of older

brothers in men has been found to be associated with asexuality (Yule et al., 2014). Handedness, in particular, having also been linked to other (nonheterosexual) sexual orientations (Lalumière et al., 2000), is a biological marker of prenatal development and is relevant to explanations of early biological determinants in asexual development. The number of older brothers may also point to prenatal influences on sexual orientation development, with an elevated number of older brothers being linked to homosexuality in men (Blanchard, 2018; Blanchard & Bogaert, 1996). This fraternal birth order effect is explained by the maternal immune hypothesis: A mother exposed to one or more male pregnancies develops an immune response against a male-specific protein relevant to fetal brain development, thereby affecting the sexual orientation of later-born sons (Blanchard & Bogaert, 1996; Bogaert et al., 2018). These correlates are suggestive of early biological influences on asexuality and provide indirect evidence for asexuality as a sexual orientation.

Given that asexuality shares essential characteristics of being a unique sexual orientation vis-à-vis other sexual orientation groups, more research is needed to further our understanding of correlates and features of asexuality. Research methods such as brain imaging and eye tracking should be (and are currently) employed given the growing evidence that these methods reveal key differences between sexual orientation groups that shed light on the biological basis of sexual orientation. More specifically, assessing visual attention and cognitive processing of sexually preferred and non-preferred cues among asexual persons and ascertaining neuroanatomic features of asexuals using neuroimaging will lead to further investigations into biological and neural correlates associated with a lack of sexual attraction and asexuality, and further our understanding of sexuality as a whole.

19.4.3 Further Research that Directly Tests Asexuality as a Sexual Orientation

Despite the position of Brotto and Yule (2017) that there is compelling and converging evidence for asexuality as a unique sexual orientation, Scherrer and Pfeffer (2017) state that asexuality is best understood as an identity and a community, rather than as a sexual orientation. Identity, defined as “the way that people understand themselves and the language they use to explain themselves to others” (Scherrer & Pfeffer, 2017, p. 645) provides individuals with both a social and internal place from which to understand themselves. Community allows the broader understanding of this identity in the context of relationships and social interactions. They go on to state that conceptualizing asexuality as an identity and a community will allow us (non-asexuals) to avoid pathologizing a lack of sexual attraction, and to extend and explore further our understanding of sexuality and gender on a wider scale (Scherrer & Pfeffer, 2017).

In support of this, Scherrer (2010) posits that asexuality challenges and extends our understanding of the relationships of sexual persons. In examining qualitative

data from 102 self-identified asexuals, Scherrer (2010) challenged problematic assumptions about sex and sexuality in relationships among sexual minorities. Their analysis revealed a wide range of definitions of “relationship” and underscored the conflation of sex and intimacy. Traditionally, sex is used to delineate romantic relationships from friendships, and asexuality blurs this boundary. When understanding asexuality as an identity that is used to navigate relationships, we understand that there are a wide range of possible relationships, aside from the binary options of “in a relationship” or “single.”

It seems that research examining which of these classifications best fits the asexuality entity, whether it is as a sexual orientation, an identity, a community, or some other framework, is greatly needed. Furthermore, the developmental trajectories that lead asexuality into such a framework must be explored.

19.5 Conclusion

Although a wide range of sexual diversity has been recognized throughout human history, asexuality remains an understudied phenomenon. Asexuality is likely a normal variation in the experience of human sexuality, and future research is required to inform our understanding of not only asexuality, but also sexuality in general. A developmental approach that seeks to test hypotheses about developmental origins and different developmental trajectories of asexual persons is greatly needed. A deeper understanding of the origins of asexuality and its development, as well as conceptualizing asexuality as a sexual orientation, will help eliminate stigmatization and dehumanization of this sexual minority.

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