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Human Asexuality: What Do We Know About a Lack of Sexual Attraction?

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Abstract
Purpose of Review This paper reviews the recent literature on human asexuality, which is generally defined as an absence of sexual attraction.
Recent Findings Recent work has focused on exploring whether asexuality is best conceptualized as a mental health difficulty, a sexual dysfunction, a paraphilia, a sexual orientation, or as an identity/community, and this literature is reviewed. The authors conclude that asexuality may best be thought of as a sexual orientation and that asexuality as an identity and a community is an important component of the asexual experience.
Summary Overall, the term asexuality likely describes a heterogeneous group of individuals, with a range of experiences. Asexuality is likely a normal variation in the experience of human sexuality, and future research into asexuality might inform our understanding of sexuality in general.

Keywords Asexuality · Sexual orientation · Sexual attraction

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Introduction

This paper reviews the recent literature on asexuality. Human asexuality is generally defined as an absence of sexual attraction, although this definition varies somewhat depending on the source. Asexuality was first reported by Alfred Kinsey and colleagues in 1948 via the inclusion of a "category X," meaning "no socio-sexual contacts or reactions" as an addition to Kinsey's seven-point sexual orientation rating scale [1, 2]. Asexuality was also described in 1980 by Storms [3], who used a bidimensional model of erotic orientation to describe sexual attraction. "Anerotic" or asexual individuals on this scale experienced little sexual attraction to either men or women. Following this, there was little academic discussion of asexuality until Bogaert's 2004 investigation into the reported lack of sexual attraction among 1% of 18,000 participants in a British national probability sample [4]. This continues to be the most widely cited prevalence estimate of asexuality, although more recent research has provided estimates ranging from 0.5% [5, 6] to 3.3% [7].

It should be noted early on in this review that there is a large online community of self-identified asexual individuals (most notably the Asexual Visibility and Education Network; AVEN; asexuality.org), and this group may differ somewhat from those who fully meet Bogaert's original definition of "a lack of sexual attraction" [4]. There are important conceptual differences between self-identified asexuality (which may include a wide range of individuals with diverse experiences) and a more stringent definition of asexuality (which might be along the lines of "a complete lack of sexual attraction, which has stability over some period of time"). As discussed more thoroughly by Chasin [8], individuals who identify as being on the asexual spectrum may come to this identification through a number of diverse experiences and reasons. Further, some individuals who identify as asexual may

experience varying levels of sexual attraction. There have been efforts by researchers who are attempting to achieve a more rigorous definition of asexuality to create validated measures of a lack of sexual attraction (e.g., the Asexuality Identification Scale; AIS; [9]), but efforts to define and study those who lack sexual attraction entirely is nascent and much of the research to date is based on samples who self-identify as asexual. Indeed, much of the published literature on asexuality is derived from samples drawn from AVEN, which may represent a very heterogeneous group on the asexual spectrum.

As alluded to above asexuality is not currently a well-defined construct, at least not from a standpoint of scientific rigor, and definitions vary. Bogaert [4, 10] defined asexuality as a lack of sexual attraction, and this definition is routinely used in research. More specifically, asexuality has been defined as a lack of sexual attraction to *anyone* [4], as well as a lack of sexual attraction entirely (i.e., to *anyone* or *anything*) [11]. Overall, the lack of sexual attraction is thought to be persistent throughout an asexual individual's adult life, although this is not a requirement for self-identification as asexual within the asexual community [11].

In terms of sexual attraction, romantic attraction, and sexual behavior, there is a range of experiences that might transpire within individuals on the asexual spectrum. Among the asexual community, there is recognition that some asexual individuals do experience sexual attraction in some circumstances, or with particular individuals, and these individuals might identify as "gray asexual" (or "gray-A": a person who may only rarely experience sexual attraction) or demi-sexual (a person who experiences sexual attraction only when they form a strong emotional connection with someone) [12]. Other terms that might be used within the asexual community to classify a person who experiences very little sexual attraction include semi-sexual, asexual-ish, and hyposexual. Orthogonal to their sexual attraction is an individual's inclination for romantic attraction, defined as a desire for a romantic relationship, perhaps with a particular person. It is well known that asexual individuals vary widely in this propensity for romantic affiliation, ranging from aromantic (a person who experiences little to no romantic attraction) to panromantic (romantically attracted to others, and this attraction is not limited by sex or gender) to heteroromantic or homoromantic.

It is important to emphasize that the lack of sexual attraction that seems to be fundamental to asexuality does not necessarily equate to a lack of sexual behavior, and there is evidence that asexual individuals engage in both partnered and solitary sexual activity [13, 14] for a variety of reasons unrelated to sexual attraction, that might include involvement in a romantic relationship. In addition to challenging the assumption that asexuality implies an outright absence of all sexual activity, there are a number of other pervasive stereotypes applied to those identifying as asexual. For example, some assume all asexual individuals are aromantic, female, afraid of sex, highly religious, have experienced traumatic relationships or sexual experiences, have low testosterone levels or some other physical problem, or are making a conscious choice to be asexual (e.g., celibacy; [15–17]), and these opinions have also been expressed by clinicians and academics [17]. Empirical research, however, has provided evidence that these claims are largely false [10, 18••, 19••].

The emergence of the asexual community, combined with a lack of empirical data on asexuality, has led to much discussion and speculation, both within academic and non-academic communities, on how asexuality should be conceptualized. Asexuality has been described as a sexual orientation by a number of sources [3, 4, 13, 18••, 20, 21, 22•], and heterosexual and non-heterosexual sexual orientation groups have been used as a comparison to asexual groups in a number of studies (e.g., [23, 24]). Although the writers acknowledge alternate definitions of "sexual orientation" (i.e., as a sociopolitical category; see [8]), we define it here as an internal mechanism that directs a person's sexual interest toward men, women, or both (or potentially toward individuals who do not identify as male or female). In contrast to understanding asexuality as a sexual orientation, there has also been speculation [19••] that asexuality could arise from, or be part of, a mental health difficulty, a sexual dysfunction (defined in the Diagnostic and Statistical Manual of Mental Disorders as "a clinically significant disturbance in a person's ability to respond sexually or to experience sexual pleasure"; DSM-5, [25]), or possibly even a paraphilia. Much of the current empirical research focuses on these questions, and this literature will be reviewed here. Recent writings on asexuality have also explored the social context of asexuality, and we also include a brief discussion of asexual identities and communities.

Asexuality as a Mental Health Difficulty

There is some evidence for a relationship between autism spectrum disorders (ASD) and asexuality. In response to in-depth semi-structured interviews with a sample of asexual individuals drawn from AVEN, Brotto and colleagues [13] noted that a number of their participants discussed the potential link between the Asperger syndrome and asexuality, and Ingudomnukul and colleagues [26] found that 17% of women with ASD stated that they were asexual or had a preference for neither sex, compared to none of the women in their control group. Gilmour, Schalomon, and Smith [27] also found higher rates of asexuality among autistic participants. Further, data presented by Chasin [8] indicates that approximately 6% of autistic men and women reported having no sexual interest for anyone as well as not identifying with any sexual orientation. As Pecora et al. [28] points out, there is evidence that individuals on the autism spectrum may demonstrate 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.

Yule, Brotto, and Gorzalka [29•] found asexuality to be associated with a higher prevalence of mental health and interpersonal problems. Specifically, asexual individuals were more likely to endorse symptoms of social withdrawal on a self-report screener for personality symptoms and to report more interpersonal difficulties in general. Asexual individuals were also more likely to report symptoms of anxiety and to endorse more symptoms of suicidality compared to non-asexual participants. Despite these symptoms, it is reasonable to conclude that asexuality should not be classified as either a mental illness, nor be conceptualized as a symptom of a psychiatric condition. Based on the findings of MacInnis and Hodson [24], which suggested that college students evaluated asexual individuals most negatively compared to other sexual orientation groups and asexual individuals were seen to be the least likely to possess "human nature traits," it is likely that the elevated rates of mental health symptoms observed in some studies of asexual individuals can be explained by their experience of stigmatization and dehumanization.

Overall, these findings strongly suggest that increased experience of distress and associated mental health difficulties should not be used to pathologize asexual individuals [10] and that asexuality should not be classified as a psychiatric diagnosis, nor be seen as a symptom of one. It remains a possibility that, for those asexual individuals who do have symptoms of autism spectrum disorder, distress arises from these mental health conditions, rather than from the asexuality itself. This group is understudied, and much more research needs to be done to understand this further.

Asexuality as a Sexual Dysfunction

Given that lack of interest in sex is a hallmark feature of asexuality, it is understandable that speculation has arisen about whether asexuality is not simply an extreme case of low sexual desire. In order to evaluate whether asexual individuals may experience impairments to their physical sexual response, one study compared genital sexual arousal between asexual, bisexual, heterosexual, and lesbian women in response to erotic films [21]. There was no significant difference in genital sexual arousal, as measured by vaginal photoplethysmography, between groups. However, the asexual women differed from the sexual women in that they reported no increase in desire for sex after viewing the erotic films [21]. Thus, it does not seem that a lack of sexual arousal in response to sexual triggers underlies asexual individuals' lack of sexual attraction. Whether genital arousal patterns of asexual men differ from other sexual orientation groups is to date unknown and is currently the subject of at least two studies at the University of British Columbia, Brock University, and Northwestern University.

It has also been speculated that asexuality may be understood under the umbrella of a dysfunction of sexual desire, such as hypoactive sexual desire disorder (HSDD) or female sexual interest/arousal disorder (FSIAD). As discussed by Hinderliter [30], the conflation between sexual desire disorders and asexuality is problematic for the asexual community, whose goal, in part, is for asexuality to be seen as a "normal variation" on the spectrum of human sexuality. That asexuality and sexual desire disorders are different has some empirical backing. One recent study found significant differences between participants who met diagnostic criteria for a desire disorder and self-identified asexual individuals. Specifically, Brotto, Yule, and Gorzalka [31•] found that participants who met criteria for a desire disorder endorsed higher sex-related distress, had higher levels of sexual desire, were more likely to be in a relationship, and had lower alexithymia scores (i.e., inability to identify and express emotions) than did asexual participants. Moreover, studies have find their lack of sexual desire to be problematic, and, if given the choice, they did not wish to speak with a health care provider about it [32, 33]. Kristina Gupta [34•] conducted an in-depth qualitative study of 30 asexual individuals and concluded that the distinction between a disorder of sexual desire and asexuality is not clear-cut, and that, because it might arise in response to stigma or relationship difficulties, distress alone may not separate asexual individuals from those with a sexual dysfunction.

From these studies, we suggest that asexuality does not appear to be a disorder of sexual arousal, nor of sexual desire. However, as discussed by Brotto and Yule [18••], there remains a possibility that at least some individuals diagnosed with a lifelong sexual desire disorder might be better classified as asexual. Brotto, Yule, and Gorzalka [31•]compared individuals who met diagnostic criteria for lifelong HSDD with asexual individuals. Those with lifelong HSDD scored lower on a measure of asexuality (the AIS [9], described above), and reported greater sexual-related distress than did asexual participants. The two groups did not differ on total sexual behaviors or on level of sexual desire. Overall, this suggests that there is potentially a large amount of overlap between the two groups. It may be that some individuals who meet diagnostic criteria for lifelong HSDD might self-identify as asexual if they were aware of the term. It may be that the clinically significant distress required to make a diagnosis of lifelong sexual desire disorder could arise in response to attempting to navigate a relationship with a (sexual) partner, despite a person remaining disinterested in engaging in sexual activity otherwise [18••], or from the experience of stigma [33, 34•]. Further, the previously discussed discrimination that asexual individuals experience [24] may also result in distress that could be clinically significant. More research is required to determine the extent of overlap between these groups.

There are important clinical implications of the finding that asexuality is not likely to be a sexual dysfunction. The goal in

treatment for the person with a sexual desire or arousal disorder is to increase their interest in sex, whereas, based on the current evidence, an asexual person in therapy would be more likely to benefit from a focus on self-acceptance [30], or on developing skills around navigating relationships, especially if their partner was sexual and motivated to have sex. Gupta recommended that clinicians who work with individuals who experience low levels of sexual interest should encourage exploration of which label ("HSDD" vs. "asexual") fits best for the client and would allow them to lead a fulfilling life [34•]. In the DSM-5, the accompanying text for the sexual desire disorders (both FSIAD in women and HSDD in men) explicitly mentions asexuality as an exclusion criterion [25].

Asexuality as a Paraphilia

Paraphilias are defined as non-normative or atypical sexual interests. A paraphilia itself is not necessarily considered a disorder. To meet diagnostic criteria for a paraphilic disorder, an individual's atypical sexual interest must cause clinically significant distress in themselves or another person (i.e., if the target of the sexual interest is an unwilling partner or child; [25]). Evidence that asexual individuals engage in masturbation [13, 14, 35•] has led to speculation [36••] that asexual individuals might have some sexual interest that is not directed toward a partner, and that this may be understood to be a paraphilic sexual interest. Bogaert, in his 2006 [10] discussion of asexuality and paraphilias noted that the likelihood of all asexual individuals being paraphilic was low. Paraphilia without any human interest is rare, and more frequently occurs in men [4, 6], while asexual individuals are more frequently women [4, 13]. However, Bogaert [37] also questioned whether some asexual individuals might have a particular type of paraphilia, namely autochorissexuality, which he defined as "identity-less sexuality." Individuals who experience autochorissexuality see their identity as being separate from sexual acts that they might be engaging in or fantasizing about. For example, Yule, Brotto, and Gorzalka [35•] asked asexual (and sexual) individuals who engage in sexual fantasy what they fantasize about. Thirty-three percent of asexual women (compared to 8% of sexual women) and 19% of asexual men (compared to none of the sexual men) reported that their sexual fantasies did not involve them. For example, one participant stated: "I don't put myself into my fantasies. That is thoroughly unappealing to me. Instead, I imagine other people in sexual situations, and focus on their thoughts and feelings for a sort of vicarious arousal." ([35•] pg. 6).

The study by Yule et al. [35•] also found that asexual individuals fantasize about a number of topics, including some that have traditionally been thought of as non-normative, such as BDSM (bondage-discipline-sadism-masochism). We suggest, however, that rather than understanding that asexual individuals have paraphilic sexual interests, it may be that these interests, which have been traditionally seen to be "non-normative" are much more frequently experienced than was once thought [38, 39]. Thus, it may be that asexual individuals do experience sexual interest, but that they are not motivated to direct this interest toward anyone or anything, aside from, perhaps, themselves while engaging in masturbation. More research needs to be done in this area.

Asexuality as a Sexual Orientation

Sexual orientation is thought to be a largely undefined internal mechanism that directs a person's sexual interest, with varying degrees, toward men, women, or both [40], and asexual advocates maintain that asexuality is a unique sexual orientation, alongside heterosexuality, homosexuality, and bisexuality. It has been suggested that it may be more accurate to conceptualize asexuality as a lack of sexual orientation, in that this internal mechanism is not directed toward anyone or anything, or might not exist at all. It may also be that the same processes that guide the direction of sexual attraction to men, women, or both, might be involved in the development of a lack of sexual attraction. By investigating markers previously associated with sexual orientation development, such as age of menstruation, shorter stature, and increased number of health problems [4, 6], and potential biological markers of prenatal environment such as handedness and number of older siblings [22•], researchers have provided evidence that the same processes that influence these markers of sexual orientation may be associated with the development of the lack of sexual [10, 13, 21, 22•]. Because of this, Brotto and Yule [18••] argue that asexuality be conceptualized as a unique sexual orientation rather than the absence of one.

It is important to note that temporal stability over time is one criterion for categorizing something as a sexual orientation [41, 42]. Cranney [43] found relatively low stability over time when investigating two separate waves of data querying lack of sexual attraction in the Add Health survey. He has suggested, however, that this may not be evidence against asexuality as a sexual orientation. This is in part because it was generally concluded that homosexuality was an intrinsic, lifelong state before there was any formal longitudinal evidence of it being long lasting. Cranney argues that asexual individuals should be provided the same good faith as were lesbians and gay men when describing their lack of sexual attraction as being non-problematic and a long-lasting part of their experience [44]. He also noted that our current measurement of asexuality most frequently involves a single query about whether a participant lacks sexual attraction. It may well be that sexual attraction and romantic attraction are conflated by individuals who are not familiar with the terms used by researchers. See [9] for a more in-depth discussion of the measurement of asexuality for research purposes.

Evidence of fluidity of sexual attraction among other groups, particularly among women [45]. The existence of demi-sexual individuals, who become attracted to someone only after an emotional bond has been formed, suggests that there is some fluidity in at least some people who identify as within the asexual spectrum.

Asexuality as an Identity and Community

Scherrer [46•] pointed out that social scientists understand sexuality in three ways: behavior, desire, and identity [47]. As discussed, asexuality research has generally focused on lack of sexual behavior and lack of sexual desire. Scherrer argues that a focus on asexual identity is essential to understanding asexuality fully. An example of its importance was underscored by Gressgard [48], who suggested that the subjective identity dimension of sexual orientation allows asexual individuals to exercise self-determination based on what they perceive to be the reality of their own sexuality. Scherrer provides an interesting discussion on how asexual individuals come to an asexual identity and concluded that understanding asexual identities provides alternative ways of understanding sexual identities in general [46•].

More recently, Scherrer and Pfeffer [49] argued that asexuality is, in fact, best understood as an identity and a community, rather than as a sexual orientation or any other category discussed above. Identity, defined as "the way that people understand themselves and the language they use to explain themselves to others" [49], pg. 3, provides people 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. Scherrer and Pfeffer [49] suggested that conceptualizing asexuality as an identity and a community will allow us to avoid pathologizing a lack of sexual attraction and will rather allow us to extend and explore further our understanding of sexuality and gender on a wider scale. For example, Scherrer [50] discussed how asexuality challenges and extends our understanding of sexual people's relationships. In examining qualitative data from 102 self-identified asexual individuals, Scherrer [50] challenged problematic assumptions about sex and sexuality in relationships among sexual minorities. Her analysis revealed a wide range of definitions of "relationship" and underscored the conflation of and intimacy among the study's participants. 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 traditional dichotomy of "in a relationship" or "single." Scherrer's work suggests very practical outcomes for practitioners and researchers to explore the quality of relationships, including but not limited to asexuality, in more detail.

Conclusion

Asexuality challenges the ubiquitous notion that sexuality is a universal human experience. Overall, there is convincing evidence that a lack of sexual attraction is not the result of a mental health disturbance, a sexual dysfunction, or necessarily a paraphilia, and that asexuality is best thought of as a sexual orientation. While we strongly feel that asexuality is a valid presentation and should not be seen as a pathology, we also suggest that individuals presenting to a clinician's office expressing low sexual attraction do deserve a comprehensive mental health assessment to recognize and deal with potential psychological and relational difficulties that might arise as a result of this. Asexuality, as has been suggested by previous writers (e.g., [24, 29•]), may be associated with discrimination and difficulty navigating relationships, which may come with its own set of problems.

Recognizing asexuality as an identity and as a community is an important component of the asexual experience that academics should incorporate into their research. Of course, it is likely that the term *asexuality* is used to describe a heterogeneous group, with a wide range of sexual attractions and sexual behaviors (or lack thereof). Overall, asexuality is likely a normal variation in the experience of human sexuality, and future research into asexuality might inform our understanding of sexuality in general.

Compliance with Ethical Standards

Conflict of Interest M. A. Yule, L.A. Brotto, and B. B. Gorzalka each declare no potential conflicts of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

References

Papers of particular importance, published recently, have been highlighted as:
• Of importance
•• Of major importance

1. Kinsey AC, Pomeroy WB, Martin CE. Sexual behavior in the human male. Philadelphia: WB Saunders Co; 1948.
2. Kinsey AC. Sexual behavior in the human female. Philadelphia: WB Saunders Co; 1953.
3. Storms MD. Theories of sexual orientation. J Pers Soc Psychol. 1980;38(5):783–92.

4. Bogaert AF. Asexuality: prevalence and associated factors in a national probability sample. J Sex Res. 2004;41(3):279–87.
5. Aicken CRH, Mercer CH, Cassell JA. Who reports absence of sexual attraction in Britain? Evidence from national probability surveys. Psychol Sex. 2013;4(2):121–35.
6. Bogaert AF. The demography of asexuality. In: International handbook on the demography of sexuality. Netherlands: Springer; 2013. p. 275–88.
7. Höglund J, Höglund J, Jern P, Jern P, Sandnabba NK, Sandnabba NK, et al. Finnish women and men who self-report no sexual attraction in the past 12 months: prevalence, relationship status, and sexual behavior history. Arch Sex Behav. 2014;43(5):879–89.
8. Chasin C. Considering asexuality as a sexual orientation and implications for acquired female sexual arousal/interest disorder. Arch Sex Behav. 2016. Online First. doi:10.1007/s10508-016-0893-1.
9. Yule MA, Brotto LA, Gorzalka BB. A validated measure of no sexual attraction: the Asexuality Identification Scale. Psychol Assess. 2015;27(1):148–60.
10. Bogaert AF. Toward a conceptual understanding of asexuality. Rev Gen Psychol. 2006;10(3):241–50.
11. Asexual Visibility and Education Network (AVEN) [Internet]. 2011 [cited 2017 Jan 11]. Available from: asexuality.org.
12. Mosbergen D. The asexual spectrum: identities in the ace community. 2016. Retrieved from http://www.huffingtonpost.com/2013/06/19/asexual-spectrum_n_3428710.html.
13. Brotto LA, Knudson G, Inskip J, Rhodes K. Asexuality: a mixed-methods approach. Arch Sex Behav. 2010;39(3):599–618.
14. Yule MA, Brotto LA, Gorzalka BB. Sexual fantasy and masturbation among asexual individuals. Can J Hum Sex. 2014;23(2):89–95.
15. NextStepCake. I'm an aromantic asexual. [Blog]. Retrieved from http://nextstepcake.tumblr.com/post/5473267595/southpawscopic-buildmeatower-the-whole-thing. 13 May 2011.
16. The View. Secrets of asexuals [video clip]. Available from http://www.youtube.com/watch?v=6kPfLYuQlL8 2006.
17. Sloan D (Director). 20/20, March 24. [Television series episode]. In: Sloan D (Executive Producer), Cincinnati, OH: ABC News Productions; 2006.
18.•• Brotto LA, Yule M. Asexuality: sexual orientation, paraphilia, sexual dysfunction, or none of the above? Arch Sex Behav. 2016. Online First. doi:10.1007/s10508-016-0802-7. **This review paper provides a discussion of how asexuality might best be conceptualized.**
19.•• Bogaert AF. Asexuality: what it is and why it matters. J Sex Res. 2015;52(4):362–79. **This paper provides a discussion of what asexuality studies can reveal about sexuality in general.**
20. Berkey BR, Perelman-Hall T, Kurdek LA. The multidimensional scale of sexuality. J Homosex. 1990;19(4):67–88.
21. Brotto LA, Yule MA. Physiological and subjective sexual arousal in self-identified asexual women. Arch Sex Behav. 2011;40(4):699–712.
22.• Yule MA, Brotto LA, Gorzalka BB. Biological markers of asexuality: handedness, birth order, and finger length ratios in self-identified asexual men and women. Arch Sex Behav. 2014;43(2):299–310. **This study demonstrates that biological markers, such as handedness and number of older siblings, that have previously been linked to other sexual orientations are also indicated in asexuality.**
23. Nurius PS. Mental health implications of sexual orientation. J Sex Res. 2010;19(2):119–36.
24. MacInnis CC, Hodson G. Intergroup bias toward "group X": evidence of prejudice, dehumanization, avoidance, and discrimination against asexuals. Group Process Intergroup Relat. 2012;15(6):725–43.
25. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington, VA: Author; 2013.
26. Ingudomnukul E, Baron-Cohen S, Wheelwright S, Knickmeyer R. Elevated rates of testosterone-related disorders in women with autism spectrum conditions. Horm Behav. 2007;51(5):597–604.
27. Gilmour L, Schalomon PM, Smith V. Sexuality in a community based sample of adults with autism spectrum disorder. Res Autism Spectr Disord. 2012;6(1):313–8.
28. Pecora LA, Mesibov GB, Stokes MA. Sexuality in high-functioning autism: a systematic review and meta-analysis. J Autism Dev Disord. 2016;46(11):3519–56.
29.• Yule MA, Brotto LA, Gorzalka BB. Mental health and interpersonal functioning in self-identified asexual men and women. Psychol Sex. 2013;4(2):136–51. **This study explores mental health correlates of asexuality and finds elevated levels of some mental health difficulties among asexual individuals, including suicidality.**
30. Hinderliter A. How is asexuality different from hypoactive sexual desire disorder? Psychol Sex. 2013;4(2):167–78.
31.• Brotto LA, Yule MA, Gorzalka BB. Asexuality: an extreme variant of sexual desire disorder? J Sex Med. 2015;12(3):646–60. **This study compares asexuality with sexual desire disorders. It concludes that there are significant differences between the two groups.**
32. Prause N, Graham CA. Asexuality: classification and characterization. Arch Sex Behav. 2007;36(3):341–56.
33. Gupta K. "And now I'm just different, but there's nothing actually wrong with me": asexual marginalization and resistance. J Homosex. 2016;1–23. Online First. doi:10.1080/00918369.2016.1236590.
34.• Gupta K. What does asexuality teach us about sexual disinterest? Recommendations for health professionals based on qualitative study with asexually identified people. J Sex Marital Ther. 2015;43(1):1–14. **This qualitative study explores when low sexual desire should be treated as a medical/mental health issue and when it should be treated as a normal variation in human sexual experience. It provides concrete recommendations for health professionals based on these data.**
35.• Yule MA, Brotto LA, Gorzalka BB. Sexual fantasy and masturbation among asexual individuals: an in-depth exploration. Arch Sex Behav. 2016. Online First. doi:10.1007/s10508-016-0870-8. **This study investigates the content of sexual fantasy of asexual individuals and explores what this might tell us about asexuality as a paraphilia or a sexual orientation.**
36.•• Bogaert AF. Understanding asexuality. Plymouth: Rowman & Littlefield Publishers, Inc; 2012 .**This book provides a comprehensive discussion of asexuality for both academic and a general audience.**
37. Bogaert AF. Asexuality and autochorissexualism (identity-less sexuality). Arch Sex Behav. 2012;41(6):1513–4.
38. Ahlers CJ, Schaefer GA, Mundt IA, Roll S, Englert H, Willich SN, et al. How unusual are the contents of paraphilias? Paraphilia-associated sexual arousal patterns in a community-based sample of men. J Sex Med. 2011;8(5):1362–70.
39. Joyal CC, Cossette A, Lapierre V. What exactly is an unusual sexual fantasy? J Sex Med. 2015;12(2):328–40.
40. LeVay S, Baldwin J. Human sexuality. 4th ed. Sunderland, MA: Sinauer.
41. Moser C. Defining sexual orientation. Arch Sex Behav. 2016;45(3):505–8.
42. Seto MC. Is pedophilia a sexual orientation? Arch Sex Behav. 2012;41(1):231–6.
43. Cranney S. The temporal stability of lack of sexual attraction across young adulthood. Arch Sex Behav. 2016;45(3):743–9.
44. Cranney S. Does asexuality meet the stability criterion for a sexual orientation? Arch Sex Behav. 2016. Online First. doi:10.1007/s10508-016-0887-z.

45. Diamond LM. The desire disorder in research on sexual orientation in women: contributions of dynamical systems theory. Arch Sex Behav. 2012;41(1):73–83.
46.• Scherrer KS. Coming to an asexual identity: negotiating identity, negotiating desire. Sexualities. 2008;11(5):621–41. **This article discusses asexuality in the context of asexual communities and asexual identity.**
47. Laumann EO. The social organization of sexuality: sexual practices in the United States. Chicago: University of Chicago Press; 1994.
48. Gressgård R. Asexuality: from pathology to identity and beyond. Psychol Sex. 2013;4(2):179–92.
49. Scherrer KS, Pfeffer CA. None of the above: toward identity and community-based understandings of (a)sexualities. Arch Sex Behav. 2016. Online First. doi:10.1007/s10508-016-0900-6.
50. Scherrer KS. What asexuality contributes to the same-sex marriage discussion. J Gay Lesbian Soc Serv. 2010;22(1–2):56–73.