#### **ORIGINAL PAPER**



# Demographic and Experiential Characteristics of Asexual Individuals and Associations with Well-Being

Alexandra Brozowski<sup>1</sup> · William J. Chopik<sup>1</sup> · Rebekka Weidmann<sup>1</sup> · Jeewon Oh<sup>2</sup> · Jonathan R. Weaver<sup>1</sup>

Received: 17 June 2023 / Revised: 8 December 2024 / Accepted: 9 December 2024 / Published online: 24 January 2025 © The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2025

#### Abstract

The visibility and number of people identifying as asexual—those with little to no sexual attraction—have been increasing in recent years. In the current study, we examined variation in experiential and developmental milestones and psychosocial functioning in 1,726 individuals on the asexual spectrum (61.2% women, 15.0% non-binary, 14.2% men, 9.0% other gender). A lack of sexual attraction was a lifelong orientation—most (i.e., often half to two-thirds) asexual individuals reported never experiencing sexual attraction or acting on it. Identity formation processes and romantic feelings tended to be most salient in adolescence. People are identifying as asexual more recently, such that 18–22-year-olds did so recently in adolescence (ages 13–17), 23–29 year-olds did so recently in young adulthood (ages 18–24), and 30 + year-olds did so recently in adulthood (ages 25–34). This may be consistent with the visibility of asexuality increasing in recent years, providing a useful label for people. Asexual people were more out to other members of the LGBTQIA+community but less to family, coworkers, and the heterosexual community. Being out and lower levels of internalized acephobia were associated with higher life satisfaction. We discuss these findings in the context of identity development and the mechanisms linking individual and relational characteristics to well-being in asexual populations.

Keywords Asexuality · Asexual spectrum · Acephobia · Life satisfaction · Romantic and sexual histories · Fraysexual

# Introduction

The visibility and the number of people identifying as asexual—those with little to no sexual attraction—have been increasing in recent years. Researchers and practitioners have slowly been developing taxonomies and descriptive models for characterizing the thoughts, feelings, and behaviors of asexual people (Bogaert, 2015; Yule et al., 2015). Through this work on the phenomenology of asexuality, much knowledge has been gained regarding the definitions of asexuality, the sexual histories and experiences of asexual individuals, asexuality's similarities and differences with other stigmatized and minoritized identities, the historical evolution of asexuality as an identity, and how the broader public perceives asexual individuals (e.g., Bogaert, 2015; Brotto et al.,

2010; DeLuzio Chasin, 2011; MacInnis & Hodson, 2012; Prause & Graham, 2007).

Like most identities (Suen et al., 2020), there is likely a great deal of within-group heterogeneity in the experiences, development, and outcomes of asexual individuals (examples of identities under the asexual umbrella include demisexual [experiencing sexual feelings and attraction only after developing a close emotional relationship], graysexual [experiencing very low or no sexual attraction], and fraysexual [attraction to strangers more than familiar people) (see Copulsky & Hammack, 2023; Hille et al., 2020, for a discussion of asexuality sub-labels). Comparing allosexual (those who experience sexual attraction) and asexual individuals has been valuable in understanding the full spectrum of human sexuality, but relying on comparisons makes allosexual people seem like a standard that asexual people are then compared to, which may inadvertently imply asexual individuals are deficient in some way (e.g., Brotto et al., 2015; Bulmer & Izuma, 2018; Greaves et al., 2017; Parent & Ferriter, 2018; Rothblum et al., 2020; Zheng & Su, 2018). In the current study, we examined variation in experiential and developmental milestones and psychosocial functioning in over 1700 individuals



William J. Chopik bill.chopik@gmail.com

Department of Psychology, Michigan State University, 316 Physics Rd., East Lansing, MI 48824, USA

Department of Psychology, Syracuse University, Syracuse, NY, USA

who identified as being on the asexual spectrum. We also sought to describe asexual individuals' current and historical social ties—the ontogeny of same and opposite sexual and romantic attraction by age, and the degree to which they disclosed their identities to various social network members. Finally, we examined how the ways asexual individuals view themselves (i.e., internalized acephobia), and their outness, were associated with life satisfaction.

# **Characteristics of an Asexual Identity**

Asexuality is best described as an enduring lack of sexual attraction and desire toward others but does not necessarily include a lack of romantic attraction for others (Bogaert, 2004, 2015; Brotto et al., 2010). Although the asexual spectrum is a heterogeneous community with myriad identity labels that make up the spectrum (Carrigan, 2011), for the sake of simplicity, "asexual" is generally used as a blanket term for this community throughout this report and is not meant to diminish the entire spectrum or the sub-labels within the spectrum. More broadly, scholars have conceptualized asexuality as sexual orientation, similar to heterosexuality, homosexuality, and bisexuality (Bogaert, 2015; Storms, 1980). The prevalence rates of asexuality in three studies with sample sizes above 10,000 participants ranged from 0.4% and 1% (Bogaert, 2004; Greaves et al., 2017; Parent & Ferriter, 2018), suggesting that asexual people belong to a sexual minority group.

Research on asexuality is relatively nascent but has substantially increased in recent years (Brotto & Yule, 2017; Van Houdenhove et al., 2014). The descriptive work on asexual individuals to date has been invaluable in helping build this understanding of human sexuality. Work by Antonsen et al. (2020) and Brotto et al. (2010) has characterized variability along the romantic spectrum of asexual individuals regarding demographic information, sexual behavior, psychiatric symptoms, and personality problems. And one of the largest continuing surveys—the Ace Community Survey—has provided invaluable descriptive information on the lives, attitudes, and relationship/sexual histories of asexual individuals (The Ace Community Survey, 2014, 2023, 2024). These studies have revealed a few reliable trends. Asexual individuals tend to be more religious, have less education, have a lower socioeconomic standing, be older, and identify as women (Bogaert, 2015; Brotto et al., 2010; Prause & Graham, 2007; Yule et al., 2015). People who identify as asexual may also be more likely to be transgender (DeLuzio Chasin, 2011; Simon et al., 2022; Sumerau et al., 2018).



Springer

# **Development of Asexual Identities**

When characterizing asexual individuals' identity development, it can be helpful to reference the literature on other sexual minority groups with whom they might share some similarities (see Morgan, 2013, for a discussion of a stage model implicating identity confusion, comparison, tolerance, acceptance, pride, and synthesis). Specifically, from a minority identity perspective, there might be some parallels with respect to how they come to identify as asexual, how they think about their identity, if they disclose this identity to others, and how these factors contribute to adjustment and well-being (Rentería et al., 2023; The Ace Community Survey, 2014).

# Lifespan Processes and Sexual and Romantic Feelings

Defining and negotiating one's sexuality is a lifelong process (Cacciatore et al., 2019; Heine & Browning, 2014; LeVay et al., 2006; Tolman & McClelland, 2011). In discussing sexuality, it is important to acknowledge that there can be a great deal of variation across people's thoughts, feelings, experiences, and behaviors (Allen & Robson, 2020; Allen & Walter, 2018a, 2018b). Asexual individuals are exposed to the same norms and public ecosystem about relationships and sexuality as allosexual people (Bogaert, 2015; Rothblum et al., 2020). For a variety of reasons, people may engage in sexual or romantic behavior despite not feeling an overwhelming desire to do so (Impett & Peplau, 2002). Similarly, given that people's identities do not necessarily determine the exclusive nature of their romantic and sexual lives, asexual people may engage in sexual pursuits (Brozowski et al., 2022; Hall & Knox, 2022; Su & Zheng, 2023). Indeed, some asexual people often report romantic and sexual experiences in young adulthood and adolescence, around the same time that they are considering adopting the asexual orientation or participating in asexual communities (Hille et al., 2020; The Ace Community Survey, 2014).

Asexuality includes a unique set of circumstances for the study of lifespan sexual development. Worth noting, sexual attraction and romantic feelings may be closely related in allosexual individuals. But sexual attraction and romantic feelings, particularly in the asexual community, may only be partially overlapping or even orthogonal considerations (Carvalho & Rodrigues, 2022; Diamond, 2003). In other words, asexual people may feel romantic feelings even in the absence of sexual feelings, as in some surveys over 70% of asexual people experience at least some romantic attraction in their lives (Antonsen et al., 2020; Guz et al., 2022; Hall & Knox, 2022; Hille, 2023; Hille et al., 2020). Romantic asexual individuals often report experiencing relationship milestones (e.g., kissing; Antonsen et al., 2020), and

investment and commitment processes often resemble the romantic relationships of allosexual individuals (Brozowski et al., 2022). Given strong sexual socialization forces, asexual people may at one point—either genuinely (given that asexuality is a spectrum) or because of socialization or peer pressure—think they have felt sexual attraction or have even acted sexually with others (Brotto & Yule, 2011; Prause & Graham, 2007; Przybylo, 2013). Acknowledging this possibility does not deny the phenomenological experience of asexual people or frame the lack of sexual behavior as a natural or unnatural thing to engage in (see Przybylo, 2013, for a discussion). Rather, it acknowledges the very real pressure that society puts on people to live sexual lives, particularly when they are young. Results from previous studies show that doing so is worthwhile—asexual individuals often acknowledge having some romantic and sexual experiences (often as young adults)(Carvalho & Rodrigues, 2022; The Ace Community Survey, 2014, 2023). We revisit this question more formally in the current study here.

# Outness and Internalized Acephobia of Asexual Individuals

There are many contributors to subjective well-being (Pinquart & Sörensen, 2000; Steel et al., 2008). In the present study, we focus on two that might be particularly relevant to the asexual (and broader sexual minority) community—outness and internalized acephobia. These two constructs have been the subject of some past work on asexual individuals, but this research is often focused on contrasting asexual individuals with other sexual/gender minorities and has relied on relatively small samples of asexual individuals (e.g., Rothblum et al., 2020). Below, we briefly overview of the literature on outness and internalized acephobia.

#### **Outness**

Outness is the process of disclosing one's sexual orientation to others. Outness is associated with a wide array of disparate outcomes. For example, there is a large amount of research showing that disclosing one's sexual minority identity is associated with better well-being (Rentería et al., 2023), primarily because minoritized individuals can find opportunities for social support, feel more positive about their identities, and feel comfortable doing so in affirming contexts (Chang et al., 2021; Legate et al., 2012; Whitman & Nadal, 2015). There are also studies suggesting that identity disclosure can occasionally be harmful for sexual minorities, as it leaves them open to being the target of discrimination and even violence (Chang et al., 2021; D'Augelli et al., 1998). Concealing one's identity may protect people from these negative effects of disclosure but doing so is also accompanied by other negative consequences, such as distress and compromised health and well-being (Bosson et al., 2012; Cole et al., 1996; Mohr & Fassinger, 2006; Morris et al., 2001). There is often a bifurcation of who asexual individuals are out to (Caba et al., 2022; The Ace Community Survey, 2024). Specifically, they are mostly likely to disclose their identities to sexual and gender minority friends, less so to family members and other friends (sometimes even partners), and very rarely to people in professional spaces (e.g., coworkers, teachers, medical professionals). In studies that have included asexual individuals specifically, being out to social networks is associated with fewer depressive symptoms and higher self-esteem—at comparable levels to gay and lesbian individuals (Rentería et al., 2023).

#### Stigmatization and Internalized Acephobia

Being asexual is a stigmatized identity (Hoffarth et al., 2016; MacInnis & Hodson, 2012). Nascent research suggests that asexual individuals feel uncomfortable disclosing their identity for fear of stigmatization, and this identity concealment is associated with many of the same negative outcomes seen in other sexual minority groups (Chan & Leung, 2023; Flanagan & Peters, 2020; Vu et al., 2022). Although asexual individuals often feel more connected to other sexual minorities (Scott & Dawson, 2015), they also occasionally experience ambivalent feelings toward sexual minority groups who might nevertheless judge them negatively based on their lack of desire for sexual activity or that their asexuality is merely a transitory phase (occasionally termed the "sexual inevitability assumption"; Parmenter et al., 2021; Worthen & Laljer, 2021; Zivony & Reggev, 2023). Along similar lines, asexual people may encounter more rigid stereotypes around interpersonal relationships, both romantic (experiencing "exclusions" from intimacy; Dawson et al., 2016) and platonic (because they are perceived as less human, more immature, and avoided socially; Hoffarth et al., 2016; MacInnis & Hodson, 2012). One consequence of this stigma is that people may begin to internalize negative feelings, as is the case with internalized homophobia—an individual's inward direction of society's homophobic attitudes (Frost & Meyer, 2009; Meyer, 1995; Moradi et al., 2010). Higher levels of internalized homophobia are associated with worse mental and physical health (see Newcomb & Mustanski, 2010; Szymanski et al., 2008; Williamson, 2000 for review).

Like internalized homophobia, internalized acephobia is defined as the inward direction of prejudice or dislike toward asexual individuals among asexual individuals—a negative consequence of societal stigma (Su & Zheng, 2022; Zheng & Su, 2022). Because asexual individuals often feel stigmatized by both heterosexual and LGBTQIA+P people, some evidence suggests that internalized stigma might be particularly high compared to what is seen in other sexual minorities (McInroy et al., 2022; although this is not always seen; Su &



Zheng, 2022). The same effects of identity concealment can be seen among asexual people as well (i.e., people who held the most severe internalized acephobic attitudes were less likely to identify as asexual [despite high scores on asexual identity questionnaires]; Zheng & Su, 2022). Worth noting, the question of how internalized acephobia contributes to well-being is far from settled. Although internalized homophobia is robustly associated with negative outcomes, the two studies conducted (to our knowledge) have produced mixed results, with one showing no association between acephobia and mental health (Zheng & Su, 2022), and the other compared sexual minority groups in a broader LGBTQ-phobia but nevertheless did not report the association with mental health symptoms (McInroy et al., 2022). In the current study, we revisit this question by examining the association between internalized acephobia and subjective well-being among a large sample of over 1,700 asexual individuals while controlling for additional personal (i.e., demographic) and contextual (i.e., outness) factors.

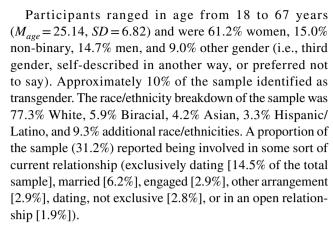
# The Current Study

The current study focused on several facets of the life experiences of people on the asexual spectrum. Specifically, our analysis is divided into three parts: (1) how romantic and sexual attraction (and behavior) differs across life, and how asexual people come to identify with this label, (2) their degree of outness, and (3) how sociodemographic characteristics, outness, and acephobia are associated with subjective well-being.

### Method

# **Participants**

A total of 1726 individuals who identified as asexual were recruited from a series of online sources to participate in a study of asexuality. Most participants (62.0%) were recruited via Facebook groups dedicated to discussions about asexuality, 24% were recruited via asexuality-relevant subreddits on Reddit, 9.0% were recruited via Tumblr, 3.5% were recruited via the Asexual Visibility and Education Network web community forums, and 1.6% was recruited via other sources (e.g., referrals from friends). Posts to the sites and forums advertised a volunteer-based study about asexual individuals and their experiences. An additional 353 people skipped through all the measures, so they were excluded from the analysis. We did not employ validity or attention tests. Sample sizes varied a bit across analyses due to missing data (see tables for degrees of freedom). Reproduction data and syntax are available at: https://osf.io/3qeaz/.



Although the survey was limited to people on the asexual spectrum, we also asked a series of questions about their sexual orientation, romantic orientation, and any additional identity-based labels they adopt. Most people (78.9%) noted asexuality as their sexual orientation when presented with a forced choice question regarding their sexual orientation, and the remaining chose none of the above (17.9%), bisexual (2.7%), heterosexual (2.1%), and homosexual (1.6%). Regarding romantic orientation, 25.6% identified as heteroromantic (i.e., having romantic attraction toward people of a different sex/gender), 24.9% identified as "other" and provided their romantic orientation (e.g., panromantic [i.e., romantic attraction to every sex/gender, which was the most common at 10%]), 22.1% identified as biromantic (i.e., having romantic attraction toward men and women), 21.6% identified as aromantic (i.e., not having romantic attraction toward people of any sex/gender), and 6.1% identified as homoromantic (i.e., having romantic attraction toward people of the same sex/ gender).

Finally, although all participants self-identified as being on the asexual spectrum, we gave them the additional opportunity to provide any labels that would help characterize their identity. In response to this open-ended prompt, more than half of the participants (53.9%) wrote that they were "asexual." The next largest groups were graysexual (6.2%), demisexual (6.0%), and an asexual classification with a romantic orientation appended (10.8%; i.e., hetero-, homo-, a-, bi-, and panromantic). The remaining 23.1% of respondents reported another identity that each was represented by less than 2% of the sample.

#### Measures

#### Romantic, Sexual, and Asexual Identity History

Several items were created to retrospectively assess romantic and sexual attraction and behavior and how individuals came to identify as asexual (see Table 1 for a full list and exact items). Worth noting, there were a few cases in which participants were provided with a scale point of 65+ to identify



 Table 1
 Retrospective reports of romantic and sexual attraction and identity development

						•					
How old	were you	when you	first felt a ph	ysical attract	ion to a perso	on of the	same gender	?			,
		<13	13-	-17	18–24		25-34	35+		Never	Mode
18–22		6.9%	21.	8%	8.0%					63.3%	Never
23-29		6.7%	13.	9%	13.9%		2.0%			63.5%	Never
30+		7.7%	16.	3%	12.6%		4.0%	0.2%		59.2%	Never
Total		7.0%	17.	7%	11.2%		1.7%	0.1%		62.3%	Never
How old	were you	when you	first felt a phy	ysical attract	ion to a perso	on of a di	ifferent gende	er?			
		<13	13	i–17	18–24		25–34	35+		Never	Mode
18-22		13.9%	24	.1%	9.6%					52.3%	Never
23-29		12.5%	20	0.9%	17.7%		2.9%			46.1%	Never
30+		17.8%	25	5.2%	8.6%		2.4%	0.9%		45.2%	Never
Total		14.4%	23	.3%	12.1%		1.6%	0.2%		48.3%	Never
How old	were you	when you	first felt a ror	nantic, emot	ional attraction	on to a p	erson of the s	ame gender?			
	<1	3	13–17	18–24	25–34		35–44	45–54	55–64	Never	Mode
18–22	9.79	%	33.0%	11.7%						45.6%	Never
23-29	8.49	%	22.3%	21.4%	3.4%					44.5%	Never
30+	9.39	%	22.7%	13.7%	7.3%		1.3%			45.7%	Never
Total	9.19	%	26.7%	15.5%	3.0%		0.3%			45.3%	Never
How old	were you	when you	first felt a ror	nantic, emot	ional attraction	on to a p	erson of a diff	ferent gender?			
	<1.	3	13–17	18–24	25–34		35–44	45–54	55–64	Never	Mode
18–22	21.2	2%	42.9%	10.4%						25.6%	13–17
23-29	19.9	9%	39.0%	19.7%	2.4%					19.1%	13-17
30+	17.9	9%	39.6%	17.5%	4.9%		0.9%			19.2%	13–17
Total	19.9	9%	40.7%	15.4%	2.1%		0.2%			21.7%	13–17
How old	were you	when you	first acted on	sexual desir	es with the sa	ime gen	der?				
	<13	13–17	18–24	25–34	35–44	45–54	55–64	Never felt it	Never :	acted on it	Mode
18-22	1.1%	5.7%	3.7%					69.0%	20.5%		Never felt it
23-29	1.5%	5.9%	6.8%	1.2%				64.2%	20.4%		Never felt it
30+	0.2%	7.3%	11.4%	3.3%				55.4%	22.4%		Never felt it
Total	1.0%	6.2%	6.8%	1.3%				63.8%	21.0%		Never felt it
How old	were you	when you	first acted on	sexual desir	es with a diffe	erent ger	nder?				
	<13	13–17	18–24	25–34	35–44	45–54	55–64	Never felt it	Never :	acted on it	Mode
18–22	1.0%	11.6%	12.0%					57.1%	18.3%		Never felt it
23-29	1.3%	10.4%	20.8%	2.2%				48.6%	16.6%		Never felt it
30+	1.3%	16.7%	16.7%	5.1%	0.2%			42.6%	17.4%		Never felt it
Total	1.2%	12.5%	16.2%	2.1%	0.1%			50.4%	17.5%		Never felt it
How old	were you	when you	first acted on	a romantic,	emotional att	raction v	with a person	of the same geno	ler?		
	<13	13–17	18–24	25–34	35–44	45–54	55–64	Never felt it	Never	acted on it	Mode
18–22	3.6%	16.9%	11.3%					36.2%	32.0%		Never felt it
23–29	3.7%	11.9%	15.1%	3.5%				36.5%	29.2%		Never felt it
30+	3.3%	11.5%	14.5%	5.5%	1.1%			35.9%	28.2%		Never felt it
Total	3.5%	13.8%	13.4%	2.6%	0.3%			36.2%	30.1%		Never felt it



Table 1 (continued)

How old	were you w	when you	first acted on a	romantic, emo	tional at	traction wit	h a pe	erson of a di	fferent gender?		
	<13	13–17	18–24	25-34	35–44	45–54	1	55–64	Never felt it	Never acted on it	Mode
18–22	7.5%	38.7%	13.5%						19.0%	21.3%	13–17
23-29	8.8%	31.5%	27.3%	2.5%					15.0%	15.0%	13-17
30+	8.4%	35.2%	22.3%	5.3%	0.2%				14.8%	13.7%	13-17
Total	8.2%	35.3%	20.5%	2.2%	0.1%				16.5%	17.2%	13-17
How old	were you w	when you	first considere	d your sexual o	rientatio	n?					
	< 1	13	13–17	18–24		25–34		35–44	45–54	55–64	Mode
18–22	10.	.9%	65.1%	24.0%					,		13–17
23-29	11.	.2%	38.0%	44.0%		6.9%					18-24
30+	11.	.5%	37.9%	27.5%		18.1%		3.3%	1.5%	0.2%	13-17
Total	11.	.1%	48.8%	31.7%		7.0%		0.9%	0.4%	0.1%	13-17
How old	were you w	hen you	first assumed a	an asexual spec	trum idei	ntity?					
	<	13	13–17	18–24		25-34		35–44	45–54	55–64	Mode
18–22	1.3	3%	49.9%	48.8%							13–17
23-29	0.3	3%	11.4%	68.3%		20.0%					18-24
30+	1.8	3%	11.9%	28.2%		39.0%		14.8%	3.7%	0.7%	25-34
Total	1.1	%	26.9%	50.1%		17.0%		3.8%	1.0%	0.2%	18-24
How old	were you w	hen you	first disclosed	your asexual sp	ectrum o	orientation	to ano	ther person	?		
	< 13	1	13–17	18–24	25–34	35	5–44	45-	54 55–64	Never	Mode
18–22	0.3%	,	38.7%	53.7%						7.3%	18–24
23-29	0.3%		6.6%	62.2%	25.9%					5.0%	18-24
30+	_		7.7%	24.4%	38.1%	15	5.2%	3.3	% 0.2%	11.0%	25-34
Total	0.2%	)	19.7%	49.0%	18.7%	3.	9%	0.99	% 0.1%	7.5%	18-24

when something happened in their life; because no participants selected this category, it is not listed in Table 1.

These items were assessed on Likert-type scales and can be organized around three areas—feelings of attraction (when participants first felt a physical or romantic/emotional attraction to a person of the same/different gender), acting on attraction (when participants first acted on sexual desires or romantic/emotional attraction with a person of the same/different gender), and asexuality/sexual orientation (when they considered their sexual orientation, assumed the asexual identity, and disclosed the orientation to another person). See Table 1 for scale response options.

# **Outness in Social Networks**

Participants were asked about the degree to which they were out to different members of their social networks. Specifically, they were asked, "Are you out to \_\_\_\_? If so, how many are you out to?" separately for heterosexual friends, LGBT-QIA+ friends, family, and coworkers. People responded

using the Likert scale values of 1(none at all), 2(a little), 3(a moderate amount), 4(a lot), and 5(a great deal) (see Caba et al., 2022 for a similar approach). To provide some context about their social networks and how many people they interact with on average, we also asked participants how many people in the heterosexual and LGBTQIA+ communities (2 questions) with whom they interact daily using scale points of 1(0), 2(1-3), 3(3-5), 4(5+). We did not collect comparable data on how often they interact with their families or coworkers (however, presumably, they likely interact with coworkers fairly often). Distributions of the outness variable are reported, but for the regression analyses predicting subjective well-being, we computed an average outness score across all items ( $\alpha = 0.83$ ).

# **Psychosocial Functioning**

**Internalized Acephobia** To measure internalized acephobia, we adapted 8 items from a measure of internalized homopho-



bia that could easily be reworded to accommodate asexuality (Martin & Dean, 1987). Following previous research (Frost & Meyer, 2009), we dropped a ninth item given its conflation with community connectedness rather than a pure item reflecting internalized phobia. Participants responded to each item (e.g., "I feel that being on the asexual spectrum is a personal shortcoming for me.") on a scale from 1(strongly disagree) to 7(strongly agree). Responses were averaged such that higher scores corresponded to more internalized acephobia ( $\alpha$ =0.88).

**Life Satisfaction** A single-item indicator of life satisfaction was administered. The item, "I am satisfied with my life" was answered on a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). Single-item measures of life satisfaction have comparable validity to longer-form measures (Cheung & Lucas, 2014; Lucas & Donnellan, 2012).

#### Results

Descriptives and correlations between all study variables are provided in Table 2.

# History of Romantic and Sexual Attraction and Asexual Identity Across Life

Retrospective reports of histories of romantic and sexual attraction are reported in Table 1. Because some of the response categories did not apply to certain ages (i.e., people could not select felt romantic feelings when they were 45-54 if they were only 22 years old when they took the survey), we split the sample into three age groups so that a large enough sample size could be obtained for people aged 18-22 (n=700), 22-29 (n=599), and 30+(n=427). We also did so to capture any possible cohort differences in people's reports of sexual and romantic attraction (e.g., do older people report different romantic/sexual histories as they grew up during a time when asexuality was a less visible identity?). A sample-wide (i.e., Total) score (collapsing across ages) is also reported in Table 1.

Across nearly all types of romantic and sexual histories, the most common response for asexual individuals is that they mostly never felt romantic/emotional attraction, physical attraction, or acted on sexual desire (with those of the same or different gender) across their entire lives. The only exceptions were that people tended to feel and act on a romantic/emotional attraction to someone of a different gender around adolescence (ages 13–17). Worth noting, even for these two variables, a substantial proportion of the sample reported not feeling or acting on romantic/emotional feelings (33.7%) toward someone of a different gender. This pattern was somewhat found across the other variables—although most

 Table 2
 Correlation and descriptive statistics of study variables

lable 2 Correlation and descriptive statistics of study variables	iptive statis	stics of stu	dy variables										
	M/%	M/% SD Range	Range	1	2	3	4	5	9	7	8	6	10
1. Age	25.14	6.82											Ī
2. Man	14.8			***/0'-									
3. Woman	61.2			***20.	52**								
4. Non-Binary	15.0			-0.02	17**	53**							
5. Other Gender	0.6			-0.00	13**	40**	13**						
6. Transgender	10.7			05*	0.04	39**	.37**	.17**					
7. Race	21.4			-0.04	0.02	08**	0.04	*90	-0.00				
8. Relationship Status	31.2			**80`	11**	0.05	0.02	0.03	.11**	-0.02			
9. Outness	2.54	1.08	1–5	-0.01	11**	05*	.12**	.054*	.19**	**80'-	**80`		
10. Internalized Acephobia	2.33	96.0	1–5	0.00	0.00	**60	*90	**60'-	08	-0.02	*90`	11**	
11. Life Satisfaction	4.55	1.65	1–7	0.02	-0.04	.13**	-0.05	12**	10**	07**	.13**	.13**	22**



reported never feeling physical and/or romantic/emotional attraction, those who did said this most often happened in adolescence.

Regarding thinking about their sexual orientation and asexual identities, most people considered their sexual orientation for the first time in adolescence. The age at which people first assumed an asexual spectrum identity was agegraded: 18–22-year-olds did so in adolescence (ages 13–17), 23–29-year-olds did so in young adulthood (ages 18–24), and 30+-year-olds did so in adulthood (ages 25-34). Although the lack of romantic and sexual attraction was ever-present in many participants' lives, identification as asexual happened at an early age for younger participants and a slightly later age for 30 + -year-olds. Despite assuming an asexual identity at an early age (ages 13-17), most 18-22-year-olds did not disclose their asexual orientation until recently (when they were 18–24, or now). Identification and disclosure happened more simultaneously among 23–29 and 30+-year-olds—many of them disclosed their asexual identity around the same time that they first assumed the identity.

#### **Outness in Social Networks**

Table 3 reports the degree of outness among asexual individuals to different people in their social networks (along with contextualizing information about who they tend to interact with daily). Asexual individuals are most commonly out to their LGBTQIA+ friends. Asexual individuals have disclosed their identities to a few heterosexual friends and are largely not out to their family and, especially, their coworkers (62.2% are not out at all to coworkers). These results largely replicate what was seen in previous research (Caba et al., 2022).

To provide some context, asexual individuals have relatively little contact with members of the LGBTQIA+ community on a daily basis yet are out to most of their friends in the LGBTQIA+ community. Asexual individuals interact a

great deal with members of the heterosexual community daily but are rarely out to their heterosexual friends.

# Predictors of Life Satisfaction Among Asexual Individuals

To examine associations with well-being, we ran a linear regression in which life satisfaction was predicted from: internalized acephobia, the degree of outness (i.e., an average of the four outness variables), age, gender (dichotomously coded for women (=1), non-binary people (=1), and those who listed another gender (=1), with men serving as the reference group (0)), transgender identity (dichotomously coded for transgender people (1), with non-transgender people serving as the reference group), race/ethnicity (i.e., dichotomously coded for whether they are a person of color (1), with White people serving as the reference group), and relationship status (dichotomously coded for whether they are in any sort of relationship (1), with single people serving as the reference group). For each of these dichotomous variables, a separate variable was constructed for each group (i.e., effects are estimated for women, non-binary people, and other genders separately, with men as the reference group). Rotating the reference group allowed us to compare differences between groups that had more than three categories. These results largely reproduced the effect sizes and directional differences reported below.

The results of this analysis can be found in Table 4. By far, the largest predictor of life satisfaction was internalized acephobia: Those who reported higher levels of internalized acephobia reported lower life satisfaction. More outness was also associated with higher life satisfaction. Participants identifying as another sex/gender (not male, female, or non-binary) and transgender participants reported lower life satisfaction. Asexual individuals who are currently in a relationship reported higher life satisfaction.

**Table 3** Outness in the social networks of asexual individuals

	None at all	A little	A moderate amount	A lot	A great deal	M	SD	Mode
Are you "out" to: (and if so, how many?)								
Heterosexual Friends	16.0%	32.5%	20.1%	12.6%	18.7%	2.86	1.35	A little
LGBTQIA+Friends	15.6%	20.3%	12.4%	16.0%	35.8%	3.36	1.51	A great deal
Family	37.1%	31.9%	15.6%	7.2%	8.1%	2.17	1.23	None at all
Coworkers	62.2%	18.4%	9.5%	3.6%	6.2%	1.73	1.16	None at all
	0	1–2	3–5	5+		M	SD	Mode
How many people in the following communi	ities do you inte	ract with or	a daily basis?					
Heterosexual community	1.7%	21.0%	19.2%	58.1%		3.34	0.86	5+
LGBTQIA+community	16.2%	48.8%	18.3%	16.7%		2.36	0.94	1–2



**Table 4** Associations between primary study variables and life satisfaction

Life satisfaction						95% Confide val ( <i>b</i> )	ence Inter-
	b	SE	β	t	p	LB	UB
Intercept	5.08	.18		28.45	<.001	4.73	5.43
Internalized acephobia	42	.04	24	-9.72	<.001	51	34
Outness	.18	.04	.12	4.57	<.001	.10	.26
Age	<.001	.01	001	04	.97	01	.01
Gender (Ref: Men)							
Women	.07	.12	.02	.57	.57	17	.30
Non-binary	13	.16	03	84	.40	44	.18
Other gender	73	.18	12	-3.96	<.001	-1.09	37
Transgender (Ref: no)	71	.15	13	-4.73	<.001	-1.00	41
Person of color (Ref: White)	19	.10	05	-1.89	.06	39	.01
In a relationship (Ref: No)	.56	.09	.16	6.27	<.001	.39	.74

Note.  $F(9, 1458) = 22.95, p < .001, R^2 = .12$ 

# Discussion

# **Development of Asexual Identities**

Situating one's place within their sexual orientation can be a complicated and highly individualized process, particularly for sexual minorities (Cacciatore et al., 2019; Heine & Browning, 2014; LeVay et al., 2006; Tolman & McClelland, 2011). In the current study, we examined retrospective accounts of whether people felt sexual/romantic attraction or had acted on their romantic/sexual feelings. We did so to gain a broader appreciation of the diversity and heterogeneity of asexual individuals' experiences across the lifespan (Bogaert, 2015; Moore et al., 2014; Morgan, 2013; Mori et al., 2020; Rothblum et al., 2020; Srivastava et al., 2022; Tillman et al., 2019).

Some asexual people reported having sexual and/or romantic feelings earlier in life, although the way our questions (i.e., the "first" time they felt or acted on these things) were worded leaves some uncertainty about whether they have felt or acted on these feelings since their first time. Nevertheless, over half the sample (and often more than two-thirds of the sample) said that they have not had sexual feelings ever. Among those who never experienced sexual or romantic feelings, this pattern suggests that the lack of sexual attraction was present even before they formally adopted an asexual identity. However, one common response was that asexual individuals felt and acted on romantic/emotional attraction relatively early in life, during their adolescent years. This is consistent with normative relational development that occurs in allosexual populations. This suggests that romantic attraction was felt during a period of high socialization and peer influences about relationships (i.e., high school). Although the lack of romantic and sexual attraction and behavior was common in this sample, there was an acknowledgment among some asexual individuals that they experienced fleeting physical attraction earlier in life, although these rare events were most likely to occur in adolescence. It was around this time that people began to interrogate their sexual orientation as well. However, despite thinking about their sexuality, many people had only recently formally identified as being on the asexual spectrum. Specifically, there was an age-graded pattern such that 18–22-year-olds did so in adolescence (ages 13–17), 23–29-year-olds did so in young adulthood (ages 18–24), and 30+-year-olds did so in adulthood (ages 25-34). This pattern may be consistent with greater education and visibility of asexual identities and communities increasing in recent years, finally providing people with a useful label for how they think and feel about sex. Again, identifying and comparing subgroups of asexual participants would likely provide additional insights into whether all asexual people tend to display these age-graded patterns and identity negotiation.

# Outness, Acephobia, and Life Satisfaction Among Asexual Individuals

Being out can be a double-edged sword—both providing a sense of community and acceptance with some people but also leaving a person open to discrimination (Chang et al., 2021; D'Augelli et al., 1998; Legate et al., 2012; Whitman & Nadal, 2015). Asexual individuals are more likely to be out to other members of the LGBTQIA+ community than other groups they interact with, such as heterosexuals, family members, and work colleagues (Caba et al., 2022). This could be because asexual individuals feel they are more likely to be accepted and understood by other sexual minority groups, as opposed to members of the dominant heterosexual community (Scott & Dawson, 2015). Indeed, we found that asexual



individuals are rarely out to heterosexual friends, and most participants were not out to family or coworkers at all. With respect to participants not being out among family members specifically, sexual minority individuals may conceal their identities out of fear of judgment or losing connections (or even resources) with their family and others if not accepted (Bosson et al., 2012; Morris et al., 2020). In the large literature on the process of coming out for asexual people, there are contexts in which doing so can jeopardize social relationships (Vares, 2018). However, there is also a substantial portion of the asexual community that views it as unnecessary to come out or make formal declarations of their sexual orientation (Dawson et al., 2018; Robbins et al., 2016; Scott et al., 2016; Van Houdenhove et al., 2015). Qualitative testimonies from asexual people provide many explanations for this assessment: some view it as unnecessary altogether, others view it as irrelevant for particular contexts, and yet others view it as unlikely to enhance their experiences in these spaces or relationships.

Ultimately, the positive or negative impacts of coming out on mental well-being may be explained by whether they receive support from their social network (Chang et al., 2021; Leahy & Chopik, 2020). In the current study, we found that being more out to one's community was associated with greater well-being. However, there are important caveats to interpreting the practical implications of this effect, and there could be multiple explanations for why there is a link between the two variables. First, being out in one's environment might remove the stress associated with concealing one's identity and enable them to effectively navigate their social environments in a more authentic way. Alternatively, the association between outness and life satisfaction could be attributable to higher levels of social support. In other words, it could be that publicly disclosing one's identity might be more indicative of people finding themselves in supportive environments rather than a psychological catharsis from no longer concealing their identity. Of course, it is likely a product of both an individual not needing to conceal their identities and finding themselves in supportive environments that predict why out asexual people tend to be happier. Moving forward, more research should be dedicated to examining the conditions under which asexual individuals disclose their identities and the environmental predictors of acceptance for doing so. Considering that asexual individuals are so rarely out to family members and coworkers (and only rarely out to heterosexual peers overall), maintaining a concealed identity is likely to have important implications for their wellbeing, especially as they spend most of their time around non-LGBTO+ groups, as we found in the current study.

Asexuality is still a minority sexual identity, and asexual individuals face discrimination, microaggressions, and negative attitudes from society based on who they are (Dawson et al., 2016; Hoffarth et al., 2016; MacInnis & Hodson, 2012).

Internalized acephobia involves internally adopting these societal attitudes about oneself, which negatively impacts mental health and well-being (Su & Zheng, 2022; Zheng & Su, 2022). Acephobia may also be more likely to be internalized because asexual individuals may feel stigma from "all directions" (i.e., from both heterosexual majorities and the LGBTQ+ community; Parmenter et al., 2021; Worthen & Laljer, 2021; Zivony & Reggev, 2023). In the current study, asexual individuals endorsing higher levels of internalized acephobia were less satisfied with their lives overall. This association is consistent with past research on internalized homophobia processes in other sexual minorities and how this leads to worse health outcomes (Newcomb & Mustanski, 2010; Szymanski et al., 2008; Williamson, 2000). However, this association is also inconsistent with some past research showing weaker or non-existent effects of internalized acephobia on health and well-being (McInroy et al., 2022; Zheng & Su, 2022). Ultimately, more research is needed to determine the specific impacts of asexual individuals' experiences with internalized acephobia. To further unpack the phenomenon of internalized acephobia, future research can examine its prevalence and effects among different subgroups along the asexual spectrum. In other words, those with different constellations of asexual characteristics and identity might have differential experiences with and reactions to stigma by society and, consequently, internalize these experiences differently.

### **Limitations and Future Directions**

Our study had limitations that are important to acknowledge. First, our study was a single, cross-sectional, and descriptive examination of asexual individuals' experiences. Although it is valuable to better characterize asexual individuals' experiences, improvements in study designs can shed additional light on the processes that enhance asexual individuals' health and well-being. For example, having longitudinal data would help the field identify longer-term prospective predictors of asexual individuals' outness, acephobia, and wellbeing. Knowing what predicts these elements of individual and social well-being can also help identify modifiable factors that can enhance well-being among asexual individuals. Related, having longitudinal data on additional explanatory variables can also help pinpoint why individuals and social circumstances are related to well-being. For example, being out was associated with well-being among asexual individuals in our sample. However, only knowing this association exists creates some ambiguity regarding why out asexual people are happier, whether it comes from the stress relief of not needing to conceal their identity or receiving social support from their environment, both of which may lower internalized acephobia and enhance well-being (see Chang et al., 2021 for a similar mechanistic approach).



Second, our study featured a convenience sample of asexual individuals from online forums. Asexuality is rarely asked about in nationally representative panel studies, although some largesample studies exist (e.g., Bogaert, 2004; The Ace Community Survey, 2014). Among these large-sample surveys, subgroups within the larger group of asexual individuals are only sometimes acknowledged or studied directly. This is particularly true when considering distinctions between romantic and sexual attraction (and different facets within romantic and sexual attraction), toward who is attraction felt (or not), from whom is attraction expressed, and at what point attraction emerges toward others (or not). For example, some asexual individuals may come to feel some attraction but only after a strong emotional bond is formed first (i.e., demisexual individuals). Other asexual individuals may feel no romantic or sexual attraction (i.e., aromantic asexual individuals). Yet other asexual individuals may have their romantic or sexual feelings wax and wane over time, depending on the particulars of their situation and the people around them (i.e., graysexual individuals). To date, there are very few largesample studies that adequately capture the diversity of the asexual community's experiences. The measurement and representation of different subgroups of asexual individuals are crucial in this regard. This would include the experiences of people who identify as demisexual or graysexual, or who are more romantically inclined. Although we had some representation from these different subgroups, we were not able to make formal comparisons between them in a way that would yield informative results. Thus, future research should more deliberately sample groups of asexual people and ask about the many facets of romantic and sexual attraction that people can experience.

Finally, we encourage more researchers to intentionally adopt a more intersectional approach moving forward (Cole, 2009). For example, in our study, we found that asexual individuals who identified as transgender or as an "other gender" reported lower levels of well-being. This pattern may have resulted from additional stigma resulting from their sex/gender identity that is compounded with stigma resulting from their asexual identity. Ultimately, the experiences of asexual people may not be separable from other identities in people's lives. Emergent research on asexual populations has provided some exciting new directions for future research with respect to how asexuality intersects with age, gender, race/ethnicity, and disability status, to name just a few intersecting identities (Cuthbert, 2017; Foster et al., 2019; Gupta, 2019; Kenny, 2013; Przybylo & Gupta, 2020).

# **Conclusion**

In closure, a lack of sexual attraction was a lifelong orientation—many asexual individuals reported never experiencing sexual attraction or acting on it. Identity formation processes and romantic feelings tended to be most salient in adolescence, but formal identification patterns suggest that people may have only recently started formally adopting an asexual orientation (i.e., only a few years prior to their current age, regardless of their current age). Asexual people were more out to other members of the LGBTQIA+community and less so to family members, coworkers, and the heterosexual community. Being out and lower levels of acephobia were associated with higher life satisfaction. Future directions should focus on unpacking the mechanisms that link individual and relational experiences to health and well-being among asexual individuals across the lifespan.

**Author Contributions** AB, JW, and WC conceived of the study. WC analyzed the data and created the tables and figures. AB and WC drafted the initial manuscript. All authors provided critical edits. All authors contributed to the article and approved the submitted version.

**Funding** The authors have no relevant financial or non-financial interests to disclose.

Data Availability Data and syntax/code are available at https://osf.io/3qeaz/.

#### **Declarations**

**Conflict of interest** The authors did not receive support from any organization for the submitted work.

Ethical Approval This study was carried out in accordance with the recommendations of Michigan State University Institutional Review Board (IRB#×17-448e) with informed consent being secured from all participants (documentation requirement waived but collected in accordance with the Declaration of Helsinki).

**Informed Consent** Participants provided informed consent prior to starting the survey. Physical documentation of informed consent was waived.

#### References

Allen, M. S., & Robson, D. A. (2020). Personality and sexual orientation: New data and meta-analysis. *Journal of Sex Research*, *57*, 953–965.

Allen, M. S., & Walter, E. E. (2018a). Linking big five personality traits to sexuality and sexual health: A meta-analytic review. *Psychological Bulletin*, 144, 1081–1110.

Allen, M. S., & Walter, E. E. (2018b). Personality stability and change between age 12 and 14 predicts relationships, sexual activity and same-sex sexual attraction at age 14. *Journal of Research in Personality*, 74, 95–101.

Antonsen, A. N., Zdaniuk, B., Yule, M., & Brotto, L. A. (2020). Ace and aro: Understanding differences in romantic attractions among persons identifying as asexual. *Archives of Sexual Behavior*, 49, 1615–1630.

Bogaert, A. F. (2004). Asexuality: Prevalence and associated factors in a national probability sample. *Journal of Sex Research*, 41, 279–287. Bogaert, A. F. (2015). Asexuality: What it is and why it matters. *Journal of Sex Research*, 52, 362–379.



- Bosson, J. K., Weaver, J. R., & Prewitt-Freilino, J. L. (2012). Concealing to belong, revealing to be known: Classification expectations and self-threats among persons with concealable stigmas. Self and Identity, 11, 114–135.
- Brotto, L. A., Knudson, G., Inskip, J., Rhodes, K., & Erskine, Y. (2010). Asexuality: A mixed-methods approach. Archives of Sexual Behavior, 39, 599–618.
- Brotto, L. A., & Yule, M. (2017). Asexuality: Sexual orientation, paraphilia, sexual dysfunction, or none of the above? Archives of Sexual Behavior. 46, 619–627.
- Brotto, L. A., & Yule, M. A. (2011). Physiological and subjective sexual arousal in self-identified asexual women. *Archives of Sexual Behavior*, 40, 699–712.
- Brotto, L. A., Yule, M. A., & Gorzalka, B. B. (2015). Asexuality: An extreme variant of sexual desire disorder? *Journal of Sexual Medicine*, 12, 646–660.
- Brozowski, A., Connor-Kuntz, H., Lewis, S., Sinha, S., Oh, J., Weidmann, R., Weaver, J. R., & Chopik, W. J. (2022). A test of the investment model among asexual individuals: The moderating role of attachment orientation. *Frontiers in Psychology*, 13, 912978.
- Bulmer, M., & Izuma, K. (2018). Implicit and explicit attitudes toward sex and romance in asexuals. *Journal of Sex Research*, 55, 962–974.
- Caba, A. E., Mallory, A. B., Simon, K. A., Rathus, T., & Watson, R. J. (2022). Complex outness patterns among sexual minority youth: A latent class analysis. *Journal of Youth and Adolescence*, 51, 746–765.
- Cacciatore, R., Korteniemi-Poikela, E., & Kaltiala, R. (2019). The steps of sexuality—A developmental, emotion-focused, child-centered model of sexual development and sexuality education from birth to adulthood. *International Journal of Sexual Health*, 31, 319–338.
- Carrigan, M. (2011). There's more to life than sex? Difference and commonality within the asexual community. Sexualities, 14, 462–478.
- Carvalho, A. C., & Rodrigues, D. L. (2022). Sexuality, sexual behavior, and relationships of asexual individuals: Differences between aromantic and romantic orientation. Archives of Sexual Behavior, 51, 2159–2168
- Chan, R. C. H., & Leung, J. S. Y. (2023). Experiences of minority stress and their impact on suicidality among asexual individuals. *Journal* of Affective Disorders, 325, 794–803.
- Chang, C. J., Kellerman, J. K., Fehling, K. B., Feinstein, B. A., & Selby, E. A. (2021). The roles of discrimination and social support in the associations between outness and mental health outcomes among sexual minorities. *American Journal of Orthopsychiatry*, 91, 607–616.
- Cheung, F., & Lucas, R. E. (2014). Assessing the validity of single-item life satisfaction measures: Results from three large samples. *Quality of Life Research*, 23, 2809–2818.
- Cole, E. R. (2009). Intersectionality and research in psychology. American Psychologist, 64, 170–180.
- Cole, S. W., Kemeny, M. E., Taylor, S. E., & Visscher, B. R. (1996). Elevated physical health risk among gay men who conceal their homosexual identity. *Health Psychology*, 15, 243–251.
- Copulsky, D., & Hammack, P. L. (2023). Asexuality, graysexuality, and demisexuality: Distinctions in desire, behavior, and identity. *Journal of Sex Research*, 60, 221–230.
- Cuthbert, K. (2017). You have to be normal to be abnormal: An empirically grounded exploration of the intersection of asexuality and disability. *Sociology*, *51*, 241–257.
- D'Augelli, A. R., Hershberger, S. L., & Pilkington, N. W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. *American Journal of Orthopsychiatry*, 68, 361–371.

- Dawson, M., McDonnell, L., & Scott, S. (2016). Negotiating the boundaries of intimacy: The personal lives of asexual people. *Sociological Review*, 64, 349–365.
- Dawson, M., Scott, S., & McDonnell, L. (2018). "'Asexual" isn't who I am': The politics of asexuality. Sociological Research Online, 23, 374–391.
- DeLuzio Chasin, C. J. (2011). Theoretical issues in the study of asexuality. *Archives of Sexual Behavior*, 40, 713–723.
- Diamond, L. M. (2003). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Psychological Review*, 110, 173–192.
- Flanagan, S. K., & Peters, H. J. (2020). Asexual-identified adults: Interactions with health-care practitioners. Archives of Sexual Behavior, 49, 1631–1643.
- Foster, A. B., Eklund, A., Brewster, M. E., Walker, A. D., & Candon, E. (2019). Personal agency disavowed: Identity construction in asexual women of color. *Psychology of Sexual Orientation and Gender Diversity*, 6, 127–137.
- Frost, D. M., & Meyer, I. H. (2009). Internalized homophobia and relationship quality among lesbians, gay men, and bisexuals. *Journal of Counseling Psychology*, *56*, 97–109.
- Greaves, L. M., Barlow, F. K., Huang, Y., Stronge, S., Fraser, G., & Sibley, C. G. (2017). Asexual identity in a New Zealand national sample: Demographics, well-being, and health. Archives of Sexual Behavior, 46, 2417–2427.
- Gupta, K. (2019). Gendering asexuality and asexualizing gender: A qualitative study exploring the intersections between gender and asexuality. Sexualities, 22, 1197–1216.
- Guz, S., Hecht, H. K., Kattari, S. K., Gross, E., & Ross, E. (2022). A scoping review of empirical asexuality research in social science literature. *Archives of Sexual Behavior*, 51, 2135–2145.
- Hall, S. S., & Knox, D. (2022). Not just about sex: Relationship experiences, beliefs, and intentions associated with asexuality. Sexuality and Culture, 26, 2274–2287.
- Heine, C., & Browning, C. (2014). Sexuality and older adults. In M. Temple-Smith (Ed.), Sexual health: A multidisciplinary approach (pp. 258–272). IP Communications.
- Hille, J. J. (2023). Beyond sex: A review of recent literature on asexuality. Current Opinion in Psychology, 49, 101516.
- Hille, J. J., Simmons, M. K., & Sanders, S. A. (2020). "Sex" and the ace spectrum: Definitions of sex, behavioral histories, and future interest for individuals who identify as asexual, graysexual, or demisexual. *Journal of Sex Research*, 57, 813–823.
- Hoffarth, M. R., Drolet, C. E., Hodson, G., & Hafer, C. L. (2016). Development and validation of the Attitudes Towards Asexuals (ATA) scale. *Psychology and Sexuality*, 7, 88–100.
- Impett, E. A., & Peplau, L. A. (2002). Why some women consent to unwanted sex with a dating partner: Insights from attachment theory. *Psychology of Women Quarterly*, 26, 360–370.
- Kenny, R. (2013). A review of the literature on sexual development of older adults in relation to the asexual stereotype of older adults. Canadian Journal of Family and Youth, 5, 91–106.
- Leahy, K. E., & Chopik, W. J. (2020). The effect of social network size and composition on the link between discrimination and health among sexual minorities. *Journal of Aging and Health*, 32, 1214–1221.
- Legate, N., Ryan, R. M., & Weinstein, N. (2012). Is coming out always a "good thing"? Exploring the relations of autonomy support, outness, and wellness for lesbian, gay, and bisexual Individuals. *Social Psychological and Personality Science*, 3, 145–152.
- LeVay, S., Valente, S. M., & Watson, N. V. (2006). Human sexuality. Sinauer Associates.
- Lucas, R. E., & Donnellan, M. B. (2012). Estimating the reliability of single-item life satisfaction measures: Results from four national panel studies. *Social Indicators Research*, 105, 323–331.



- MacInnis, C. C., & Hodson, G. (2012). Intergroup bias toward "Group X": Evidence of prejudice, dehumanization, avoidance, and discrimination against asexuals. Group Processes and Intergroup Relations, 15, 725–743.
- Martin, J., & Dean, L. (1987). *Ego-dystonic Homosexuality Scale*. School of Public Health, Columbia University.
- McInroy, L. B., Beaujolais, B., Leung, V. W. Y., Craig, S. L., Eaton, A. D., & Austin, A. (2022). Comparing asexual and non-asexual sexual minority adolescents and young adults: Stressors, suicidality and mental and behavioural health risk outcomes. *Psychology* and Sexuality, 13, 387–403.
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, 36, 38–56.
- Mohr, J. J., & Fassinger, R. E. (2006). Sexual orientation identity and romantic relationship quality in same-sex couples. *Personality and Social Psychology Bulletin*, 32, 1085–1099.
- Moore, S. R., Harden, K. P., & Mendle, J. (2014). Pubertal timing and adolescent sexual behavior in girls. *Developmental Psychology*, 50, 1734–1745.
- Moradi, B., Wiseman, M. C., DeBlaere, C., Goodman, M. B., Sarkees, A., Brewster, M. E., & Huang, Y.-P. (2010). LGB of color and white individuals' perceptions of heterosexist stigma, internalized homophobia, and outness: Comparisons of levels and links. *Counseling Psychologist*, 38, 397–424.
- Morgan, E. M. (2013). Contemporary issues in sexual orientation and identity development in emerging adulthood. *Emerging Adulthood*, 1, 52–66.
- Mori, C., Cooke, J. E., Temple, J. R., Ly, A., Lu, Y., Anderson, N., Rash, C., & Madigan, S. (2020). The prevalence of sexting behaviors among emerging adults: A meta-analysis. *Archives of Sexual Behavior*, 49, 1103–1119.
- Morris, E., Balaji, A. B., Trujillo, L., Rasberry, C. N., Mustanski, B., Newcomb, M. E., Brady, K. A., & Prachand, N. G. (2020). Family factors and HIV-related risk behaviors among adolescent sexual minority males in three United States cities, 2015. *LGBT Health*, 7, 367–374.
- Morris, J. F., Waldo, C. R., & Rothblum, E. D. (2001). A model of predictors and outcomes of outness among lesbian and bisexual women. *American Journal of Orthopsychiatry*, 71, 61–71.
- Newcomb, M. E., & Mustanski, B. (2010). Internalized homophobia and internalizing mental health problems: A meta-analytic review. *Clinical Psychology Review*, 30, 1019–1029.
- Parent, M. C., & Ferriter, K. P. (2018). The co-occurrence of asexuality and self-reported post-traumatic stress disorder diagnosis and sexual trauma within the past 12 months among US college students. *Archives of Sexual Behavior*, 47, 1277–1282.
- Parmenter, J. G., Galliher, R. V., & Maughan, A. D. A. (2021). LGBTQ+ emerging adults perceptions of discrimination and exclusion within the LGBTQ+ community. *Psychology and Sexuality*, 12, 289–304.
- Pinquart, M., & Sörensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging*, 15, 187–224.
- Prause, N., & Graham, C. A. (2007). Asexuality: Classification and characterization. *Archives of Sexual Behavior*, *36*, 341–356.
- Przybylo, E. (2013). Producing facts: Empirical asexuality and the scientific study of sex. Feminism and Psychology, 23, 224–242.
- Przybylo, E., & Gupta, K. (2020). Editorial introduction: The erotics of asexualities and nonsexualities: Intersectional approaches. *Femi*nist Formations, 32, vii–xxi.
- Rentería, R., Feinstein, B. A., Dyar, C., & Watson, R. J. (2023). Does outness function the same for all sexual minority youth? Testing its associations with different aspects of well-being in a sample of youth with diverse sexual identities. *Psychology of Sexual Orienta*tion and Gender Diversity, 10, 490–497.

- Robbins, N. K., Low, K. G., & Query, A. N. (2016). A qualitative exploration of the "Coming out" process for asexual individuals. *Archives of Sexual Behavior*, 45, 751–760.
- Rothblum, E. D., Krueger, E. A., Kittle, K. R., & Meyer, I. H. (2020). Asexual and non-asexual respondents from a U.S. population-based study of sexual minorities. *Archives of Sexual Behavior*, 49, 757–767.
- Scott, S., & Dawson, M. (2015). Rethinking asexuality: A symbolic interactionist account. Sexualities, 18, 3–19.
- Scott, S., McDonnell, L., & Dawson, M. (2016). Stories of non-becoming: Non-issues, non-events and non-identities in asexual lives. Symbolic Interaction, 39, 268–286.
- Simon, K. A., Hawthorne, H. M., Clark, A. N., Renley, B. M., Farr, R. H., Eaton, L. A., & Watson, R. J. (2022). Contextualizing the well-being of asexual youth: Evidence of differences in family, health, and school outcomes. *Journal of Youth and Adolescence*, 51, 128–140.
- Srivastava, A., Winn, J., Senese, J., & Goldbach, J. T. (2022). Sexual orientation change among adolescents and young adults: A systematic review. Archives of Sexual Behavior, 51, 3361–3376.
- Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, 134, 138–161.
- Storms, M. D. (1980). Theories of sexual orientation. *Journal of Personality and Social Psychology*, 38, 783–792.
- Su, Y., & Zheng, L. (2022). Sexual orientation and gender differences in sexual minority identity in China: Extension to asexuality. *Current Psychology*, 41, 8678–8691.
- Su, Y., & Zheng, L. (2023). Stability and change in asexuality: Relationship between sexual/romantic attraction and sexual desire. *Journal* of Sex Research, 60, 231–241.
- Suen, L. W., Lunn, M. R., Katuzny, K., Finn, S., Duncan, L., Sevelius, J., Flentje, A., Capriotti, M. R., Lubensky, M. E., Hunt, C., Weber, S., Bibbins-Domingo, K., & Obedin-Maliver, J. (2020). What sexual and gender minority people want researchers to know about sexual orientation and gender identity questions: A qualitative study. Archives of Sexual Behavior, 49, 2301–2318.
- Sumerau, J., Barbee, H., Mathers, L. A., & Eaton, V. (2018). Exploring the experiences of heterosexual and asexual transgender people. *Social Sciences*, 7, 162. https://doi.org/10.3390/socsci7090162
- Szymanski, D. M., Kashubeck-West, S., & Meyer, J. (2008). Internalized heterosexism: Measurement, psychosocial correlates, and research directions. *Counseling Psychologist*, 36, 525–574.
- The Ace Community Survey. (2014). *The 2014 AVEN community census: Preliminary findings*. https://acecommunitysurvey.org/wpcontent/uploads/2014/11/2014censuspreliminaryreport.pdf
- The Ace Community Survey. (2023). 2021 ace community survey summary report. https://acecommunitysurvey.org/wp-content/uploa ds/2023/10/2021-Ace-Community-Survey-Summary-Report.pdf
- The Ace Community Survey. (2024). Living conditions, coming out, and communities. https://acecommunitysurvey.org/2024/06/30/living-conditions-coming-out-and-communities-2021-survey/
- Tillman, K. H., Brewster, K. L., & Holway, G. V. (2019). Sexual and romantic relationships in young adulthood. *Annual Review of Sociology*, 45, 133–153.
- Tolman, D. L., & McClelland, S. I. (2011). Normative sexuality development in adolescence: A decade in review, 2000–2009. *Journal of Research on Adolescence*, 21, 242–255.
- Van Houdenhove, E., Gijs, L., T'sjoen, G., & Enzlin, P. (2014). Asexuality: Few facts, many questions. *Journal of Sex and Marital Therapy*, 40, 175–192.
- Van Houdenhove, E., Gijs, L., T'Sjoen, G., & Enzlin, P. (2015). Stories about asexuality: A qualitative study on asexual women. *Journal* of Sex and Marital Therapy, 41, 262–281.



- Vares, T. (2018). 'My [asexuality] is playing hell with my dating life': Romantic identified asexuals negotiate the dating game. Sexualities, 21, 520–536.
- Vu, K., Riggs, D. W., & Due, C. (2022). Exploring anti-asexual bias in a sample of Australian undergraduate psychology students. *Psychology and Sexuality*, 13, 984–995.
- Whitman, C. N., & Nadal, K. L. (2015). Sexual minority identities: Outness and well-being among lesbian, gay, and bisexual adults. *Journal of Gay and Lesbian Mental Health*, 19, 370–396.
- Williamson, I. R. (2000). Internalized homophobia and health issues affecting lesbians and gay men. *Health Education Research*, 15, 97–107.
- Worthen, M. G. F., & Laljer, J. (2021). LGBTQ+A? Asexuals' attitudes toward LGBTQ individuals: A test of norm-centered stigma theory. Sexuality & Culture, 25, 2052–2074.
- Yule, M. A., Brotto, L. A., & Gorzalka, B. B. (2015). A validated measure of no sexual attraction: The Asexuality Identification Scale. Psychological Assessment, 27, 148–160.
- Zheng, L., & Su, Y. (2018). Patterns of asexuality in China: Sexual activity, sexual and romantic attraction, and sexual desire. Archives of Sexual Behavior, 47, 1265–1276.

- Zheng, L., & Su, Y. (2022). Sexual minority identity and mental health among individuals on the asexuality spectrum in China: A longitudinal study. *Archives of Sexual Behavior*, 51, 3627–3636.
- Zivony, A., & Reggev, N. (2023). Beliefs about the inevitability of sexual attraction predict stereotypes about asexuality. Archives of Sexual Behavior, 52, 2215–2228.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.

