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Asexual and Non-Asexual Respondents from a U.S. Population-Based Study of Sexual Minorities

Esther D. Rothblum, Evan A. Krueger, Krystal R. Kittle, Ilan H. Meyer

Abstract

Using a U.S. population-based sample of lesbian, gay, bisexual (LGB) and other sexual minority (e.g., queer-identified) people, we compared those who identified as asexual ($n = 19$; 1.66%) and those who were non-asexual ($n = 1504$; 98.34%). Compared to non-asexual respondents, asexual respondents were more likely to be women or gender non-binary and belong to a younger (ages 18–27) cohort. Asexual individuals were also less likely to have had sex in the past 5 years, compared to non-asexual men, women, and gender non-binary participants, and also reported lower levels of sexual attraction to cisgender men and women than non-asexual women and men, respectively. However, asexual participants did not differ from non-asexual participants in being in an intimate relationship. Asexual respondents felt more stigma than non-asexual men and women, and asexuals reported more everyday discrimination than did non-asexual men. Asexual and non-asexual respondents did not differ in their sense of connectedness to the LGB community. Asexual and non-asexual respondents were as likely to be out to all family, all friends, and all co-workers, but fewer asexual participants were out to all healthcare providers than non-asexual men. The two groups were similar in general well-being, life satisfaction, and social support. In conclusion, asexual identity is an infrequent but unique identity, and one that has the potential to expand the concept of queer identity as well as to destabilize the foregrounding of sexual behavior.

Introduction

Qualitative research on the experiences of asexual-identified individuals has most often recruited participants from the Asexual Visibility and Education Network (AVEN) or similar online communities. This has included research on the process of coming out as asexual (McDonnell, Scott, & Dawson, 2017; Mitchell & Hunnicutt, 2018; Robbins, Low, & Query, 2016; Scott, McDonnell, & Dawson, 2016) and managing an identity that is inconsistent with societal assumptions about sex and relationships (Dawson, Scott, & McDonnell, 2018; Gupta, 2017; MacNeela & Murphy, 2015; Scherrer,

2008; Van Houdenhove, Gijs, T'Sjoen, & Enzlin, 2015). Quantitative studies on asexual identity have used non-probability samples and reported on sexual history (Brotto, Knudson, Inskip, Rhodes, & Erskine, 2010; Prause & Graham, 2007) and asexual community (Carrigan, 2011).

Most studies of asexual participants have small sample sizes, with the exception of AVEN's member survey of 10,880 asexual-identified individuals (Ginoza, Miller, & AVEN Survey Team, 2014). Participants in the AVEN sample ranged in age from 13 to 77 years, with a median age of 21. The median age of first identifying as asexual was 17, and the median age of disclosure to someone else was 19. The majority of asexual individuals were highly educated and not affiliated with a mainstream religion. Three-quarters were White/non-Hispanic, and 63.6% were from the U.S. Only 13.3% identified as a man or male compared with 62.1% who identified as a woman or female. Remaining respondents identified as genderqueer or some other gender. Regarding sexual orientation, 26.6% identified as straight, 26.1% as bisexual, 16.4% as pansexual, 11% as queer, 8.4% as lesbian, 4.6% as gay, and 6.9% as other.

Population-based studies have defined asexuality as the lack of sexual attraction rather than focusing on sexual identity. In a probability sample of over 18,000 households in the UK (Bogaert, 2004), about 1% of respondents (57 males and 138 females) reported never feeling sexual attraction toward anyone. Aicken, Mercer, and Cassell (2013) examined the National Surveys of Sexual Attitudes and Lifestyles in the UK in 1990–1991 and 2000–2001 and found that 0.4% and 0.9% of participants had never experienced sexual attraction, respectively, with no age or sex differences between people with and without attraction. In the Second Australian Study of Health and Relationships (Richters et al., 2014), 0.3% of men and 0.4% of women indicated that they were sexually attracted to no one. No comparable population-based study in the U.S. has asked about lack of sexual attraction, although Poston and Baumle (2010) found that 0.7% of males and 0.8% of females responded “not sure” about their sexual attraction on the U.S. National Survey of Family Growth.

A limitation of these studies is that *asexual* was not included as an identity or sexual orientation, so findings from previous studies have not captured the experiences of asexual-identified individuals specifically. This is a limitation because people who reported no sexual attraction or behavior may very well use heterosexual, LGB, or other identity terms. This is because there is no

perfect overlap among sexual identity, sexual behavior, and sexual attraction (Geary et al., 2018; Laumann, Gagnon, Michael, & Michaels, 1994; Morris & Rothblum, 1999).

An important exception is a recent study by Greaves et al. (2017) that used data from the New Zealand Attitudes and Values Study. Participants were asked “How would you describe your sexual orientation?” and wrote their response into an openended box. It was found that 0.4% of participants explicitly wrote in asexual; participants who wrote in other terms such as celibate or no sex were not categorized as asexual, allowing Greaves et al. to focus specifically on asexual identity. Compared with heterosexuals, asexuals were more likely to be women and much less likely to identify as cisgender. Compared with lesbians, gay men, and bisexuals, asexuals were more likely to be women, “gender diverse” and of Pacific Nations ethnicity. Compared with bisexuals, asexuals were less likely to be cisgender, a parent, or in a partnered relationship. There was no difference between groups in age, ethnicity, religion, education, or socioeconomic status.

Asexual Identity and Gender Identity

Most studies have found that far more women than men identify as asexual. Some researchers (Bogaert, 2004; MacNeela & Murphy, 2015; Mitchell & Hunnicutt, 2018; Przybylo, 2013; Robbins et al., 2016) have speculated that this is due to the societal expectations for men to be sexual, so that asexual men are more stigmatized than asexual women. For example, a theme in MacNeela and Murphy’s (2015) qualitative study was the assumption that women are generally disinterested in sex. Because nearly all of these studies recruited participants from AVEN or other online networks, McDonnell et al. (2017) have suggested that online respondents may be skewed toward certain demographics, including more women, as well as respondents who are White, younger, highly educated, and middle class. In contrast, Prause and Graham (2007) recruited participants from undergraduate psychology courses in addition to online communities and did not find a gender difference in asexual identity. Similarly, some population-based studies have not found gender differences in lack of sexual attraction, including those in the UK (Aicken et al., 2013), Australia (Richters et al., 2014), and the U.S. (Poston & Baumle, 2010), whereas others did find women to predominate (Bogaert, 2004, in the UK; Greaves et al., 2017 in New Zealand using asexual identity).

In addition, a significant percentage of asexual individuals do not identify as women or men. MacNeela and Murphy (2015) indicated that 18 out of their 66 (27%) asexual participants identified as genderqueer, androgynous, or did not indicate a gender. Yule, Brotto, and Gorzalka (2015) recruited a convenience sample of 316 asexual participants via online sources and found that 15% described their gender as undefined or other. In the AVEN Community Census (Ginoza et al., 2014), onequarter of the sample identified as genderqueer, bigender, agender, neutrois, or other. In the New Zealand population-based study by Greaves et al. (2017), asexual-identified participants were more likely to identify as transgender, gender fluid, or genderqueer than were sexual participants. Greaves et al. stated: “for reference, people who did not identify as cisgender were 149 times more likely to identify as asexual relative to those who identified as cisgender” (p. 2421). There has been little theorizing about gender identity among asexual individuals, although Mitchell and Hunnicutt (2018) reported that a few of their participants began to question gender identity and gender expression when they also questioned sexual expectations.

The Stigma of Asexual Identity

One of the themes in qualitative studies is that asexual individuals report feeling invisible or isolated in society due to negative attitudes about asexuality, and also feel left out when their friends talk about sex (Carrigan, 2011; Gupta, 2017; Mitchell & Hunnicutt, 2018). Prause and Graham (2007) asked asexual participants about the benefits and drawbacks of their identity; one of the drawbacks was the negative societal attitudes about asexuality. MacNeela and Murphy (2015) stated that “selfidentification [as asexual] places the person in a threatening position that has to be managed” (p. 800). In their study, asexual participants indicated that reactions from others included anger, disbelief, and pathologizing. MacInnis and Hodson (2012) surveyed 148 heterosexual Canadian university students and then 101 heterosexual online community participants about their attitudes toward asexuals. Both groups were biased toward sexual minorities, and most biased toward asexuals compared with homosexuals and bisexuals.

Given these results, it is perhaps not surprising that Brotto et al. (2010) found asexual individuals recruited from AVEN to have elevated scores on social withdrawal. On the other hand, the

population-based study of asexual-identified participants in New Zealand by Grieves et al. (2017) did not find them to differ from non-asexuals on social support, self-esteem, felt belongingness, and life satisfaction.

For these reasons, it is particularly important for asexual individuals to find a supportive community (Carrigan, 2011). In the AVEN Community Census, the primary reasons for asexuals to participate in asexual communities were to understand themselves and to find other asexual people (Ginoza et al., 2014). Asexual participants in Gupta's (2017) qualitative study described the relief they felt upon finding asexual community, and those in MacNeela and Murphy's (2015) qualitative study described finding asexual community to be meaningful and a good fit.

Asexual Identity as a Sexual Identity?

Researchers have also discussed whether asexuality per se should be considered a sexual orientation instead of, or along with, other sexual orientations (cf. Bogaert, 2006, 2012; Brotto & Yule, 2017; Pacho, 2013). In Gupta's (2017) qualitative study, all of the participants referred to asexuality as a sexual identity, and many as a sexual orientation. Many also perceived asexuality to be an innate or essentialist part of themselves. In the AVEN Community Census (Ginoza et al., 2014), the majority of asexual participants also identified as "LGBTQ+" (41.9% without reservations and 32.7% with some reservations), although in a separate item fewer identified as queer (33.6% without reservations and 24.2% with some reservations). Additionally, 88% of participants felt that asexuality should "be part of the LGBTQ + Umbrella."

A separate question is whether the LGB communities accept asexual-identified members. In the AVEN Community Census, only 11.5% of participants felt unconditionally welcomed by the "Queer/LGBTQ + Community." Dawson et al. (2018) also found asexual participants to express ambivalent feelings about LGBT organizations.

Purpose of the Present Study

With the exception of the study by Greaves et al. (2017) in New Zealand, there have been no population-based studies of asexuality as an identity, and none in the U.S. The present study

examined the experiences of a sample of asexual-identified adults from the *Generations* study (Krueger, Lin, Kittle, & Meyer, 2015), a longitudinal U.S. population-based study that compares sexual minorities across three age cohorts. The reporting of asexual identity as sexual orientation in the study lends opportunity to compare asexual with non-asexual respondents recruited from a U.S. population-based survey. Our first aim was to compare asexual and sexual respondents on gender identity given the mixed findings from prior research. Second, like many of the existing studies, the current study assessed demographic characteristics of asexual individuals as well as items about sexual attraction and behavior.

Third, we also wanted to assess measures of outness to others, felt stigma, and everyday discrimination between asexual and non-asexual respondents. Given the negative attitudes that asexual individuals experience and the bias reported by heterosexuals against asexuals (MacInnis & Hodson, 2012), we hypothesized that asexuals would experience more stigma and discrimination, and be less out to others, than non-asexual respondents.

Fourth, we were interested in how asexuals experience themselves as a part of the LGBT communities. We hypothesized that asexual respondents recruited via a survey of sexual minorities would feel less connected to LGBT communities than nonasexual respondents. Additionally, we wanted to analyze measures of social support, social well-being, and satisfaction with life, in order to examine the general sense of social well-being experienced by asexual respondents. If asexual minorities have negative experiences in society and/or do not feel part of the LGBT communities, are they finding support and well-being?

Method

Participants and Procedure

Participants were from the *Generations* study, a longitudinal epidemiological study that compares three cohorts of sexual minority people that are distinct in the historical context and events that happened over their lifetime (Krueger et al., 2015). Researchers began by composing a list of major events that characterize the social environment of LGB people since 1969 (available on the study

website at www.generations-study.com). To define the cohorts, the researchers lined up significant events that people who would have been 10 years old plus/minus 3 years—considered a significant age span for sexual development (Herdt & McClintock, 2000)—in order to approximate the ages when the social environment would make an impact on their socialization. Three events stood out to characterize three distinct periods in LGB life: the Stonewall Inn riots (1969), the formation of ACT UP (1987), and the Massachusetts Supreme Court ruling that it was unconstitutional to deny marriage to same-sex couples (2003).

Respondents for the present study were from the first wave (2016–2017) of this study. The youngest cohort, the *Equality* generation, was 18–25 years old when recruited. They are respondents whose early life experiences were impacted by a national focus on LGBT equality, such as marriage equality, employment discrimination, and other forms of institutionalized LGBT acceptance. The second cohort, the *Visibility* generation, was 34–41 years old when recruited. They are respondents whose early life experiences were impacted by a period after the beginning of the AIDS epidemic, when LGBT institutions were strengthened and LGBT people gained greater visibility. The oldest cohort, the *Pride* generation, was 52–59 years old when recruited. Their early life experiences took place immediately after the 1969 Stonewall riots and the start of the modern gay liberation movement, and thus, they were impacted by the emergence of a gay identity, discourse about gay pride, and coming out.

Respondents were recruited by the survey research company Gallup, Inc., which uses random-digit dialing of landlines and cell phones to interview U.S. adults. Participants were recruited using a daily random sample over 1 year (March 2016–March 2017 with an oversample of Black and Latino respondents recruited in March 2017–March 2018). Participants were screened via a 2-step recruitment procedure. In the first step, LGBT individuals were identified in the general U.S. population; in the second step, eligible respondents who agreed to participate completed a self-administered questionnaire (online or paper). Straight/heterosexual respondents were not eligible for the study. Respondents who identified as transgender, regardless of sexual orientation, were recruited into a different study that focused on transgender issues and are not reported here (www.transpop.org), but sexual minority respondents who identified as genderqueer/non-binary

(GQNB) but not transgender, were included in the Generations study. Therefore, the current study considers the experiences of cisgender (that is, respondents who answered “no” to the question asking if they identified as transgender) and GQNB individuals who are sexual minorities.

In the first step, a representative sample of the U.S. cell phone and landline telephones was called by Gallup interviewers. Among other questions respondents were asked, “Do you personally identify as lesbian, gay, bisexual or transgender?” Respondents who identified as LGBT were further assessed based on additional criteria: they had to be in one of three age cohorts (i.e., 18–27, 32–43, 50–61); identify as Black, Latino, or White or multiracial including one of these groups; completed the sixth grade or higher; and able speak English well enough to be interviewed in English. The reason for the age restriction had to do with the aims of the study to understand differences in socialization experiences of sexual minorities coming of age in different historical contexts. The reason for the race/ethnicity restriction has to do with the small base rate of other racial/ethnic groups in the U.S., which would have not allowed the necessary number of respondents per race/ethnic group within the recruitment time.

As part of the Step 1 eligibility assessment, respondents were asked about their gender and sexual identity. To assess gender identity, respondents were asked the following two questions, “Which of the following terms best describes your current gender identity” (response options: man, woman, non-binary/ genderqueer) and, “Do you currently describe yourself as a man, a woman, or transgender” (response options: man, woman, transgender). Respondents were classified as transgender if they identified as transgender or if they identified as men or women and their gender identity was different than their sex assigned at birth. To assess sexual identity, respondents were asked, “Do you consider yourself to be...” and provided with the following options: lesbian, gay, bisexual, queer, same-gender loving.

A total of 366,644 individuals representing the U.S. population of people with phone (landline or cell phones) were screened by phone. Of them, 3.5% identified as LGBT and 27.5% of those participants met all of the eligibility criteria requirements and were invited to participate in the study. Eighty percent agreed to participate and were emailed a linked web address to access the online survey (76%) or mailed a survey questionnaire with a stamped return addressed envelope

(24%). Of them, 48% completed the survey. The final dataset for the baseline survey included 1534 (1345 from original sample, 189 from oversample). Eleven participants identified as straight/heterosexual and were excluded from analysis. As such, the final analytic sample used in this report had 1523 participants. The self-administered (web or paper) survey took about an hour to complete; upon being recruited, participants received a \$25 gift certificate.

Measures

Sexual Orientation

On the survey, participants were asked “Which of the following best describes your current sexual orientation” with choices of straight/heterosexual, lesbian, gay, bisexual, queer, samegender loving, or other (write-in). Nineteen respondents wrote in a sexual identity on the asexual spectrum (13 wrote asexual or indicated asexuality within their response [e.g., asexual panromantic, bi-romantic asexual], 5 wrote demisexual, 1 wrote non-sexual) and were categorized as asexual for this study. All other respondents were categorized as non-asexual.

Demographic Characteristics

Participants also provided their current gender identity (woman, man, non-binary/genderqueer). Other demographic measures included sex assigned at birth (female, male), race/ethnicity (White, Black/African American, or Latino/Hispanic), age cohort, and education (high school or less/more than high school).

Sexual Behavior and Attraction

Respondents were asked “In the last 5 years, who did you have sex with? By sex, we mean any activity you personally define as sexual activity. Please mark all that apply.” They were asked about sex with cisgender women, cisgender men, transgender women, and/or transgender men, or not at all (yes/no). They were also asked if they were sexually attracted to non-trans women, non-trans men, trans women, and/or trans men (somewhat or very, not at all, not very, or not sure).

Respondents were also asked “Are you currently in a relationship or feel a special commitment to someone” (yes/no).

Outness

In a series of four questions, respondents were asked about the degree to which they were out to or concealed their sexual identity to family, heterosexual friends, co-workers, and healthcare professionals, respectively (Meyer, Rossano, Ellis, & Bradford, 2002). Respondents were asked whether they were out to all, most, some, or none of each group of people, and responses to each of the questions were dichotomized as out to all or not to all (none, some, most). A higher score indicated a greater degree of outness.

Felt Stigma

This subscale (Herek, 2008) focuses on participants' perceptions of stigma in their environment. It consists of three items (Cronbach's $\alpha = .70$), including items such as “Most people where I live would not want someone who is openly LGB to take care of their children,” scored on a 5-point Likert scale (strongly agree to strongly disagree). A mean score was calculated for each participant, with higher scores indicating more felt stigma.

Everyday Discrimination

This scale was modified from Williams, Yu, Jackson, and Anderson (1997) and asked participants the extent to which nine items (Cronbach's $\alpha = .91$), such as “You were called names or insulted,” happened to them in their day-to-day life. Items were scored on a 4-point Likert scale (often to never). A mean score was calculated for each participant, and the final scale was reverse-coded so that higher scores indicated more discrimination.

LGBT Community Connectedness

The study used the first seven items (Cronbach's $\alpha = .86$) of the Community Connectedness Scale (Frost & Meyer, 2011). Items (e.g., “You feel you're a part of the LGBT community”) were scored on a

4-point Likert scale (agree strongly to disagree strongly). A mean score was calculated for each participant, and the final scale was reverse-coded so that higher scores represented greater connectedness.

Social support

The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-item scale (Cronbach's $\alpha = .93$) of overall perceived social support that assesses the perception of support from family, friends, and significant others. Items (e.g., "There is a special person who is around when I am in need," "My family really tries to help me") were scored on a 7-point Likert scale (very strongly disagree to very strongly agree), and a mean score was created with high scores indicating more social support.

Social Well-Being

This 15-item scale (Cronbach's $\alpha = .81$) focuses on participants' sense of belonging to a community (Keyes, 1998). Items (e.g., "My community is a source of comfort") were scored on a 7-point Likert scale (strongly disagree to strongly agree). Items were reverse-coded as necessary, and a mean score was created, with higher scores indicating greater social well-being.

Satisfaction with Life

Diener, Emmons, Larsen, and Griffin's (1985) 5-item scale (Cronbach's $\alpha = .91$) measures general satisfaction with life (e.g., "In most ways, my life is close to my ideal"). Items were scored on a 7-point Likert scale (strongly disagree to strongly agree), and a mean score was created, with higher scores indicating greater life satisfaction.

Data Analysis

Bivariate differences were assessed between asexual and nonasexual minority participants. Comparisons were made across a range of selected characteristics using Rao Scott designadjusted F tests (categorical variables) and adjusted Wald F tests (continuous variables). Bivariate differences

were also assessed among asexuals and the subgroups of non-asexual women, men, and genderqueer/non-binary (GQNB) participants, similarly using adjusted Wald and Rao Scott designadjusted *F* tests. When overall differences were detected, post hoc tests then assessed whether asexual participants differed, specifically, from each of the non-asexual subgroups (i.e., nonasexual women, non-asexual men, non-asexual GQNB), and Holm–Bonferroni adjusted *p* values were used to adjust for multiple comparisons. All analyses used survey weights to allow for generalization to the U.S. population of sexual minority adults, ages 18–27, 32–43, and 50–61.

Results

Nineteen participants wrote in a sexual identity on the asexual spectrum (1.66%, SE = 0.47, of the sample). In Table 1, we present proportions or means of all the tested variables for the asexual and non-asexual participants together and separately for the non-asexual subgroups of women, men, and GQNB.

Gender Identity

As shown in Table 1, asexual participants differed significantly from non-asexual groups on the basis of gender identity. About one-quarter of asexual participants (27.74%, SE = 11.45) identified as women, compared with 54.92% (SE = 1.58) of the nonasexual participants. None of the asexual individuals identified as men, compared to 38.73% (SE = 1.52) of the non-asexuals. Nearly three-quarters (72.26%, SE = 11.45) of asexual participants identified as GQNB compared to 6.35% (SE = 0.81) of non-asexual participants.

The overwhelming majority of asexual participants were assigned female at birth (85.62%, SE = 10.32) compared with 59.04% (SE = 1.54) of non-asexual participants, and 14.38% (SE = 10.32) of asexuals reported male sex assigned at birth as compared with 40.96% (SE = 1.54) of the non-asexual participants. However, this difference was not statistically significant.

Demographic Characteristics

Table 1 shows demographic characteristics for asexual and non-asexual respondents, and also for the subgroups of nonasexual women, men, and GQNB participants. The samples did not differ

significantly on the basis of race/ethnicity, with similar proportions of asexual and non-asexual participants identifying as White, Black, and Latino, and no gender subgroup differences were detected either. Asexual participants were younger than non-asexual participants: a greater proportion of asexual respondents (91.19%, SE = 5.47) were in the younger cohort (ages 18–27) compared to the non-asexual respondents (61.30%, SE = 1.47), while a smaller proportion of asexuals reported being in the middle (ages 32–43) and older (ages 50–61) cohorts.

While there was a significant difference between asexual and non-asexual participants on education, with fewer asexuals above a high school level of education (31.44%, SE = 10.87) than non-asexuals (Table 1; 58.75%, SE = 1.71), this was related to the age difference between the groups and was not significant in analysis that controlled for participants' age (data not shown). The education of asexual participants did not differ significantly from the education of any of the non-asexual groups when analyzed separately by gender.

Sexual Behavior and Attraction

Asexual participants reported significantly less sexual activity than non-asexual participants. Nearly half (46.46%, SE= 14.17) of the asexuals reported that they had not had sex in the 5 years prior to completing the survey, compared with less than a tenth of the non-asexual respondents (9.74%, SE= 0.97). In terms of sexual partners, a smaller proportion of asexual respondents reported engaging in sexual activity with cisgender men in the past 5 years, compared to non-asexual women, men, and GQNB.

There was also a significant difference in sexual attraction, with a smaller proportion of asexual respondents reporting attraction to cisgender women than did non-asexual women and GQNB, and a smaller proportion of asexual respondents reporting attraction to cisgender men than did non-asexual women, men, and GQNB. A smaller proportion of asexual respondents also reported attraction to transgender men, compared to non-asexual GQNB. None of the group differences reported in sexual behavior and attraction were related to age differences between the groups (results not shown).

In terms of intimate partners, 58.58% (SE = 14.09) of asexual participants reported being in a current intimate relationship or feeling a special commitment to someone, similar to non-asexual participants (61.36%, SE = 1.58), and this did not differ significantly between asexual respondents or any the gender subgroups of non-asexual participants (Table 1, post hoc analysis).

Stigma and Outness

In this survey of sexual minorities, asexual respondents reported more everyday discrimination than non-asexual men, but not non-asexual women or GQNB. Asexual respondents also reported more felt stigma than non-asexual men and women, but not GQNB. Asexual and non-asexual sexual minorities did not differ on outness to all family members, all heterosexual friends, or all co-workers, but asexuals were less out to all healthcare providers, compared to non-asexual men.

Connection to the LGBT Community, Social Support, and Well-Being

Asexual and non-asexual participants did not differ in their sense of connection with the LGBT community. Asexual and non-asexual respondents did not differ significantly in availability of social support, social well-being, and satisfaction with life.

Table 1 Differences in selected characteristics between asexual and non-asexual sexual minorities, Generations Study (*N* = 1323)

	Asexual <i>N</i> = 19 1.66% (0.47)	Non-asexual LGB <i>N</i> = 1504 98.34% (0.47)	Asexual versus non-asexual test statistic	Non-asexual test women <i>N</i> = 739 54.01% (1.58)	Non-asexual men <i>N</i> = 683 38.08% (1.50)	Non-asexual GQNB <i>N</i> = 82 6.25% (0.80)	Overall group differences test statistic
Gender identity ^d			44.52***				
Woman	27.74 (11.45)	54.92 (1.58)		N/A	N/A	N/A	
Man	0.00 (0.00)	38.73 (1.52)		N/A	N/A	N/A	
Non-binary/ genderqueer	72.26 (11.45)	6.35 (0.81)					
Sex assigned at birth ^d			3.34				
Female	85.62 (10.32)	59.04 (1.54)		N/A	N/A	N/A	
Male	14.38 (10.32)	40.96 (1.54)		N/A	N/A	N/A	

Race/ethnicity ^d			0.96				1.48
White	80.46 (10.95)	62.05 (1.55)		60.92 (2.21)	63.64 (2.27)	62.15 (6.44)	
Black/African American	9.56 (6.71)	16.52 (1.17)		19.27 (1.75)	13.14 (1.56)	13.42 (4.31)	
Latino/Hispanic	9.98 (9.37)	21.43 (1.32)		19.81 (1.81)	23.22 (2.01)	24.43 (5.84)	
Age cohort ^d			5.56**				13.19***
Equality (18–25)	91.19 (5.47) _{a,b}	61.30 (1.47)		66.26 (1.96)	51.04 (2.36)	80.68 (3.96)	
Visibility (34–41)	6.05 (4.63) _{a,b}	20.96 (1.21)		21.09 (1.70)	22.56 (1.91)	10.22 (2.77)	
Pride (52–59)	2.76 (2.80) _{a,b}	17.73 (0.95)		12.65 (1.08)	26.40 (1.79)	9.11 (2.76)	
Education ^d			5.48*				2.01
High school or less	68.56 (10.87)	41.25 (1.71)		41.57 (2.42)	39.78 (2.52)	47.52 (6.74)	
More than high school	31.44 (10.87)	58.75 (1.71)		58.43 (2.42)	60.22 (2.52)	52.48 (6.74)	
Did not have sex in past 5 years ^d	46.46 (14.17) _{a,b,c}	9.74 (0.97)	17.88***	10.05 (1.37)	8.14 (1.35)	16.87 (5.15)	8.10***
Sex partner in past 5 years ^d							
Cisgender women	37.01 (14.06)	47.46 (1.61)	0.51	68.60 (2.15)	17.57 (1.84)	46.96 (6.56)	67.70***
Cisgender men	26.85 (11.19) _{a,b,c}	69.18 (1.48)	12.82***	58.51 (2.23)	85.92 (1.67)	59.45 (6.41)	30.85***
Transgender women	8.02 (5.68)	3.08 (0.54)	1.77	2.73 (0.68)	3.06 (0.85)	6.27 (3.22)	1.31
Transgender men	8.02 (5.68)	3.95 (0.66)	0.95	3.20 (0.87)	3.42 (0.93)	13.63 (4.22)	5.91***
Sexual attraction (somewhat or very attracted) ^d							
Cisgender women	38.81 (13.37) _{a,c}	71.78 (1.38)	6.97**	99.13 (0.46)	30.61 (2.27)	81.96 (5.39)	137.02***
Cisgender men	36.04 (13.18) _{a,b,c}	79.23 (1.33)	14.47***	66.92 (2.13)	97.32 (0.89)	76.33 (5.58)	40.08***
Transgender women	38.81 (13.37)	30.14 (1.54)	0.47	34.99 (2.23)	18.23 (1.96)	59.80 (6.38)	17.22***
Transgender men	33.63 (13.05) _c	37.52 (1.61)	0.08	37.71 (2.27)	31.77 (2.33)	69.95 (5.97)	10.00***
Currently in relationship ^d	58.58 (14.09)	61.36 (1.58)	0.04	66.19 (2.18)	54.52 (2.37)	61.07 (6.76)	3.61*
Social support ^e	4.77 (0.24)	5.15 (0.04)	2.46	5.16 (0.06)	5.16 (0.06)	5.07 (0.14)	0.96
Social wellbeing ^e	4.44 (0.20)	4.52 (0.03)	0.15	4.41 (0.04)	4.70 (0.04)	4.26 (0.11)	10.06***

Table 1 (continued)

	Asexual N = 19 1.66% (0.47)	Non-asexual LGB N = 1504 98.34% (0.47)	Asexual versus non-asexual statistic	Non-asexual test women N = 739 54.01% (1.58)	Non-asexual men N = 683 38.08% (1.50)	Non-asexual GQNB N = 82 6.25% (0.80)	Overall group differences test statistic
Satisfaction with life ^e	3.91 (0.33)	4.15 (0.05)	0.54	4.14 (0.07)	4.30 (0.07)	3.42 (0.20)	5.91***
Outness ^d							
To all family	36.59 (14.64)	36.83 (1.53)	0.00	32.62 (2.13)	43.46 (2.33)	32.88 (5.97)	3.33*
To all straight friends	49.56 (14.23)	54.77 (1.61)	0.13	54.18 (2.29)	54.82 (2.36)	59.49 (6.39)	0.24
To all coworkers	16.08 (10.34)	33.04 (1.51)	1.63	28.18 (2.04)	39.39 (2.31)	36.39 (6.56)	4.41**
To all health-care providers	19.06 (11.11) _b	40.80 (1.57)	2.42	35.86 (2.17)	49.49 (2.36)	30.94 (6.08)	6.82***
Felt stigma ^e	3.42 (0.30) _{ab}	2.70 (0.03)	5.78*	2.72 (0.04)	2.65 (0.05)	2.90 (0.13)	3.20*
Everyday discrimination ^e	2.16 (0.11) _b	2.03 (0.02)	1.36	2.09 (0.03)	1.87 (0.03)	2.40 (0.09)	14.54***
LGBT Community connectedness ^e	2.98 (0.13)	2.99 (0.02)	0.00	3.00 (0.03)	2.94 (0.03)	3.10 (0.06)	2.25

Adjusted Wald tests were performed to calculate *p* values for continuous variables, and Rao Scott design-adjusted *F* tests were performed to calculate *p* values for categorical variables. For tests in which an overall difference was found, post hoc comparisons assessed whether asexual respondents differed significantly (*p* < 0.05 adjusted for multiple comparisons using Holm–Bonferroni method) from (a) non-asexual women, (b) non-asexual men, and (c) non-asexual genderqueer non-binary (GQNB), separately, reported as subscripts ^d Weighted percentage and (standard error) ^eMean and (standard error) * *p* < .05; ** *p* < .01; *** *p* < .001

Discussion

Prevalence and Demographic Profile of Asexual Individuals

This is the first study to assess the prevalence of asexuality as an identity among a U.S. representative sample of sexual minorities. Participants in the present study had to identify as sexual minorities to be eligible to enter the study, so this is a study about asexuals who identify as LGB or GQNB sexual minorities and who did not identify as transgender or heterosexual. This should lead to some caution in interpreting our results. We also found high affiliation of asexual respondents with the LGBT community, which may be a special characteristic of our sexual minority asexuals but not

others. Our study is, thus, limited in that it does not provide information about all asexual-identified individuals but a select subgroup of asexual sexual minorities who found it acceptable to identify with the term lesbian, gay, bisexual, when asked in a general survey, later writing in their preferred identity as asexual.

The proportion of sexual minorities who indicated that their identity is asexual was 1.66%, which is higher than the percentage of 0.4% in the New Zealand population-based survey of Greaves et al. (2017) on asexual identity as well as population-based surveys on lack of sexual attraction in the UK and Australia (0.4–0.9% in Aicken et al., 2013; 1% in Bogaert, 2004; 0.3–0.4% in Richters et al., 2014). We do not know why this proportion is higher, but we speculate that sexual minorities may be more likely than people in the general public to identify as asexual, either because they are more familiar with sexual identity terms or because they are more willing to assume a non-mainstream sexual identity. For example, in the AVEN survey, only 26.6% identified as straight and 6.9% as other; the rest identified as LGB, queer, or pansexual.

On the other hand, asexual respondents in our study had to choose a write-in option, an option that presumably appealed to the most strongly identified asexuals. It is, thus, plausible that more people would have chosen an asexual identity if it were available to them as one of the response options. Evidence for this comes from the research of Prause and Graham (2007), who asked participants to write in their sexual orientation and then later to check off their sexual orientation from a list. Nearly twice as many ($N = 40$) participants checked off asexual when it was presented in a multiple-choice format, as compared to those who wrote in asexual ($N = 22$) into an open-ended item. Those who had not written asexual originally had written in mixed or miscellaneous, none, heterosexual, homosexual, or bisexual. In that regard, the prevalence of asexual identity in the present sexual minority study may actually be an under-representation. In a different study, researchers provided a choice of sexual identities to respondents in a national U.S. representative sample, who chose something other than lesbian, gay, bisexual, and straight as their sexual identity (Meyer, Marken, Auter, Wilson, & Conron, 2019). More than 5.5% of those respondents chose asexual (4.65%) and demisexual (0.93%). Hopefully, further population-based research will provide

population estimates of asexuals. To do this, it will be important to differentiate between respondents who use asexual as an identity and those who select asexual because they are not currently sexually active even if they do not use that term as an identity.

That the majority of asexual participants were between the ages of 18 and 27 indicates that this is a fairly new identity. In the AVEN Community Survey (Ginoza et al., 2014), the median age was 21, and thus, the frequency of this identity may increase over time as more people become familiar with the term and identify as asexual.

As we hypothesized, a large proportion of asexual participants identified as GQNB, consistent with prior community studies (Ginoza et al., 2014; MacNeela & Murphy, 2015; Yule et al., 2015) as well as the population-based research by Greaves et al. (2017). It appears that asexual individuals understand their gender identity, like their sexual identity, in non-traditional ways. As Chasin (2011) has stated, "It is possible that sexual attractiveness standards govern gender presentations and behaviors, and that without the desire to attract a sexual partner, asexual people may have more freedom to explore their own genders" (p. 716). Further research is needed to explore the interaction among sexual and gender identities more fully.

Just as research with LGB samples has found only weak associations between the dimensions of sexual identity, sexual behavior, and sexual relationships (cf. Geary et al., 2018; Laumann et al., 1994; Morris & Rothblum, 1999), our findings demonstrate that asexual identity is not synonymous with lack of sexual attraction, sexual behavior, or an intimate relationship. Compared with non-asexual individuals, asexuals were less likely to report having had sex in the 5 years prior to the survey. However, it is important to note that absence of sex was only reported by approximately half the asexuals. Similarly, asexual and non-asexual participants were similar in terms of being in romantic intimate relationships, a finding that is comparable to the community sample of Prause and Graham (2007).

Our hypothesis that asexuals would experience more stigma than non-asexuals was generally confirmed. Asexuals reported feeling more stigma than non-asexual men and women and more everyday discrimination than did non-asexual men. These results suggest that asexual identity is

more stigmatized in society than LGB sexual minority identities. This supports prior research of MacInnis and Hodson (2012) who found that Canadian university students and online participants were more biased toward asexuals than toward LGB people. It also supports the qualitative research of Gupta (2017) who interviewed 30 participants recruited from AVEN and other websites, and found that over half indicated that they had been stigmatized or marginalized for being asexual. In Gupta's study every participant mentioned at least one negative incident, such as getting medical or psychological explanations when they came out to family or friends, and feeling alienated from social events, classroom discussions about sex, conversations with friends, or media programs or advertising.

Connection to the LGBT Community

Contrary to our hypothesis, asexual and non-asexual participants felt similarly connected to the LGBT community. This may be a feature of our sampling approach, where respondents had to identify as sexual minorities to participate and therefore tended toward greater affiliation with the LGBT community. For example, this finding is different from the AVEN Community Survey in which only 11.5% of asexuals felt they were unconditionally welcomed by the Queer/LGBTQ + Community (Ginoza et al., 2014). Dawson et al. (2018) described that some of their asexual participants joined LGBT groups because of their own prior or current identities as LGBT, others felt little connection with these groups, and others identified as heteroromantic and so did not feel they should be part of these groups. Given that the present study recruited asexuals via an LGBQ survey, it is likely that these individuals did associate to some extent with the LGBT community.

Also contrary to our prediction, asexual participants did not differ from non-asexual participants in general well-being, life satisfaction, and social support. Greaves et al. (2017) similarly found no differences between asexuals and non-asexuals on social support, self-esteem, felt belongingness, and life satisfaction. These results suggest that asexual minorities may be as social and happy with their lives as non-asexual women, men, and gender non-binary individuals and that a lower level of sexual attraction does not imply that asexual people are socially isolated or lonely.

Conclusions

We provide data on demographic, psychological, and LGB-related factors among asexual compared with non-asexual individuals. The results indicated various ways that asexuality is an infrequent but unique identity, and one that is likely to increase in frequency as more sexual minorities reach adolescence and adulthood and become aware of the concept.

Nevertheless, these results need to be interpreted with caution. There is a diversity of asexual identities, including individuals who do not fit well into or do not like the term asexual (cf. Scott et al., 2016). The *Generations* study participants had to indicate comfort with the label LGBT to be included, and we did not include participants who identified as heterosexual or transgender at all. Future research should compare asexuals who do and do not identify as heterosexual, transgender, and LGBTQ. The *Generations* study also included only sexual minorities who identified as Black, Latino or White, thus excluding other ethnic and racial minorities.

Przybylo (2011) used the term “sexusociety” to describe the foregrounding and salience of sexual behavior and sexual relationships stating that, “the ‘sexual world’ is for asexuals very much akin to what patriarchy is for feminists and heteronormativity for LGBTQ populations, in the sense that it constitutes the oppressive force against which some sort of organizing and rebellion must take place” (p. 146). Thus, sexual identities are defined in terms of sexual attraction. In that regard, asexual identity has the unique potential to destabilize this focus on sex as innate or natural (cf. Cerankowski & Milks, 2010; Pacho, 2013) and certainly to expand the concept of queer identity (Gressgård, 2013).

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Compliance with Ethical Standards

Ethical Approval This study had IRB approval, and informed consent was obtained from all individual participants included in the study.

Conflict of interest The authors declare that they have no conflict of interest.

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