Asexuality is inversely associated with positive body image in British adults

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A R T I C L E  I N F O

Keywords:
Asexuality
Sexual orientation
Positive body image
Sexual minority
Aging and life course
Social sciences
Sociology
Psychology
Public health

A B S T R A C T

Research on positive body image has infrequently considered sexual minority orientations beyond lesbians, gay men, and bisexual persons. Indeed, there is no existing research on the relationships between body image and asexuality, which refers to a lack of sexual attraction to anyone or anything. In two studies, we rectified this by examining associations between asexuality – operationalised as a continuous construct – and indices of positive body image. In Study 1, 188 Britons from the community completed measures of asexuality and body appreciation. Once the effects of self-identified sexual orientation, relationship status, and body mass index (BMI) had been considered, asexuality was found to be significantly and negatively associated with body appreciation in women and men. In Study 2, an online sample of 377 Britons completed measures of asexuality, body appreciation, functionality appreciation, body acceptance from others, and body image flexibility. Beyond the effects of sexual orientation, relationship status, and BMI, asexuality was significantly and negatively associated with all four body image constructs in men, and with body appreciation and functionality appreciation in women. Although asexuality only explained a small proportion of the variance in positive body image (3–11%) and further studies are needed, the relationship appears to be stable.

1. Introduction

Positive body image refers to an “overarching love and respect for the body” that includes appreciation of the body and its functions, acceptance of the body despite its imperfections, and body-protective behaviours (Tylka, 2018, p. 9). The growth of positive body image research has renewed attention on various social identity groups (Swami, 2018). In terms of sexual orientation, for example, one study with U.S. adults reported that sexual minority (i.e., lesbian and bisexual) women had significantly higher body appreciation than heterosexual women (Winter et al., 2015). In explanation, it has been suggested that sexual minority women experience less pressure to attain heteronormative appearance ideals and that lesbian subcultures promote greater acceptance of diverse appearance ideals (VanKim et al., 2016). Conversely, body appreciation is significantly lower in U.K. sexual minority (i.e., gay and bisexual) men compared to heterosexual men (Alleva et al., 2018), possibly because gay men inhabit an appearance-potent subculture wherein physical appearance is overvalued (VanKim et al., 2016).

While informative, it is notable that existing studies have infrequently considered sexual minority orientations beyond lesbians, gay men, and bisexual persons (Swami, 2018). One sexual orientation that has not received any attention from body image scholars is asexuality, which refers to a lack of sexual attraction to anyone or anything (Bogaert, 2004, 2015; for a discussion of its conceptualisation as a sexual orientation, see Brotto and Yule, 2016). A sizeable minority of individuals lack sexual attraction to others, with U.K. national probability surveys placing the prevalence of asexuality between 0.4% (Aicken et al., 2013) and 1.0% (Bogaert, 2004). Importantly, while asexuality is typically operationalised as a taxonomic category, it can also be conceived along a continuous dimension, with some individuals being more asexual than others (Yule et al., 2015). Put differently, it is possible to conceive of asexuality at one end of a continuum of sexual attraction (i.e., no sexual attraction), with the opposite pole consisting of hypersexuality (McClave, 2013).

Although research on asexuality remains nascent, there are reasons to think that asexuality will be associated with indices of body image. For example, drawing on objectification theory – which posits that the treatment of women as sexual objects by men leads women to view themselves as sexual objects (Frederickson and Roberts, 1997) – it might be argued that greater asexuality will be associated with less pressure to be attractive to others (see Bogaert, 2012, 2015) and, consequently, more
body-positive behaviours (e.g., a rejection of prescriptive appearance standards, lower monitoring of how one appears to others). This would be consistent with the suggestion that individuals who experience less pressure to attain heteronormative gender and appearance ideals are relatively have more positive body image (VanKim et al., 2016). Conversely, however, it is also possible the positioning of asexuality and potentially asexual individuals as deviating from heteronormative expectations and appearance requirements negatively impacts any positive body work (see Chasin, 2015). There is also some evidence that asexuality is associated with greater social avoidance (Brotto et al., 2010), which may impact positive body image by reducing sources of social support.

In the absence of empirical data, however, more in-depth theorising is difficult, particularly as actual relationships between asexuality and body image remain unknown. To rectify this, we report on two separate studies examining associations between asexuality and indices of positive body image in British adults. First, we conducted an exploratory study (Study 1) examining associations between asexuality and body appreciation, which represents the primary way in which the construct of positive body image is operationalised (Tylka, 2018). To ensure that the results of Study 1 were replicable, we conducted a second study (Study 2) examining the same associations in a distinct sample. In Study 2, we also included additional indices of positive body image to provide broader coverage of the construct. Taken together, the two studies here represent the first attempts to determine more precisely the nature of any association between asexuality and positive body image.

2. Hypothesis

2.1. Study 1

2.1.1. Introduction

Study 1 was conceived as an initial, exploratory study examining the association between asexuality and body appreciation. An exploratory framework was utilised as there was no existing research examining associations between asexuality and body image, and thus allowed us to examine possible relationships that could be further interrogated in future work. In Study 1, we recruited a British community sample, who were asked to completed measures of body appreciation and asexuality, operationalised as a continuous construct. In Here, we hypothesised that greater asexuality would be positively associated with positive body image after accounting for the effects of self-described sexual orientation, relationship status, and body mass index (BMI). Relationship status and BMI were included as covariates because they are known to have independent influences on body image, whereas sexual orientation was included because we were interested in the effects of sexual attraction beyond self-described binary categorisation of attraction (i.e., to the opposite sex, same sex, both, or neither). Another reason for including sexual orientation was because self-identification as asexual requires that respondents are familiar with the term and its meaning; given that this assumption is problematic (van Houdenhove et al., 2015a), it is important to measure asexuality independently of self-reported sexual orientation.

2.1.2. Method

2.1.2.1. Participants. Participants were 96 women and 92 men from the community in Cambridge, U.K., who ranged in age from 18 to 61 years (M = 30.89, SD = 9.16) and in self-reported BMI from 14.66 to 39.06 kg/m² (M = 24.06, SD = 4.69). The majority of participants described their sexual orientation as heterosexual (92.6%; bisexual = 4.8%; gay/lesbian = 2.7%) and their ethnicity as British White (87.2%; Asian = 7.4%; African Caribbean = 3.7%; mixed race = 1.6%). In terms of relationship status, 35.6% of participants were single, 9.0% were single and dating, 5.9% were partnered and not cohabiting, 26.6% were partnered and cohabiting, and 22.9% were married.

2.1.2.2. Measures

2.1.2.2.1. Body appreciation. Participants completed the 10-item Body Appreciation Scale-2 (BAS-2; Tylka and Wood-Barcalow, 2015), which measures acceptance of one’s body, respect and care for one’s body, and protection of one’s body from unrealistic appearance standards. Items were rated on a 5-point scale (1 = never, 5 = always) and higher sum scores reflect greater body appreciation. BAS-2 scores have good psychometric properties in English-speaking populations (Swami, 2018). Omega for scores on this scale was .95 (95% CI = .93, .97).

2.1.2.2.2. Asexuality. Participants completed the Asexuality Identity Scale (AIS; Yule et al., 2015), a 12-item measure of asexuality, with items assessing sexual attraction, interest in sex, and self-perceptions of sexuality. Response anchors varied, but all items were rated on 5-point scales.

2.1.2.3. Demographics. Participants provided their demographic details consisting of age, sex, sexual orientation (response options: heterosexual, gay/lesbian/homosexual, bisexual, pansexual/queer, asexual, other), relationship status, ethnicity, height, and weight. Height and weight data were used to compute BMI as kg/m².

2.1.3. Procedures. Once ethics approval was obtained from the relevant departmental ethics committee, three research assistants recruited participants opportunistically from areas of congregate activity in October–December 2018. Participants who met inclusion criteria (British citizens of adult age and fluent in English) were invited to complete a paper-and-pencil questionnaire containing the measures above, presented in a randomised order, and a request for demographic information. Questionnaires were anonymous and completed in a portable booth to ensure privacy. Participation was voluntary and participants did not receive any remuneration. All participants received written debriefing information upon completion of the questionnaire.

2.1.4. Discussion

The results of Study 1 suggest that asexuality is significantly related to
body appreciation. However, the direction of the relationship was contrary to our hypothesis. While this finding may reflect the true association between body appreciation and asexuality, it may also have been an artefact of sampling and design issues. Specifically, Study 1 was limited by the relatively small sample and the reliance on a single measure of positive body image. In this sense, the significant association reported in Study 1 may have been inflated by the relatively small sample size. To rectify this issue, and to ensure that the relationship between the two constructs was replicable and not merely artefactual or spurious, we conducted a second study, as reported below.

2.2. Study 2

2.2.1. Introduction

In order to deal with the limitations of Study 1, we conducted a second study in which we recruited a much larger, online sample of British adults. This would help us establish the extent to which the results were spurious or artefactual. In addition to recruiting a larger sample, we also included a wider range of indices of positive body image, namely body appreciation, body image flexibility, body acceptance from others, and functionality appreciation. These indices were chosen because they provide broad coverage of the positive body image construct and because they can be operationalised using validated instruments. As in Study 1, we also included self-described sexual orientation, relationship status, and BMI as covariates in all analyses – for the reasons discussed above. Based on the results of Study 1, we hypothesised that asexuality would be inversely associated with each of the measures of positive body image, once the effects of self-described sexual orientation, relationship status, and BMI had been accounted for.

2.2.2. Method

2.2.2.1. Participants. The sample consisted of 377 Britons (190 women, 187 men) ranging in age from 19 to 76 years (M = 37.07, SD = 11.90) and in self-reported BMI from 12.33 to 45.00 kg/m² (M = 25.32, SD = 5.40). The majority (87.5%) of participants described their sexual orientation as heterosexual, 6.6% as bisexual, 2.7% as gay or lesbian, 1.6% as pansexual, 0.5% as asexual, and 1.1% as other. Of the total sample, 19.9% were single, 6.6% were single and dating, 8.8% were partnered but not cohabiting, 29.2% were partnered and cohabiting, 34.5% were married, and 1.1% were of another status. The majority (92.0%) of participants were British White (Asian = 3.2%; African Caribbean = 2.4%; mixed race = 1.9%; other = 0.5%).

2.2.2.2. Measures. Participants completed the BAS-2 (ω = .96, 95% CI = .93, .98) and AIS (ω = .82, 95% CI = .79, .85), as described. In addition, participants also completed the additional measures described below.

2.2.2.2.1. Functionality appreciation. We used the 7-item Functionality Appreciation Scale (FAS; Alleva et al., 2017), which measures one’s appreciation of what the body does and can do. Items were rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree) and higher sum scores reflect greater functionality appreciation. FAS scores have been reported to have good psychometric properties in English-speaking samples (Alleva et al., 2017). Omega for scores this scale was .92 (95% CI = .89-.96).

2.2.2.2.2. Body acceptance. Participants also completed the Body Acceptance by Others Scale (BAOS; Avalos and Tylka, 2006), a 10-item measure of perceived acceptance for, and receiving messages reflecting acceptance of, one's body shape and weight from various sources. Items were rated on a 5-point scale (1 = never, 5 = always), with higher sum scores reflecting greater perceived body acceptance from others. In English-speaking adults, BAOS scores have been found to have good psychometric properties (Avalos and Tylka, 2006). Omega in the present study was .88 (95% CI = .85-.91).

2.2.2.2.3. Body image flexibility. The questionnaire included the 12-item Body Image-Acceptance and Action Questionnaire (BI-AAQ; Sandoz et al., 2013), which can be used as a measure of body image flexibility (Webb et al., 2015). Items were rated on a 7-point scale (1 = never true, 7 = always true), with higher sum scores reflecting greater body image flexibility. In English-speaking adults, BI-AAQ scores have been shown to have adequate psychometric properties (Sandoz et al., 2013). Omega for scores on this scale was .96 (95% CI = .93-.99).

2.2.2.2.4. Demographics. Participants provided their demographic details consisting of age, sex, sexual orientation (response options identical to Study 1), relationship status, ethnicity, height, and weight. Height and weight data were used to compute BMI as kg/m².

2.2.3. Procedures

Following ethics approval, data were collected via the Prolific Academic marketplace on February 11–12th, 2019. Participation was limited to U.K. citizens of adult age and fluent in English. The survey included an attention detection item, which no participant failed, and completion times were manually checked to ensure that all participants completed within a reasonable period. In addition, participants were limited to those who had Prolific Academic scores of ≥96 and IP addresses were examined to ensure that no participant took the survey more than once. Participants provided digital informed consent and completed the measures describe above, which were presented in anonymous form and randomised order. Participants also provided their demographic details consisting of age, sex, sexual orientation, ethnicity, relationship status, height, and weight. Participants were paid £1.50 and received debriefing information at the end of the survey.

2.2.4. Results

Missing data accounted for <1.0% of the total dataset, were missing completely at random, and were replaced using multiple imputations. A total of 3.4% of participants had ASI scores ≥40, with women (n = 9) being significantly more likely than men (n = 3) to surpass the cut-off, χ²(2) = 30.83, p < .001. Inter-scale correlations – run separately for women and men – between asexuality, body appreciation, functionality appreciation, body acceptance, body image flexibility, and BMI are reported in Table 1. Greater asexuality in both women and men was significantly associated – albeit weakly – with lower body appreciation and functionality appreciation. Greater asexuality was also significantly and weakly associated with body acceptance and body image flexibility in men, but the same associations did not reach significance in women.

Next, we ran hierarchical regressions separately for women and men, with the body image variables as criterion variables. Self-described sexual orientation, relationship status, and BMI were included in a first step and asexuality was included in a second step (see Tables 2, 3, 4, and 5). The second steps of the regressions with body appreciation were significant in women (see Table 2) and men (see Table 3), with asexuality accounting for an additional 3% and 4% of the variance, respectively. Likewise, the second steps of the regressions with functionality appreciation were significant in women (see Table 2) and men (see Table 3), respectively, with asexuality accounting for 3% of added variance. The second steps of the regressions with body acceptance (3% added variance) and body image flexibility (5% added variance) were significant in men (see Table 5), but not in women (see Table 4).

Table 1

| Inter-scale correlations between variables included in study 2, with correlations for women in the top diagonal and men in the bottom diagonal. |
|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| (6) |
| (1) Asexuality | -24** | -20** | -12 | -10 | .06 |
| (2) Body appreciation | -.23** | .65** | .63** | .63** | -.23** |
| (3) Functionality appreciation | -.26** | .62** | .42** | .33** | -.11 |
| (4) Body acceptance | -.19* | .43** | .28** | .55** | -.32** |
| (5) Body image flexibility | -.29** | .43** | .30** | .17* | .30** |
| (6) Body mass index | .07 | -.29** | -.07 | -.15* | .41** |

Note. N = 377, *p < .05, **p < .001.
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3. Discussion

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3.2.5. Discussion

The results of Study 2 firstly replicated that of the first study; we again found that asexuality was significantly and negatively associated with body appreciation. This finding is important, as it suggests that the findings of Study 1 were unlikely to be artefactual or spurious. In addition, the results of Study 2 also showed that asexuality was significantly and inversely associated with functionality appreciation in both women and men, which suggests that the relationship between asexuality and facets of positive body image is robust. In contrast, the results of Study 2 also showed that asexuality was significantly and inversely associated with body acceptance and body image flexibility, but only in men. This aspect of Study 2 suggests some nuance to the broad assertion that asexuality is associated with positive body image.

3.3. Discussion & conclusion

Contrary to our hypothesis, asexuality was not positively associated with indices of positive body image; instead, across two studies, asexuality was in general negatively associated with indices of positive body image, although there did not appear to be significant relationships with body acceptance from others and body image flexibility in women. Of course, it should be noted that the variance explained by asexuality was small across all constructs included in the two studies (i.e., 3–11%), which is suggestive of weak relationships. However, the negative relationship between asexuality and body appreciation, at least, was robust insofar as we were able to replicate it using different study designs (i.e., offline versus online recruitment) with British adults.

Explaining why asexuality is negatively associated with positive body image is difficult in the absence of further data and clearer theorising. One possibility is that difficulties negotiating asexuality in heteronormative societies dominated by sexuality (e.g., MacNeela and Murphy, 2015; Vares, 2018) serve to impair body-positive behaviours and cognitions. For example, it may be that those scoring higher on asexuality serve to impair or incompatibility with heteronormative expectations. A related possibility is that there are variables unmeasured in the present work that mediate the relationships between asexuality and body image. For example, there is some evidence that asexuality is associated with lower emotionality and higher introversion (Bogaert et al., 2018), as well as a

Table 2

Results of the hierarchical regressions for body appreciation and functionality appreciation for women in study 2.

| Body appreciation | Functionality appreciation |
|--------------------|---------------------------|
| B | SE | β | t | p | B | SE | β | t | p |
| Sexual orientation | -.89 | .61 | -.11 | -1.47 | .142 | -.50 | .43 | -.09 | -1.17 | .244 |
| Relationship status | .40 | .40 | .07 | 1.00 | .317 | -.40 | .29 | .10 | 1.40 | .164 |
| Body mass index | -.32 | .10 | -.23 | -5.31 | .001 | .10 | .07 | -.11 | -1.49 | .138 |

F(4, 185) = 5.74, p < .001, Adj. R² = .09 (ΔR² change p = .005)

F(4, 185) = 2.79, p = .028, Adj. R² = .04 (ΔR² change p = .023)

Table 3

Results of the hierarchical regressions for body acceptance and body image flexibility for women in study 2.

| Body acceptance from others | Body image flexibility |
|-----------------------------|------------------------|
| B | SE | β | t | p | B | SE | β | t | p |
| Sexual orientation | -.25 | .64 | .03 | -0.39 | .694 | -1.13 | .46 | -.02 | -0.29 | .775 |
| Relationship status | .30 | .40 | .05 | .76 | .447 | .34 | .28 | .09 | 1.20 | .252 |
| Body mass index | -.30 | .09 | -.22 | -3.21 | .002 | -.09 | .06 | -.10 | -1.38 | .170 |
| Asexuality | -.22 | .08 | -.21 | -2.82 | .005 | -.13 | .06 | -.18 | 2.29 | .023 |

F(4, 185) = 6.61, p < .001, Adj. R² = .11 (ΔR² change p = .169)

F(4, 185) = 5.35, p < .001, Adj. R² = .08 (ΔR² change p = .452)

Table 4

Results of the hierarchical regressions for body appreciation and functionality appreciation for men in study 2.

| Body appreciation | Functionality appreciation |
|--------------------|---------------------------|
| B | SE | β | t | p | B | SE | β | t | p |
| Sexual orientation | -.89 | .61 | -.11 | -1.47 | .142 | -.50 | .43 | -.09 | -1.17 | .244 |
| Relationship status | .40 | .40 | .07 | 1.00 | .317 | -.40 | .29 | .10 | 1.40 | .164 |
| Body mass index | -.32 | .10 | -.23 | -5.31 | .001 | .10 | .07 | -.11 | -1.49 | .138 |

F(4, 185) = 4.81, p = .003, Adj. R² = .06

F(4, 185) = 1.93, p = .127, Adj. R² = .01

F(4, 185) = 7.09, p < .001, Adj. R² = .12 (ΔR² change p = .006)

F(4, 185) = 3.44, p = .010, Adj. R² = .04 (ΔR² change p = .001)
more interpersonal problems (Yule et al., 2013), which may act as mediators. Complicating these explanations is the finding that the significant relationships between asexuality and the range of body image variables in Study 2 appeared to be more robust in men compared with women. It may be that greater asexuality in men is associated with difficulties negotiating heteronormative masculinity expectations that emphasise hypersexuality (Gupta, 2019), which in turn mediates relationships with a wider range of positive body image constructs.

We do not deny that our findings raise more questions than they answer at this stage. However, in the absence of further data, it is difficult to be more forthcoming in terms of both theorising and explication. To that end, we strongly recommend greater scholarly attention to the issues highlighted herein. The most direct way in which this could be accomplished would through cross-sectional work examining differences in body image between asexuals and individuals of other sexual orientations. We were unable to do so in the present work given the small number of individuals who either self-identified as being asexual or who met the ASI cut-off recommended by Yule et al. (2015). Future work should also aim to include a wider array of outcome variables, including indices of negative body image and body image-related variables (e.g., self-objectification, body surveillance, internalisation of appearance ideals), as well as potential mediating variables. Qualitative research may also be useful to better understand body image issues in asexuals, particularly in terms of managing physical intimacy and partner expectations vis-à-vis appearance (e.g., van Houdenhove et al., 2015b) and relationships with media role models (Rothblum et al., 2019).

A further important issue to consider in the present work was our operationalisation of asexuality using the ASI, which focuses on the absence of sexual attraction. This focus likely means that we have neglected other aspects of asexuality – such as emotional attachments and fantasies, social identity, relationship intimacy, sexual behaviours (see Brotto and Yule, 2016) – that may shape body image. Nevertheless, while we acknowledge that our results are preliminary, it is also unlikely that our results are spurious given that we were able to replicate our results across two studies. Greater scholarly attention to these issues would help researchers and practitioners better understand the lived experiences of those high in asexuality in relation to their bodies. This is important if we consider individuals high in asexuality to be at-risk from body image concerns, which future research will need to investigate more thoroughly. Greater consideration of these issues may also help body image scholars better understand the role that sexuality plays in shaping body image in other sexual identity groups. For now, we call on scholars to give asexuality better coverage in body image research and hope that the present studies provide a spur for future efforts.

Declarations

Author contribution statement

Viren Swami: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Ryan Laughton: Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Simmy Grover: Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Adrian Furnham: Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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