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Asexual Individuals' Coping with Meta-
Stereotypes: Does Self-Affirmation Reduce
the Relation Between Negative Personalized
Meta-Stereotyping, Self-Acceptance of
Sexuality, and Internalized Heterosexism?

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Abstract

Asexuality (a sexual orientation meaning not experiencing sexual attraction) is a rather invisible and understudied sexual orientation. While earlier research suggests that societal norms can negatively impact asexual individuals, little is known about how asexual individuals' expectations about negative stereotypes in regard to their asexuality (i.e., negative personalized meta-stereotyping) affect them, and how they can cope. In the current study, our aim was to investigate the relationships between negative personalized meta-stereotyping, self-acceptance of sexuality and internalized heterosexism in asexual individuals. Additionally, we examined whether a self-affirmation intervention attenuated these relationships. A total of 342 self-identified asexual individuals, recruited from social media, filled in an online questionnaire. Participants were randomly assigned to the intervention condition ($n = 165$) or the control condition ($n = 177$). Contrary to our expectations, we found no significant relations between negative personalized meta-stereotyping and both self-acceptance of sexuality and internalized heterosexism. Additionally, the self-affirmation intervention did not show the expected attenuating effect. However, exploratory analysis revealed that participants strongly identifying as asexual ($N = 186$, $n_{intervention} = 84$, $n_{condition} = 102$) were affected by the self-affirmation intervention more in line with our expectations. The study contributes to the understanding of the interplay between meta-stereotyping, self-affirmation, and asexuality. More broadly, the study contributes to the understanding and visibility of asexual experiences and may stimulate further research on asexuality.

Keywords: asexuality, negative personalized meta-stereotyping, self-acceptance of sexuality, internalized heterosexism, self-affirmation

Asexual Individuals' Coping with Meta-Stereotypes: Does Self-Affirmation Reduce the Relation Between Negative Personalized Meta-Stereotyping, Self-Acceptance of Sexuality, and Internalized Heterosexism?

It is estimated that about 1.5 percent of the (adult) population is asexual (Bogaert, 2004; Rothblum, 2019). Asexuality is a sexual orientation, defined as not experiencing sexual attraction (The Asexual Visibility and Education Network [AVEN], n.d.). Given that the average person knows roughly 600 people (McCormick et al., 2010), one might unknowingly know 6 to 10 asexual individuals. Nonetheless, while the field of asexuality is gaining more academic interest, it is still a rather invisible and understudied sexual orientation (Bogaert, 2015; Brotto & Milani, 2022). Unfortunately, awareness of asexuality often triggers negative reactions, particularly on social media, where asexual people frequently encounter dismissive comments such as (UNILAD, 2021):

“Sounds like another made up “condition” plucked out of thin air, likely to cause confusion to young people. Anything for attention.”

“Best I could do is say try getting laid and tell us how it went.”

Alongside not being taken seriously or being accused of seeking attention, many asexual individuals face negative stereotypes such as being seen as sick, broken, boring, delusional, childish, and less human (Chan & Leung, 2023; Chen, 2020; MacInnis & Hodson, 2012; Thorpe & Arbeau, 2020). In a recent US survey, 56% of asexual youth reported experiencing discrimination (The Trevor Project, 2022). Similarly, Gupta (2016) found that more than half of their interviewees had felt stigmatized or marginalized due to their asexual orientation.

Previous research has demonstrated that facing negative stereotypes can have detrimental effects on sexual minority groups, including elevated risks of mental disorders such as depression or anxiety (Meyer, 2013). Furthermore, encountering negative stereotypes

may create negative *expectations* about how others perceive the group you belong to (i.e., your ingroup). While, to our knowledge, no specific studies address how these expectations affect asexual individuals, it has been found that they perceive themselves to be more stigmatized and discriminated against than other minority groups (Rothblum et al., 2019). This study therefore aims to explore how expected stereotyping about asexuality affects asexual individuals.

More specifically, our goal is twofold. First, we aim to assess the relationship between expected stereotyping and two potential struggles that asexual individuals may grapple with. These struggles include accepting their sexual orientation (Camp et al., 2022; Elizur & Mintzer, 2001) and the tendency to internalize negative societal views about non-heterosexuality (Xu et al., 2017). Second, we aim to investigate whether reflecting on personally important values unrelated to asexuality (i.e., self-affirmation, Steele, 1988), can mitigate these relationships. We presume that a self-affirmation intervention may serve as a mechanism for coping with expected stereotyping.

Negative Personalized Meta-Stereotyping and Asexuality

Individuals' perceptions of the stereotypes others hold about their ingroup, are called meta-stereotypes (Vorauer et al., 1998). For example, if an asexual person perceives that others think that asexual people are broken, that is a meta-stereotype. Similar to facing negative stereotypes, holding negative meta-stereotypes can have psychological consequences, such as depression and anxiety (Jerald et al., 2017). However, within the context of sexual minority groups, research is not conclusive. For example, it was found for gay men that holding negative meta-stereotypes was related to a decrease in cognitive wellbeing (Hinton et al., 2019). At the same time, in research on pan- and bisexual individuals, no negative effects of negative meta-stereotypes were found (Thöni et al., 2022).

When meta-stereotypes are applied on a personal level, they are termed personalized meta-stereotypes. Personalized meta-stereotypes are individuals' perceptions of the stereotypes others hold about them *personally* based on their ingroup (Vorauer et al., 1998). For example, if an asexual person thinks "other people think that I (*personally*) am broken, because of my asexuality" that is a personalized meta-stereotype. Little is known about the effects of (negative) personalized meta-stereotyping within the context of sexual minority groups, such as asexuality. Therefore, in this research we are interested in the unexplored territory of how negative personalized meta-stereotyping affects asexual individuals.

Consequences of Negative Personalized Meta-Stereotyping: Self-Acceptance of Sexuality

One of the negative consequences of personalized negative meta-stereotypes may be lowered self-acceptance of sexuality. Self-acceptance of sexuality involves embracing and feeling at ease with one's sexuality as an integral aspect of one's identity (Camp et al., 2022; Elizur & Mintzer, 2001). This acceptance is important, as it contributes to wellbeing and is associated with lower levels of minority stress (Camp et al., 2020). It is plausible that the process of accepting one's sexuality is an interplay between an internal question of whether something is 'wrong' with oneself and external factors such as the social environment.

Due to experiences with stigma, prejudice, discrimination, and fear of rejection, among other factors, it can be harder for sexual minority individuals to accept their sexuality compared to their heterosexual counterparts (Camp et al., 2020; Meyer, 2013). Similarly, it can be challenging for asexual individuals to reach self-acceptance of sexuality, as they often grapple with feelings of brokenness or otherness. Some even try to consider different explanations for not experiencing sexual attraction, or hesitate to come out, due to fear of negative reactions (Kelleher & Murphy, 2022). For example, in a qualitative study of Gupta (2016) several interviewees expected to be pathologized if they came out as asexual. Additionally, 89% of asexual participants in the National LGBTQ Survey (Government

Equalities Office, 2018) reported they avoided disclosing their asexuality for fear of negative reactions. Taken together, these findings suggest that (fear of) societal reactions can play a negative role in the journey of accepting one's asexuality. We argue that this fear and negative expectations may be rooted in expectations of being negatively stereotyped, and we therefore assume that negative personalized meta-stereotypes may negatively influence self-acceptance of sexuality. However, this relationship remains underexplored, although there is some indirect evidence pointing to it. For instance, it has been found that negative meta-stereotyping reduces self-esteem (Gordijn, 2010). As self-acceptance and self-esteem are related concepts (Stevens et al., 2020), negative meta-stereotyping may similarly affect self-acceptance of sexuality.

Given the established influence of negative meta-stereotyping on self-esteem, and the negative impact of (feared) societal reactions on self-acceptance of sexuality, we hypothesize that negative personalized meta-stereotyping will be negatively related to self-acceptance of sexuality among asexual individuals.

Consequences of Negative Personalized Meta-Stereotyping: Internalized Heterosexism

The struggle of accepting one's own sexuality may be related to feeling societal pressure to conform to the norm of heterosexuality as the only 'normal' sexual orientation (Jackson, 2006). The incorporation of negative societal attitudes towards non-heterosexuality into one's belief system, and therefore thinking and feeling negatively of one's own sexuality, is called internalized heterosexism (Meyer, 2013; Mohr & Fassinger, 2000; Xu et al., 2017). This internalization can result in intrapsychic conflict and poor self-regard (Meyer & Dean, 1998; Szymanski & Chung, 2003).

Similar to other sexual minorities, asexual individuals experience internalized heterosexism. For example, asexual men exhibit similar levels of internalized heterosexism as homosexual men, though lower than bisexual men (Zheng & Su, 2022). Research also

indicates that asexual adolescents show higher levels of internalized heterosexism compared to other sexual minority adolescents (McInroy et al., 2020). Additionally, stigma related stressors, including harassment, prejudice, discrimination, and external heterosexism, contribute to higher levels of internalized heterosexism in sexual minority populations (Hatzenbuehler, 2009; Mason et al., 2015). Nonetheless, the link between personalized meta-stereotypes and internalized heterosexism remains unclear.

Arguably, however, the mere existence of discrimination and external heterosexism, often measured by occurrence of events (e.g., Mason et al., 2015; Woodford & Hong, 2014), is not sufficient to explain the development of internalized heterosexism. It is likely that an internal psychological process can offer some explanation. This line of thought fits the finding that stigma-related stress, such as fear of rejection, increases the risk of internalizing disorders such as depression, via cognitive processes such as negative expectations of future outcomes (Hatzenbuehler, 2009). We believe that internalized heterosexism may arise from similar cognitive processes, such as expecting to be viewed negatively. Since negative personalized meta-stereotyping considers thoughts about others' negative stereotypes, it might contribute to the internalization of heterosexism.

Furthermore, according to the systematic literature review of Camp et al. (2020), *lower* self-acceptance of sexuality is associated with *higher* levels of internalized heterosexism. Therefore, logically, internalized heterosexism would show a relationship with negative personalized stereotyping in the opposite direction. Taken together, we expect that personalized meta-stereotyping and internalized heterosexism are positively related.

Self-Affirmation Intervention

While it is fascinating to explore the relations of negative meta-stereotyping with self-acceptance of sexuality and internalized heterosexism, it is also important to consider how these relations can be mitigated. We propose a self-affirmation intervention, as we expect it to

effectively protect one's identity from the threat of negative personalized meta-stereotyping. According to Steele's (1988) self-affirmation theory, self-affirmation is an effective way of dealing with perceived threats to certain aspects of one's identity, and to maintain a positive self-worth. These threats are events that can threaten people's "sense of themselves as good, virtuous, successful, and able to control important life outcomes" (Sherman & Cohen, 2006, p. 183). Self-affirmation involves reflecting on personally important values unrelated to the threat (Jaremka et al., 2011; Sherman & Cohen, 2006). For example, an asexual individual who perceives that the asexual aspect of their identity is threatened, could cope by reflecting on another personally important value, such as being honest.

Threats to aspects of one's identity often arise in relation to social standards. Specifically, people may feel threatened when they perceive themselves as failing to meet certain standards (Leary & Baumeister, 2000; Sherman & Cohen, 2006). An example of a social standard is heteronormativity, the belief that exclusively heterosexual intimacy and relationships are normal (Jackson, 2006). Many asexual individuals do not meet this social heteronormative standard, which presumably poses a perceived identity threat. We posit that not meeting social norms can be perceived as an identity threat due to anticipated reactions or stereotypes from society. Therefore, assumingly, negative personalized meta-stereotyping itself can be experienced as an identity threat. Since self-affirmation helps cope with perceived threats, it seems likely that it can reduce the impact of personalized meta-stereotypes on internalized heterosexism and self-acceptance of sexuality.

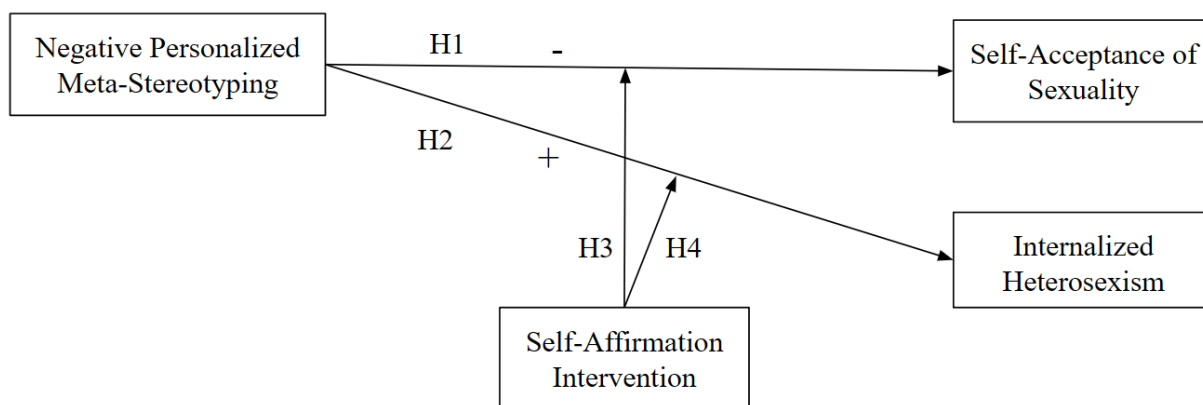
Additionally, support has been found for main effects of self-affirmation on these two outcome variables. First, self-affirmation has been shown to positively affect psychological wellbeing, which includes general self-acceptance (Agokei & Oluwaseun, 2018). Second, Li et al. (2023) found that a self-affirming writing exercise can reduce internalized heterosexism in sexual minority individuals. However, the results of Li et al. (2023) were inconsistent, and

general self-acceptance as discussed by Agokei and Oluwaseun (2018) differs from self-acceptance of sexuality. Therefore, it is interesting to investigate whether a self-affirmation intervention can attenuate the relationships between negative personalized meta-stereotyping and both self-acceptance of sexuality and internalized heterosexism.

The Current Study

Taken together, this study aims to address two key questions. The first question is how personalized meta-stereotyping is related to self-acceptance of sexuality and internalized heterosexism, in asexual individuals. The second question is what effect a self-affirmation intervention has on these relationships. To our knowledge, both research questions have not been previously studied, especially not in an asexual sample. Therefore, this research adds to the field of meta-stereotyping and to the field of research on asexuality. In practice, the outcomes of this study can give insight in how asexual individuals can be supported.

The research questions have been studied using an online survey (including an intervention) which we internationally distributed among asexual individuals. We expect that negative personalized meta-stereotyping is *negatively* related to self-acceptance of sexuality (**H1**), and *positively* related to internalized heterosexism (**H2**). Additionally, we expect that self-affirmation can *weaken* the negative relation between negative personalized meta-stereotyping and self-acceptance of sexuality (**H3**) and the positive relation between negative personalized meta-stereotyping and internalized heterosexism (**H4**). The model is illustrated in Figure 1.

Figure 1*An Illustration of the Model and Hypotheses***Method****Participants and Design**

Participants were recruited through social media pages targeting asexual individuals. After obtaining permission from the administrators of asexuality related Instagram and Facebook pages, a link to an online Qualtrics questionnaire was posted on these pages. A total of 428 individuals participated and consented to the processing of their data. Subsequently, based on our preregistered criteria (AsPredicted: https://aspredicted.org/9MN_5XM), 86 participants were excluded for the following reasons: filled out less than 50% of the scales on the dependent variables (0 excluded), spent longer than an hour on the questionnaire (16 excluded), were younger than 18 years old (0 excluded), scored "strongly disagree" on the item "I identify as asexual" (0 excluded), failed at least two out of three attention checks (0 excluded), straight-lined throughout the entire questionnaire (0 excluded), took one minute or less to complete the ranking and writing task (28 excluded), skipped the ranking or writing task (37 excluded), or failed to write anything related to the question asked in the writing task (5 excluded). This resulted in a final sample size of 342¹ participants ($M_{age} = 29.10$, $SD =$

¹ Due to an unexpectedly rapid pace of data collection, the number of participants exceeded the required 258 as determined by the power analysis.

8.55), which is sufficient according to an a priori power analysis by Perugini et al. (2018) requiring 258 participants for a power of 0.8 and a small effect size ($f^2 = .035$).

In the final sample, ages of the participants ranged from 18 to 61. Approximately 65% identified as female, 9% as male, 19% as non-binary, 5% as other, and 2% preferred not to say. Regarding sexuality, a little over 54% strongly agreed to the item "I identify as asexual" (1 = *strongly disagree*, 7 = *strongly agree*), almost 34% scored 6, and less than 12% showed lower agreement.

This study was structured according to a randomized control group intervention design, incorporating a self-affirmation intervention condition ($n = 165$) and a control condition ($n = 177$). The aim was to examine whether self-affirmation attenuated the hypothesized correlations between negative personalized meta-stereotypes (independent variable) and internalized heterosexism and self-acceptance of sexuality (dependent variables). Due to a collaborative research initiative, supplementary constructs were assessed but not used in this study². Prior to data collection, this research was approved by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen (EC-BSS).

Procedure

Participants filled out an online Qualtrics questionnaire. Participation was voluntary. At the start of the questionnaire, participants were provided with information about the study and asked to give informed consent. The questionnaire was divided into several parts.

In the first part, participants provided demographic information, including their age, gender, and the extent to which they identified as asexual. In the second part, participants indicated to what extent they held personalized meta-stereotypes considering a heterosexual

² Additional constructs assessed were: negative personalized meta-stereotypes (LGBTQ+ outgroup), identification with the asexual community, identification with the LGBTQ+ community, and psychological wellbeing.

outgroup. This was followed by several scales belonging to another study². Next, participants engaged in a ranking task and a writing task designed to manipulate self-affirmation. Finally, participants answered items related to self-acceptance of sexuality and internalized heterosexism, which were presented jointly.

Additionally, the questionnaire included three attention checks, a manipulation check and questions about community activity. The attention checks were designed to maintain participants' focus and identify deviant response patterns. For example, one attention check was, "Please click 'three' (this is an attention check)" within a 7-point Likert scale.

At the end of the questionnaire, participants were thanked, debriefed, and asked again for their consent to process their data. Furthermore, they were provided with resources for further reading or seeking support. An overview of the complete questionnaire can be found in Appendix A.

Independent Variables

Negative Personalized Meta-Stereotyping

Participants indicated the extent to which they expected heterosexual individuals to hold certain stereotypes about asexual individuals. This method was adapted from Vorauer et al. (1998) to fit the research question. To make the meta-stereotypes personalized (see Kamans et al., 2009), the sentence "Think about how heterosexual people are likely to perceive asexual people and thus (at least to some extent) you" was added. The introductory paragraph was concluded by "I think that most heterosexual people perceive asexual people as ...", and followed by nine negative stereotypes (e.g., "less human") along with six positive filler items (e.g., "trustworthy"). The negative stereotypes were derived from existing literature (Chan & Sin Yu Leung, 2023; Chen, 2020; MacNeela & Murphy, 2015). All items were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*), with higher

scores indicating stronger expectations of being viewed according to the stereotype. The items were combined into one scale ($M = 5.61$, $SD = 0.71$) with good internal consistency ($\alpha = .83$).

The Self-Affirmation Manipulation

The self-affirmation manipulation included an intervention condition and a control condition, each consisting of a ranking task and a writing task, based on Chen (2017). In the *intervention condition*, participants were asked to rank a list of 11 values, which was a combination of items from Harber's Source of Validation Scale (1995, as cited in Chen, 2017), Cohen et al. (2006), and McQueen and Klein (2006). To avoid participants associating the presented values with their asexual identity, three of Harber's values ("relations with family", "romantic values", and "physical attractiveness") were replaced with "academic achievement," "independence" (Cohen et al., 2006), and "kindness" (McQueen & Klein, 2006). This approach ensured self-affirmation occurred by reflecting on values unrelated to the potential threat of the asexual identity (Jaremka et al., 2011; Sherman & Cohen, 2006). After the ranking task, participants completed a writing task reflecting on the personal importance of their top-ranked value, and describing instances when it made them feel good about themselves. In the *control condition*, participants ranked 11 dinner dishes, including options suitable for vegetarian and vegan diets. Thereafter, they described the expected taste sensation of their third and fourth ranked dishes to minimize the risk of potential self-affirmation associated with their food choices.

The manipulation was checked with a measure based on Chen (2017), with two items: "I found the writing exercise meaningful" and "The writing exercise made me more aware of what I value", both rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). These items were combined into one scale ($M = 3.75$, $SD = 1.75$, $\alpha = .86$).

Dependent and Exploratory Variables

Self-Acceptance of Sexuality

The Self-Acceptance of Sexuality Inventory (SASI) by Camp et al. (2022) was used to measure the dependent variable self-acceptance of sexuality, with items such as “I accept my sexuality” and “I try to fight my sexuality (reversed)”. To limit the length of the questionnaire, three items with factor loadings below 0.7 were removed, resulting in a seven-item scale, with four items reversely coded. All items were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*), with higher scores indicating greater self-acceptance of sexuality. The composite scale presented excellent internal consistency ($M = 5.41$, $SD = 1.31$, $\alpha = .91$). In the questionnaire this scale was merged with the scale on internalized heterosexism.

Internalized Heterosexism

An adapted version of the Internalized Homophobia Scale from Xu et al. (2017) was used to measure the dependent variable internalized heterosexism. Items were adapted to fit the context of asexuality, such as “I wish I weren’t asexual” and “I have tried to become more sexually attracted to other people”. Two items that could not be functionally adapted were removed, resulting in a seven-item scale, rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*), with higher scores indicating greater internalized heterosexism. The composite scale demonstrated good internal consistency ($M = 2.53$, $SD = 1.23$, $\alpha = .83$). In the questionnaire this scale was merged with the scale on self-acceptance of sexuality.

Community Activity

Three community activity items, developed by the research team, assessed participants' involvement in (online) asexual and LGBTQ+ communities. An example of such a question was “I actively follow posts about asexuality on social media” (1 = *strongly disagree*, 7 = *strongly agree*). The composite scale was included for potential use in exploratory analyses ($M = 4.07$, $SD = 1.37$, $\alpha = .68$).

Results

Descriptive Statistics and Correlations

A comprehensive overview of descriptive statistics including means, standard deviations, and correlations is provided in Table 1. In addition to the variables that are included in our model (see Figure 1), we also report other relevant variables that were measured in the study.

Notably, no significant correlations emerged between the predictor variable negative personalized meta-stereotyping and the outcome variables, self-acceptance of sexuality and internalized heterosexism, which is not in line with what we expected. A strong negative correlation was observed between the two outcome variables, indicating that participants exhibiting higher levels of self-acceptance of sexuality tended to report lower levels of internalized heterosexism.

Small to moderate correlations were detected between the variables within the model and identification with the asexual community. Specifically, stronger identification with the asexual community was associated with stronger negative personalized meta-stereotypes, greater self-acceptance of sexuality, and lower levels of internalized heterosexism. The same pattern was found for correlations with identification with the LGBTQ+ community, and asexuality. However, these correlations were small.

Furthermore, both outcome variables demonstrated weak correlations with wellbeing. Participants reporting higher levels of self-acceptance of sexuality tended to score higher on wellbeing, whereas those who reported higher levels of internalized heterosexism, tended to score lower on wellbeing. No significant correlation was observed between negative personalized meta-stereotyping and wellbeing.

Lastly, community activity demonstrated weak correlations with all variables in the model. Higher scores on negative personalized meta-stereotyping and self-acceptance of

sexuality were related to higher scores on community activity. Participants with higher scores on internalized heterosexism, tended to score lower on community activity.

Table 1

Means, Standard Deviations, and Correlations for Variables in the Questionnaire

	<i>M (SD)</i>	1.	2.	3.	4.	5.	6.	7.
1. Negative Personalized Meta-stereotyping	5.61 (0.71)	-						
2. Self-acceptance of Sexuality	5.41 (1.31)	-.11	-					
3. Internalized heterosexism	2.53 (1.23)	.04	.80**	-				
4. Identification with the Asexual Community	5.17 (1.21)	.20**	.41**	-.38**	-			
5. Identification with the LGBTQ+ Community	5.11 (1.39)	.13*	.27**	-.28**	.54**	-		
6. Wellbeing	2.60 (0.70)	-.04	.24**	-.17**	.21**	.18**	-	
7. Asexuality	6.38 (0.84)	.18**	.32**	-.32**	.37**	.16**	.09	-
8. Community activity	4.07 (1.37)	.18**	.18**	-.18**	.48**	.48**	.07	.17*

Note. $N = 342$. ** $p < .01$ (two-tailed), * $p < .05$ (two-tailed). Wellbeing was rated on a 4-point Likert Scale (1 = *never*, 4 = *most of the time*). All other ratings were measured on a 7-point Likert Scale (1 = *strongly disagree*, 7 = *strongly agree*).

Manipulation Check Self-Affirmation

Effectiveness of the self-affirmation manipulation was assessed by conducting an independent-samples t-test on perceived meaningfulness of the writing task. A successful self-affirmation manipulation was confirmed by significantly higher ratings of perceived meaningfulness among participants in the intervention condition ($M = 4.57$, $SD = 1.59$) compared to participants in the control condition ($M = 2.98$, $SD = 1.53$), $t(340) = 9.39$, $d = 1.56$, $p < .001$, 95% CI [1.25, 1.92].

Testing the Hypotheses

To test our hypotheses, two moderation analyses were conducted using PROCESS v. 4.2, model 1 (Hayes, 2022). The first analysis tested Hypotheses 1 and 3, with self-acceptance of sexuality as the dependent variable, negative personalized meta-stereotyping as the independent variable, and the self-affirmation condition (intervention vs. control) as the moderator. The second analysis examined Hypotheses 2 and 4, using internalized heterosexism as the dependent variable. Prior to analysis, assumptions were checked (Appendix B).

Analysis 1: Self-Acceptance of Sexuality (SAS) as Dependent Variable

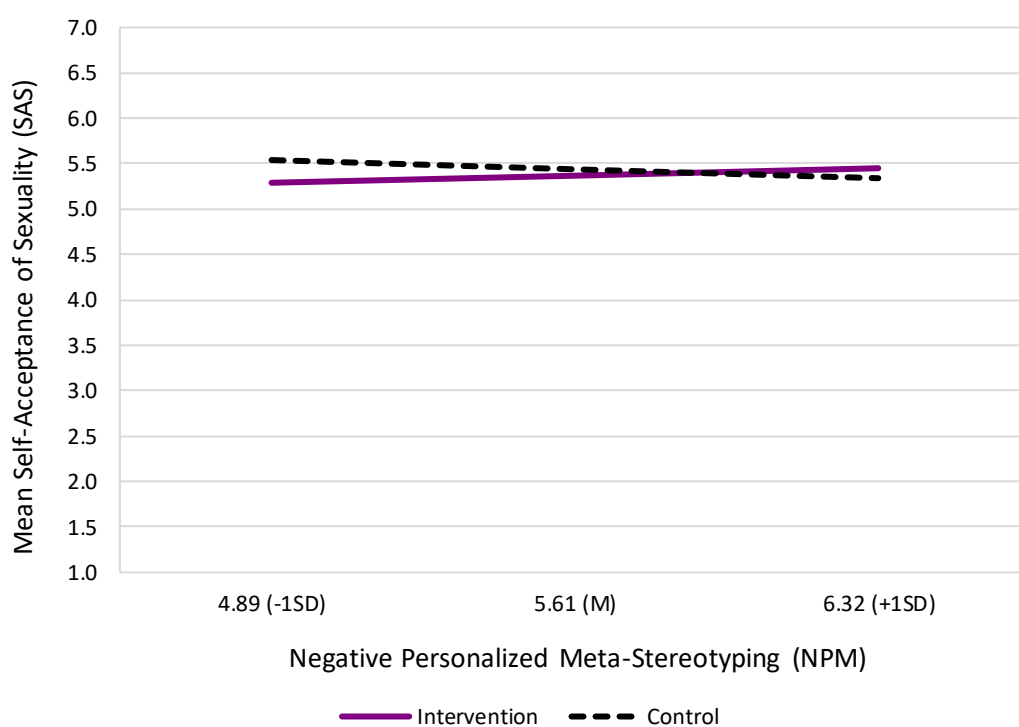
Hypothesis 1 proposed a negative relation between personalized meta-stereotyping (NPM) and self-acceptance of sexuality (SAS). Hypothesis 3 stated that self-affirmation weakens this relation (see Figure 1). The overall model was not significant, $R^2 < .01$, $F(3,338) = 0.63$, $p = .60$. No main effect of NPM was found ($b = 0.11$, $t = 0.78$, $p = .44$, 95% CI [-0.17, 0.39]). Furthermore, no main effect for the self-affirmation intervention was found ($b = 1.48$, $t = 1.32$, $p = 0.19$, 95% CI [-0.72, 3.69]). Finally, the interaction between NPM and condition was also not significant ($b = -0.25$, $t = -1.27$, $p = .25$, 95% CI [-0.64, 0.14]).

Even though we did not find a significant interaction, we examined the conditional effects of NPM on SAS for the different conditions (Figure 2) to explore whether the pattern

of the findings aligned with hypothesis 1 and hypothesis 3. For the control condition, in line with hypothesis 1, NPM negatively predicted SAS ($b = -0.14$, $t = -1.02$, $p = .31$, 95% CI [-0.41, 0.13]), but this relation was not significant. Interestingly, in the self-affirmation intervention condition, there was a positive relationship between NPM and SAS ($b = 0.11$, $t = 0.78$, $p = .44$, 95% CI [-0.17, 0.39]), although again this was not significant. The disappearance of the negative slope, in line with hypothesis 3, slightly hints at the possibility that self-affirmation may attenuate the negative relationship between NPM and SAS, although it should be noted that the interaction was not significant. Interestingly, the pattern of findings (Figure 2) seems to suggest that SAS was lowest among those in the intervention condition with low NPM. However, note that the effects were not significant.

Figure 2

The Influence of Self-Affirmation on the Relation Between NPM and SAS



Analysis 2: Internalized Heterosexism (IHS) as Dependent Variable

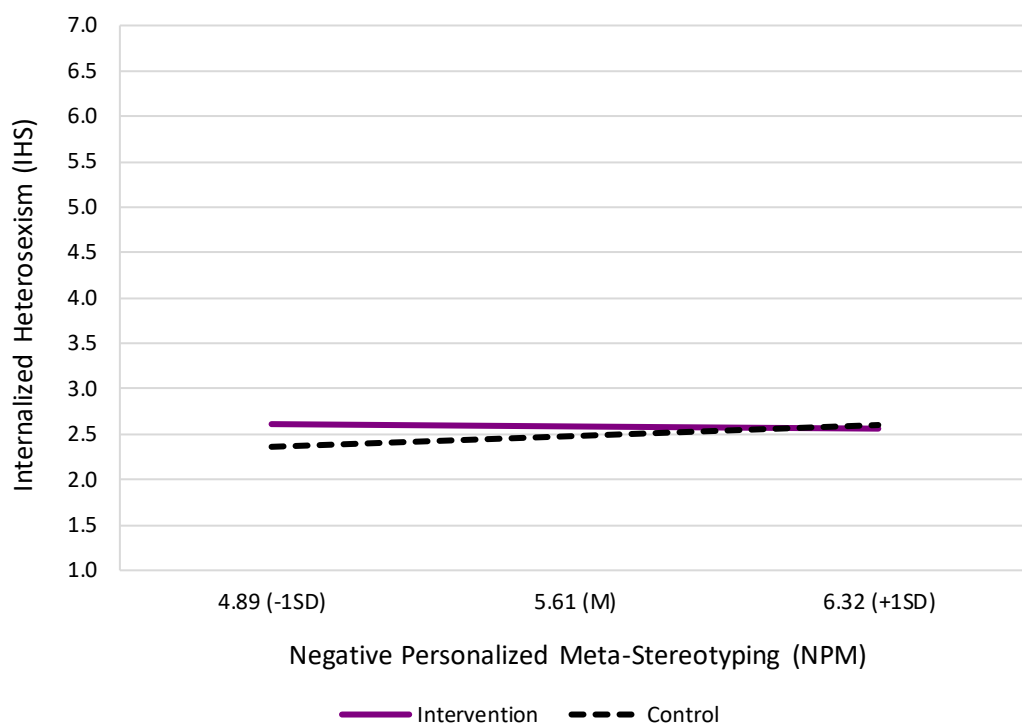
Hypothesis 2 proposed a positive relation between personalized meta-stereotyping (NPM) and internalized heterosexism (IHS). Hypothesis 4 stated that self-affirmation

weakens this relation (see Figure 1). The overall model was not significant, $R^2 = <.01$, $F(3,338) = 0.78$, $p = .51$. No main effect of NPM was found ($b = -0.04$, $t = -0.29$, $p = .77$, 95% CI [-0.30, 0.22]). Furthermore, no main effect for the self-affirmation intervention was found ($b = -1.24$, $t = -1.18$, $p = 0.24$, 95% CI [-3.32, 0.83]). Finally, the interaction between NPM and condition was also not significant ($b = 0.20$, $t = 1.08$, $p = .28$, 95% CI [-0.16, 0.57]).

Even though we did not find a significant interaction, we examined the conditional effects of NPM on IHS for the different conditions (Figure 3) to explore whether the pattern of findings aligned with hypothesis 2 and hypothesis 4. For the control condition, in line with hypothesis 2, NPM positively predicted IHS ($b = 0.16$, $t = 1.26$, $p = .21$, 95% CI [-0.09, 0.42]), but this relation was not significant. Interestingly, in the self-affirmation intervention condition, there was no relationship between NPM and IHS ($b = -0.04$, $t = -0.29$, $p = .77$, 95% CI [-0.30, 0.22]). The disappearance of the positive slope, in line with hypothesis 4, slightly hints at the possibility that self-affirmation may attenuate the negative relationship between NPM and IHS, although it should be noted that the interaction was not significant. Interestingly, the pattern of findings (Figure 3) seems to suggest that IHS was lowest among those in the control condition with low NPM. However, note that the effects were not significant.

Figure 3

The Influence of Self-Affirmation on the Relation Between NPM and IHS



To summarize, our results did not support our hypotheses. For exploratory purposes, we inspected the pattern of findings and observed that it hints at the possibility that self-affirmation may attenuate the relationships between negative personalized meta-stereotyping and the two outcome variables, self-acceptance of sexuality and internalized heterosexism. Unexpectedly, participants in the intervention condition with few negative personalized meta-stereotypes exhibited the lowest levels of self-acceptance of sexuality, and those in the control condition with few negative personalized meta-stereotypes showed the lowest levels of internalized heterosexism. However, none of these effects were significant.

Exploratory Analyses

Given that the predicted effects were not found, exploratory analyses were conducted³.

³ Additional exploratory analyses were conducted, encompassing moderation analyses with specific subgroupings: only women, exclusion of high scorers on community questions, NPM filler items as covariate, and NPM filler items as the independent variable. Results were not significant.

It is important to acknowledge that this research was conducted as part of a larger project on asexuality. Consequently, several variables were assessed between negative personalized meta-stereotyping (NPM) and the self-affirmation intervention as part of another study. Specifically, identification with the asexual community, identification with the LGBTQ+ community, and wellbeing were measured. These variables were included as covariates in the moderation analysis to statistically control for their potential influence on the relationship between NPM and the outcome variables. In the analyses self-acceptance of sexuality (SAS) was reverse-coded and merged with internalized heterosexism (IHS) into one combined scale ($M = 2.56$, $SD = 1.20$), demonstrating excellent internal consistency ($\alpha = .93$). This consolidation aimed to maintain conciseness. The resulting scale reflects higher scores as indicative of perceiving one's asexuality as problematic. Accordingly, it is expected that relationships between NPM and perceiving one's sexuality as a problem will be positive, and that a self-affirmation intervention attenuates this relationship.

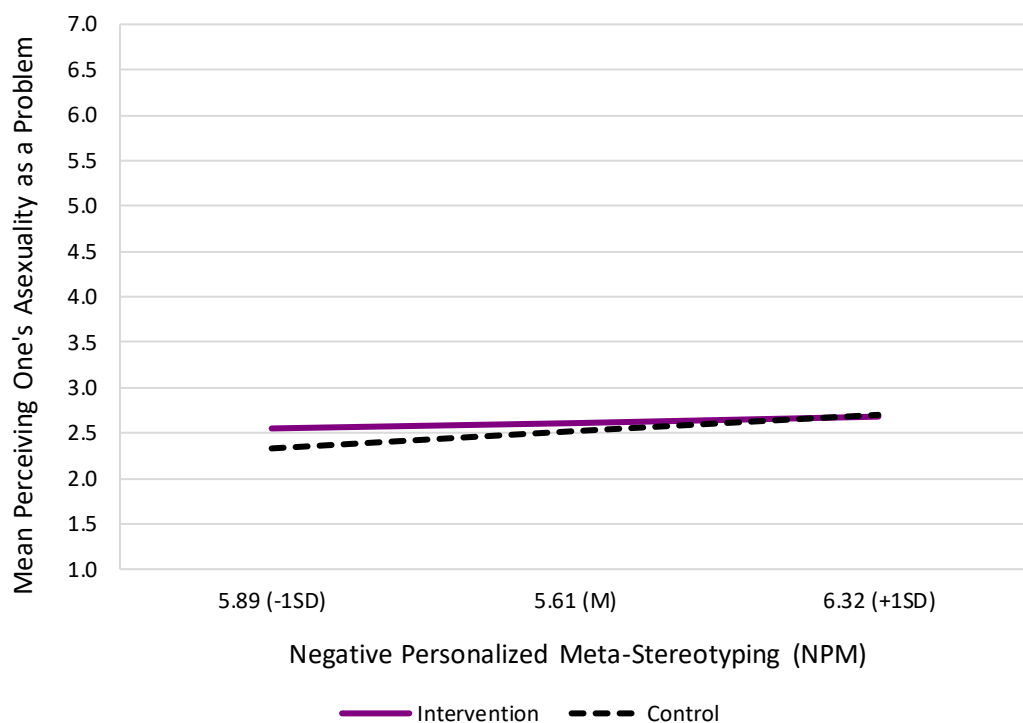
This model was significant, $R^2 = .21$, $F(6, 335) = 14.79$, $p < .001$, with no main effects observed for NPM ($b = 0.09$, $t = 0.76$, $p = .45$, 95% CI [-0.14, 0.32]). Furthermore, no main effect for the self-affirmation intervention was found ($b = -1.04$, $t = -1.10$, $p = .27$, 95% CI [-2.89, 0.82]). Notably, the covariates identification with the asexual community ($b = -0.36$, $t = -6.14$, $p < .001$, 95% CI [-0.48, -0.25]) and wellbeing ($b = -0.19$, $t = -2.16$, $p = .03$, 95% CI [-0.36, -0.02]) emerged as significant predictors of perceiving one's sexuality as a problem. The covariate identification with the LGBTQ+ community was not significant ($b = -0.08$, $t = -1.62$, $p = .11$, 95% CI [-0.18, 0.02]). Finally, the interaction between NPM and perceiving one's sexuality as a problem was not significant, $b = 0.17$, $t = 1.00$, $p = .32$, 95% CI [-0.16, 0.50].

Interestingly, the graph of the conditional effects (Figure 4) showed the hypothesized effects of simple slopes, that is, an attenuated relation between NPM and perceiving one's

sexuality as a problem in the self-affirmation intervention condition compared to the control condition (but note that the interaction was not significant). In the control condition, NPM was significantly positively related with perceiving one's sexuality as a problem, $b = 0.26$, $t = 2.18$, $p = .03$, 95% CI [0.03, 0.49]. Conversely, in the intervention condition, this significant relationship disappeared, but the slope remained slightly positive, $b = 0.09$, $t = 0.76$, $p = .45$, 95% CI [-0.14, 0.32]. Unexpectedly, however, the pattern of findings seems to suggest that those in the control condition with low NPM perceived their asexuality as least problematic.

Figure 4

The Influence of Self-Affirmation on the Relation Between NPM and Perceiving One's Sexuality as a Problem



Thus, we found that negative personalized meta-stereotyping predicted perceiving one's asexuality as a problem when controlling for identification with the asexual community, identification with the LGBTQ+ community, and wellbeing. As hypothesized, this association existed solely in the control condition. However, notably, the pattern seemed to suggest that

participants in the intervention condition viewed their asexuality as more problematic, even when they had few negative personalized meta-stereotypes.

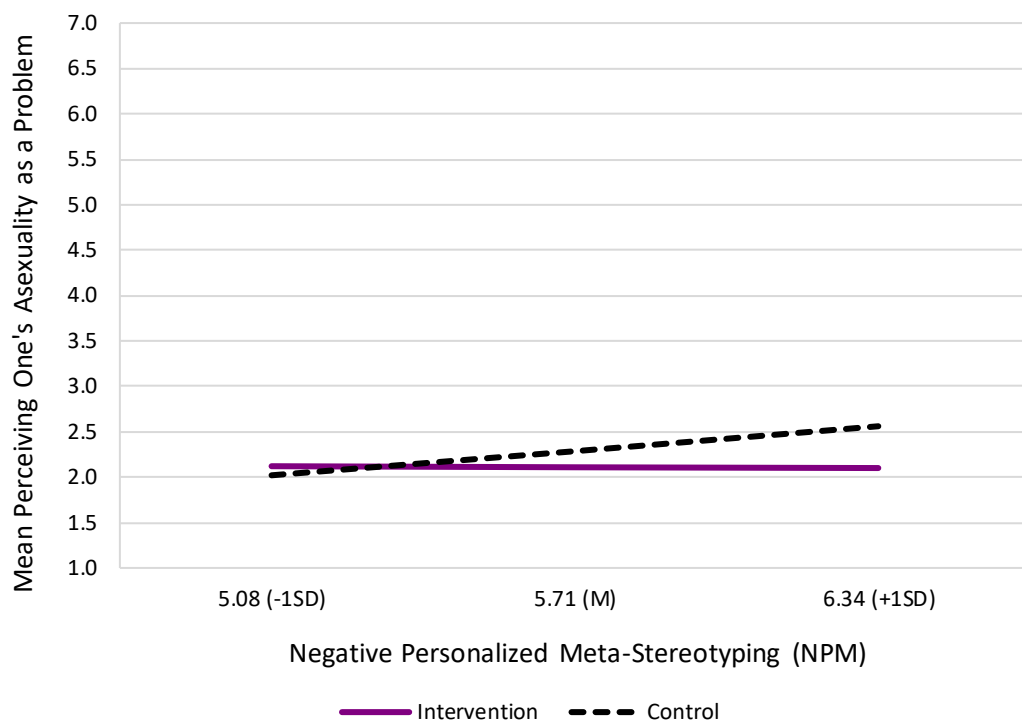
Participants Who Strongly Identified as Asexual

Our participants varied in the extent to which they perceived themselves as asexual. Given that our hypotheses were based on participants who do not question their sexuality, we carried out an exploratory analysis with only participants who strongly agreed to ‘I identify as asexual’, constituting 54% of the sample ($N = 186$, $n_{intervention} = 84$, $n_{condition} = 102$). For this sample, the overall regression model was not significant, $R^2 = .03$, $F(3,182) = 2.08$, $p = .11$. No main effect of NPM was found ($b = -0.01$, $t = -0.07$, $p = .95$, 95% CI [-0.40, 0.37]). Furthermore, no main effect for the self-affirmation intervention was found ($b = -2.34$, $t = -1.50$, $p = 0.14$, 95% CI [-5.44, 0.75]). Finally, the interaction between NPM and condition was also not significant ($b = 0.44$, $t = 1.62$, $p = .11$, 95% CI [-0.10, 0.98]).

Notably, the graph of the conditional effects (Figure 5) showed the hypothesized pattern (but note that the interaction was not significant). In the control condition, NPM was significantly positively related with perceiving one’s sexuality as a problem, $b = 0.43$, $t = 2.26$, $p = 0.02$, 95% CI [0.06, 0.80]. In the intervention condition, this significant relationship disappeared, $b = -0.01$, $t = -0.07$, $p = .95$, 95% CI [-0.40, 0.37].

Figure 5

The Influence of Self-Affirmation on the Relation Between NPM and Perceiving One's Sexuality as a Problem in Individuals Strongly Identifying as Asexual



Taken together, although no main effects or interactions were found, the predicted relationship of negative personalized meta-stereotyping with perceiving one's asexuality as a problem was present in the control condition but, as expected, not in the intervention condition. This seems to suggest that self-affirmation may have weakened the negative relation between negative personalized meta-stereotyping and the perception of asexuality as a problem. However, because of the small sample size these results should be interpreted with caution.

Discussion

In this research, we examined the relationships between negative personalized meta-stereotyping, self-acceptance of sexuality, and internalized heterosexism in a self-identifying asexual sample. Additionally, we experimentally tested the influence of a self-affirmation intervention on these relationships. We expected that negative personalized meta-stereotyping

would be negatively related to self-acceptance of sexuality (**H1**), and positively related to internalized heterosexism (**H2**). However, the data did not support these hypotheses. Next, we expected that a self-affirmation intervention would attenuate these relations (**H3 and H4**). Despite a successful self-affirmation manipulation, and slightly smaller effect sizes in the intervention condition compared to the control condition, the data did not confirm our expected patterns.

In an exploratory analysis focusing exclusively on participants strongly identifying as asexual, the pattern of findings was in line with our hypotheses. That is, we found that the more negatively asexual individuals expected to be stereotyped, the more they perceived their asexuality as a problem. On the other hand, when individuals with more negative meta-stereotypes affirmed their values, they perceived their asexuality as less problematic. However, these results should be interpreted with caution because of a small sample size and a non-significant interaction effect.

Theoretical Implications

This study explored the uncharted territory of meta-stereotyping within an asexual sample. Interestingly, contrary to our predictions derived from prior research, none of the anticipated outcomes were observed. We only found some support for our hypotheses among those who strongly identified as asexual.

The Relation Between Meta-Stereotyping, Self-Acceptance of Sexuality, and Internalized Heterosexism

Building upon prior research on societal stigma and asexuality, we anticipated that negative personalized meta-stereotyping would negatively correlate with self-acceptance of sexuality and positively with internalized heterosexism. However, our findings for the overall sample did not align with these expectations. This lack of anticipated findings resonates with research by Thöni et al. (2022), where meta-stereotyping also failed to predict adverse

outcomes, albeit in pan- and bisexual individuals. These findings seemingly suggest that both meta-stereotyping and personalized meta-stereotyping may exhibit comparable non-effects in sexual minority individuals. However, this is not true for the subset of participants who strongly identified as asexual. Possibly, this subset was more certain of their sexuality compared to those who expressed weaker agreement. Perhaps the latter group felt less addressed by the negative meta-stereotypes than the former and could therefore more easily ignore them.

Prior research has linked stigma-related stressors to self-acceptance of sexuality and internalized heterosexism among sexual minority populations (Camp et al., 2020; Hatzenbuehler, 2019; Mason et al., 2015). Aligning with these findings, the absence of associations between personalized meta-stereotyping and these outcome variables in our overall sample could imply that asexual individuals may be less influenced by perceptions of others and more by actual behaviours. Again, this explanation does not hold for participants who strongly agreed to our operationalization of asexuality as ‘not experiencing sexual attraction’. In practice, the term ‘asexuality’ is also used as an umbrella term, which encompasses a range of asexual orientations (Brotto & Milani, 2022). Those who occasionally, or under specific circumstances, experience sexual attraction may not have strongly identified as asexual according to our operationalization. Speculatively, these individuals might face less societal stigma than the strong identifiers, as their experiences regarding experiencing sexual attraction align more closely with allosexual (i.e., non-asexual) societal norms. This variability may have influenced the extent to which individuals engaged in negative personalized meta-stereotyping, perceived it as a threat to their identity, and its subsequent impact on them.

Lastly, there may be other explanations for why negative personalized meta-stereotyping did not correlate with self-acceptance of sexuality and internalized heterosexism

in our overall sample. Our sample, recruited from social media, may differ from the general asexual population. Individuals following asexuality-related social media pages and willing to complete an asexuality-related questionnaire may be particularly secure in their asexual identity. This aligns with our findings, which indicated that participants generally viewed their own sexuality positively⁴. Additionally, several participants commented they experienced greater acceptance of their asexuality over time. This self-assurance could perhaps reduce their vulnerability to negative personalized meta-stereotyping. Furthermore, social media might provide a sense of community or social support (Berger et al., 2022), buffering against the negative effects of personalized meta-stereotyping. However, this explanation does not account for strongly identifying asexual individuals, highlighting the need for further exploration of social media's influence on different asexual orientations.

The Influence of Self-Affirmation

We further expected that a self-affirmation intervention would attenuate the relationship between negative personalized meta-stereotyping and both self-acceptance of sexuality and internalized heterosexism in asexual individuals. Previous research suggests that self-affirmation can reduce identity threat (Sherman & Cohen, 2006; Steele, 1988), and positively influence self-acceptance of sexuality and internalized heterosexism (Agokei & Oluwaseun, 2018; Li et al., 2023).

Despite successfully implementing the self-affirmation manipulation, it did not influence the correlations between negative personalized meta-stereotyping and self-acceptance of sexuality or internalized heterosexism in the overall sample. One possible explanation is that the constructs preceding the intervention⁵ such as identification with the asexual and LGBTQ+ communities, may have served self-affirmingly (e.g., being a valued community member), and buffered against the negative impacts of meta-stereotyping. On the

⁴ SAS had a median of 5.64 (IQR = 4.43 – 6.57), and IHS had a median of 2.29 (IQR = 1.57 – 3.43).

⁵Due to a collaborative research initiative, supplementary constructs were assessed.

other hand, when these variables were statistically controlled for, despite a hint of attenuation, there was no effect of self-affirmation. Therefore, this explanation should be taken with caution.

However, the self-affirmation intervention was successful in the subgroup of strongly asexual identifiers. Steele's self-affirmation theory suggests that a certain level of identity threat is necessary for self-affirmation to be effective (Steele, 1988). This subgroup may have experienced a more pronounced identity threat in response to negative personalized meta-stereotypes due to their heightened certainty about their orientation, making the self-affirmation intervention more effective. Conversely, less strongly identifying individuals in the overall sample may be less certain about their asexual identity, or identify differently within the asexuality umbrella (i.e., experiencing sexual attraction sometimes or under certain circumstances). Therefore, this group may have felt less addressed or threatened by the meta-stereotypes, which possibly reduced the effectiveness of the intervention.

Practical Implications

No straightforward conclusions regarding implications can be drawn based on our findings, but the observed patterns allow for some tentative suggestions. First, it is worth noting that participants generally reported positive perceptions of their asexuality. Nevertheless, support may be desirable, as we also found that participants who viewed their asexuality in a more negative light exhibited lower wellbeing. In light of our findings, it appears that self-affirmation may not be effective as a standalone intervention in support programs for asexual individuals in general. Still, it may be beneficial for those who belong to the strongly identifying group. As such, it may be useful to tailor interventions and support programs to account for varying identities on the asexual spectrum, or individuals who may still be exploring or are uncertain about their asexuality.

Limitations and Future Directions

This study was subject to several limitations that should be acknowledged. For example, in this study, data collection was conducted through social media pages associated with asexuality. This potentially limits the representativeness of our sample. Participants who found these pages may have had more prior knowledge of asexuality than (perhaps not self-identified) asexual individuals who did not. This could have influenced our findings. Additionally, social media communities may provide social support and recognition, potentially buffering against the negative effects of personalized meta-stereotyping. However, adding activity within online communities as a covariate did not influence the results. Intriguingly, higher community activity levels correlated with increased negative meta-stereotyping but *also* with greater self-acceptance of sexuality. Potentially, active participation in online communities may expose individuals to diverse perspectives, both positive and negative, affecting the degree of both meta-stereotyping and self-acceptance of sexuality. Alternatively, social media communities might result in an ingroup/outgroup contrast, with belonging to an ingroup fostering self-acceptance of sexuality, and the idea of an outgroup heightening negative personalized meta-stereotyping tendencies. Future research could further investigate the impact of social media on the asexual community and explore alternative recruitment methods.

Other factors that may have impacted our outcomes include the age and gender distribution within our sample. Our participants were relatively young on average, and primarily female, which may not fully represent the wider asexual population, though similar demographics have been reported in earlier research (e.g., Bauer et al., 2018; Rothblum et al., 2019). Perhaps more awareness and acceptance of the term ‘asexuality’ exists in younger generations. The gender imbalance raises questions about potential differences in stigmatization. Perhaps asexual males are more stigmatized than females and therefore

hesitant to openly identify as asexual. The young cohort and the disbalance between genders may have influenced our results, as experiences in regard to asexuality may differ. Replicating this study with a more balanced sample could provide valuable insights.

Unexpectedly, an additional limitation may lie in the design of our control condition. Some participants associated the food-related questions with a joke within the asexual community, where food (specifically cake and garlic bread) is humorously considered better than sex. This association could potentially lead to a more positive view of asexuality, thereby influencing our results

Furthermore, the collaborative nature of our study may have influenced our results. Due to anticipated challenges in recruiting sufficient participants, the questionnaire was merged with another study on asexuality. Therefore, the self-affirmation intervention was preceded by potentially influencing variables⁶. These variables were statistically controlled for, and while attenuation of the self-affirmation intervention was found, the pattern did not conform to our expectations. It would be intriguing to explore the impact of eliminating these additional variables.

Additionally, in light of our contrasting findings between the overall sample and strongly identifying asexual individuals, it would be interesting to focus more on how various orientations on the asexual spectrum would respond to the self-affirmation intervention in the same context, and how these groups differ from each other. Subsequently, exploring the underlying reasons for why such differences emerge would provide valuable insights.

Finally, we encourage researchers to continue expanding knowledge on asexuality. Within our questionnaire, numerous participants expressed gratitude for the scholarly attention directed towards asexuality. Many also seized the opportunity to articulate their

⁶ Additional constructs assessed were: negative personalized meta-stereotypes (LGBTQ+ outgroup), identification with the asexual community, identification with the LGBTQ+ community, and psychological wellbeing.

desires for further research within this domain. Commonly suggested themes were: sexual identity development, change in (a)sexual orientation, nuances within the asexual spectrum, different forms of attraction, intersectionality between identifying as asexual and neurodivergence, knowledge about asexuality in the general population, and the interplay and intersectionality of romantic, sexual and gender identities. Perhaps these themes could also be relevant within the field of meta-stereotyping and asexuality, as different combinations of information may yield different results and insights. For example, one participant mentioned they would have different meta-stereotypes in regard to a *female* heterosexual outgroup compared to a *male* heterosexual outgroup.

Conclusion

This research contributes to a deeper understanding of the intersection between meta-stereotyping and asexuality. This study aimed to explore the impact of a self-affirmation intervention on the relationships between negative personalized meta-stereotyping and both self-acceptance of sexuality and internalized heterosexism within an asexual sample. Overall, we found no relationship of negative personalized meta-stereotypes with self-acceptance of sexuality and internalized heterosexism, and the self-affirmation intervention had no attenuating effect. Interestingly, however, the pattern of findings was in line with our expectations for individuals strongly identifying as asexual, although the sample was too small to draw conclusions.

Although certainly not without limitations, overall, the study contributes to the fields of meta-stereotyping, self-affirmation, and asexuality by researching the interplay of these constructs. Moreover, the study contributes to the understanding and visibility of asexual experiences within broader societal contexts, and it will hopefully help stimulating further research on this still often overlooked sexual minority.

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Appendix A

The Full Questionnaire

Start of Block: landing page

"How you think society perceives asexual people."

Welcome to this study! Please read the study information below and after that, click on the red arrow to continue to the next page.

Why do I receive this information?

You are being invited to participate in this research, because we are interested in how you think society perceives asexual people, and your experiences with being asexual. This research is part of the Master's thesis project by N.J.M. de Ruijter and A.B. de Boer, from the University of Groningen in the Netherlands, and is supervised by E. Gordijn. Contact information: n.j.m.de.ruijter@student.rug.nl or a.b.de.boer@student.rug.nl.

Do I have to participate in this research?

Participation in the research is voluntary. However, your consent is needed. Therefore, please read this information carefully. You can skip questions you do not wish to answer, or even withdraw from participation at every moment without explanation, and there will be no negative consequences for you. You have this right at all times, also after you have given consent for participation.

Why this research?

In this research, we want to study the experiences of being asexual within contemporary society.

For this research, we are looking for participants:

- (1) Who identify as asexual, or are questioning to be asexual.
- (2) Who are 18 or older.

What do we ask of you during the research?

First, we will ask you for your consent to participate. When you agree to participate, you will be guided to the online questionnaire. In the questionnaire, you will first answer some demographic questions, e.g., about your age, gender, and sexual orientation. Next, you will be asked some questions about how you think society perceives asexual people, about your preferences, and about how you feel about and identify with your sexual orientation. Afterwards, we will once again ask you for your consent to the use of your data. If you decided to withdraw from the study but would like to receive more information, you can always ask for this by sending emails to n.j.m.de.ruijter@student.rug.nl or a.b.de.boer@student.rug.nl. The questionnaire will take approximately 20-25 minutes to complete

What are the consequences of participation?

With our research, we hope to gain more understanding of asexual individuals' experiences within the current society. Thus, with your participation, you will contribute to this research. Your participation will also help two Master's students with their Master's theses. We believe that there are no major risks associated with participating in this study. However, we collect some sensitive information and the topic might be upsetting or distressing to some people. Please remember that you may always withdraw from the study and/or skip questions you may not wish to answer, which

does not have any negative consequences for you.

How will we treat your data?

The data consists of your responses to the questions which will be collected using an online questionnaire. We collect this data for scientific purposes. Your data will be used to write a Master's thesis, and possibly to write an empirical article in a scientific peer-reviewed journal. Some information may act as identifiers when combined (i.e., gender, age, and personal remarks). Only the researchers of this study will have access to it. We will anonymize information that could be used to identify individual participants (e.g., personal remarks). Data processing takes place in Europe. When the study is finished, the data will be stored at a safe University of Groningen server and will be stored for 10 years, which is in line with the university's data storage protocol.

What else do you need to know?

You may always ask questions about the research: now, during the research, and after the end of the research. You can do so by sending an e-mail to n.j.m.de.ruijter@student.rug.nl or a.b.de.boer@student.rug.nl. Do you have questions/concerns about your rights as a research participant or the conduct of the research? You may also contact the Ethics Committee of the Faculty of Behavioural and Social Sciences of the University of Groningen: ec-bss@rug.nl. Do you have questions or concerns regarding the handling of your personal data? You may also contact the University of Groningen Data Protection Officer: privacy@rug.nl. As a research participant, you have the right to a copy of this research information (i.e., you can take a screenshot).

Page Break

INFORMED CONSENT

"How you think society perceives asexual people"

By consenting to participate in this study you understand the following:

1. I have the right to receive a copy of this informed consent form by taking a screenshot of this page or asking the researcher for a copy (send an email to n.j.m.de.ruijter@student.rug.nl or a.b.de.boer@student.rug.nl)
 2. My participation is voluntary, and I can withdraw from this study at any moment without having to give a reason and without any negative consequences.
 3. I am allowed to refuse to answer any questions that I do not wish to answer. I do not have to provide any reason for this, and this does not have any negative consequences.
 4. All my data will be anonymized and will be securely stored.
 5. After completing the questionnaire, I will receive more information on the purpose of this research.
 6. I approve that researchers can handle my personal data.
 7. I declare to be at least 18 years old.
-

Do you agree to participate in this study (if you don't want to participate, click no and you will leave the questionnaire)?

Yes, I want to participate.

No.

Do you give permission for your data to be collected during your participation in this study, to be analyzed and used for the purposes of the study outlined above (if you do not consent, click no and you will leave the questionnaire)?

Yes, I consent to the processing of my personal data as mentioned in the study information.

No.

End of Block: landing page

Start of Block: no consent

[no consent] You indicated you do not want to participate in this research. If you want to let us know why you do not want to participate, you can do so below. We thank you for your time!

End of Block: no consent

Start of Block: demographics

First, we ask you to provide some demographic information below before starting the main survey.

What is your age?

Please indicate your gender

- Female
 - Male
 - Non-binary
 - Other
 - Prefer not to say
-

Page Break

In this study, asexuality is defined as not experiencing sexual attraction.

Please indicate to what extent you agree with the statement below:

"I identify as asexual."

- 1. Strongly disagree
- 2.
- 3.
- 4.
- 5.
- 6.
- 7. Strongly agree

End of Block: demographics

Start of Block: Not asexual

[not asexual] You indicated that you strongly disagree with the statement "I identify as asexual." This study focuses on asexual individuals. Therefore, you are excluded from this study. Thank you for your time!

End of Block: Not asexual

Start of Block: NPM

You have indicated to identify (at least to some extent) as asexual. One of the goals of this research is to explore how asexual people expect to be perceived by others in society.

You are now asked about your expectations of how **heterosexual people** may perceive you as someone who identifies (at least to some extent) as asexual. Heterosexual people are people who are exclusively sexually attracted to people of the other sex.

Think about how **heterosexual people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **heterosexual people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Intelligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not having met the right person yet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing to be fixed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Think about how **heterosexual people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **heterosexual people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less human	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sportive ⁷	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Childish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

⁷ Several participants commented that they did not understand what was meant with this word. 'Athletic' would have been a clearer description.

Think about how **heterosexual people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **heterosexual people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
To be making up their sexuality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have a sexual disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please click 'three' (this is an attention check)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Honest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Since asexuality is a sexual orientation that is different from heterosexuality, it is by definition part of the LGBTQ+ community. To distinguish between LGBTQ+ people who do and do not experience sexual attraction, the term “allosexual” can be used. Allosexual LGBTQ+ people experience sexual attraction.

You are now asked about your expectations of how **allosexual LGBTQ+ people** may perceive you as someone who identifies (at least to some extent) as asexual.

Think about how **allosexual LGBTQ+ people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **allosexual LGBTQ+ people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Intelligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not having met the right person yet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing to be fixed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Think about how **allosexual LGBTQ+ people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **allosexual LGBTQ+ people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less human	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sportive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Childish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Think about how **allosexual LGBTQ+ people** are likely to perceive asexual people and thus (at least to some extent) you. Please indicate for each statement to what extent you agree (1 = strongly disagree, 7 = strongly agree).

I think that most **allosexual LGBTQ+ people** perceive asexual people as ...

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
To be making up their sexuality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have a sexual disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Honest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: NPM

Start of Block: Group Identification

In the next part, you will answer some questions about your identification with the asexual and the LGBTQ+ community.

Please indicate to what extent you agree with these statements, regarding your identification with the **asexual** community.

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Being part of the asexual community is an important part of how I see myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a bond with the asexual community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am glad to be part of the asexual community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The fact that I am asexual is an important part of my identity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel committed to the asexual community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is pleasant to be part of the asexual community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Please indicate to what extent you agree with these statements, regarding your identification with the **LGBTQ+** community.

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
Being part of the LGBTQ+ community is an important part of how I see myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a bond with the LGBTQ+ community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am glad to be part of the LGBTQ+ community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The fact that I am LGBTQ+ is an important part of my identity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel committed to the LGBTQ+ community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please click 'five' (this is an attention check).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is pleasant to be part of the LGBTQ+ community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Group Identification

Start of Block: Psychological well-being

In the next part, you will answer some questions about your well-being.

Over the past week, how often have you...

	Never	Sometimes	Usually	Most of the time
Felt that you were just as good as other people?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt hopeful about the future?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt happy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that you enjoyed life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Psychological well-being

Start of Block: Intervention condition

In this part of the questionnaire we are interested in things that are important to you.

Below is a list of characteristics and values, some of which may be important to you, some of which may be unimportant.

Please rank these values and qualities in order of their importance to you, from 1 to 11 (*1 = most important item, 11 = least important item*).

You can rank the items by clicking on them, and dragging them to the desired position.

- _____ Artistic skills/ aesthetic appreciation
- _____ Sense of humor
- _____ Kindness
- _____ Spontaneity/ living life in the moment
- _____ Social skills
- _____ Athletics
- _____ Musical ability/ appreciation
- _____ Academic achievement
- _____ Creativity
- _____ Business/ managerial skills
- _____ Independence

Please take around 5 minutes to write about your top-ranked value/quality. Don't worry about finding the perfect words or phrases while writing. The purpose of this writing exercise is to focus on your feelings and thoughts about your top-ranked value.

Please write about why this value/quality is important to you and how it makes you feel good about yourself. In addition, describe a time when your top-ranked value/quality was particularly important to you. Be specific.

End of Block: Intervention condition

Start of Block: Control condition

In this part of the questionnaire we would like you to think and write about your food preferences.

Below is a list of dinner dishes, some of which may seem tasty to you, some of which may not seem tasty.

Please rank these dishes in order of tastiness, from 1-11 (*1 = most tasty dish, 11 = least tasty dish*).

You can rank the dishes by clicking on them, and dragging them to the desired position.

- _____ Lasagna with red lentils and spinach
- _____ Cooked potatoes with broccoli, and beef
- _____ Soup with roasted garlic, chickpeas, and pasta
- _____ Baked salmon with grapefruit salad
- _____ Tacos with black beans, guacamole, and salsa
- _____ Hamburger with french fries
- _____ Grilled vegetables with quinoa
- _____ Deep fried cauliflower with soy sauce
- _____ Carrots, peas, and oven roasted potato wedges
- _____ Stuffed aubergine/eggplant with pistache, and bulgur
- _____ Pizza with tomato sauce, bell peppers, onion, artichoke, and cheese

Please take around 5 minutes to write about the third and fourth dinner dishes you ranked. Don't worry about finding the perfect words or phrases while writing. The purpose of this writing exercise is to focus on your thoughts about these two dinner dishes.

Please describe the flavors of the two dinner dishes you ranked as the third and fourth tastiest. Be specific.

End of Block: Control condition

Start of Block: SA & IHS

In the first part of the questionnaire, we asked you about the extent to which you identify as asexual. In this part, we are interested in how identifying as asexual makes you feel.

Below you'll find some statements about how you feel about your sexuality. Please indicate to what extent you agree with these statements.⁸

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
I accept my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If someone offered me the chance to be completely heterosexual, I would accept the chance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel in conflict about my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I weren't asexual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I struggle to accept my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

⁸ Items 1,3, and 5 belong to the construct of self-acceptance of sexuality. Items 2 and 4 belong to the construct of internalized heterosexism.

Below you'll find some statements about how you feel about your sexuality. Please indicate to what extent you agree with these statements.⁹

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
I feel alienated from myself because of being asexual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please click 'six' (this is an attention check)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel at peace with my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to fight my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish that I could develop more erotic feelings towards other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

⁹ Items 3 and 4 belong to the construct of self-acceptance of sexuality. Items 1 and 5 belong to the construct of internalized heterosexism.

Below you'll find some statements about how you feel about your sexuality. Please indicate to what extent you agree with these statements.¹⁰

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
I have come to terms with my sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that being asexual is a personal shortcoming for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking about my sexuality makes me feel upset.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to get professional help in order to change my sexual orientation from asexual to heterosexual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have tried to become more sexually attracted to other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: SA & IHS

¹⁰ Items 1 and 3 belong to the construct of self-acceptance of sexuality. Items 2, 4, and 5 belong to the construct of internalized heterosexism.

Start of Block: Manipulation check

Earlier in this questionnaire you were asked to write something. While thinking back to this writing exercise, please indicate to what extent you agree with these statements.

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
I found the writing exercise meaningful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The writing exercise made me more aware of what I value.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Manipulation check

Start of Block: Community

Please indicate to what extent you agree with these statements.

	1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
I actively follow posts about asexuality on social media.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am active in an asexual community (for example, I write posts on an asexuality forum).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am active in an LGBTQ+ community (for example, I write posts on an LGBTQ+ forum).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Community**Start of Block: final**

You are about to come to the end of the study. We would like to hear your thoughts and feedback about the study. If any, please report them in the box below.

Page Break

Thank you for taking the time to complete this questionnaire!

The main purposes of this study were to investigate how asexual individuals feel they are perceived, how they feel about their sexual orientation, to what extent they feel connected to the asexual and/or LGBTQ+ community, and whether thinking about their values could have a positive effect on how they perceive themselves. Not all participants answered questions about values: some participants answered questions about dinner dishes, which served as a control condition.

We understand that answering questions about your¹¹ well-being may have elicited negative emotions. We are not trained to identify concerns about well-being, nor are we able to help. We also understand that answering questions about negative stereotypes may have been distressing. However, this research is important because research thus far has rarely focused on asexual people. This research may give insight into how asexual people view themselves in relation to society and how this relates to how they feel. Additionally, outcomes of this study can potentially be used to support asexual individuals.

If this study has left you with negative feelings or thoughts about your own experiences, and you require psychological support, there are several resources that might be helpful to you:

- **World Health Organization** - <https://www.who.int/news-room/feature-stories/mental-well-being-resources-for-the-public>
This website contains several articles and videos offering support for mental health and well-being issues.
- **The Asexual Visibility and Education Network (AVEN)** - <https://www.asexuality.org/>
The world's largest asexual community. AVEN provides information for people who are asexual and questioning, their friends and families, academic researchers and the media.
- **Aces & Aros** - <https://acesandaros.org>
This website contains several interesting and helpful tabs (learn, stories, events, groups, and resources).
- **The Asexuality Archive** - <https://www.asexualityarchive.com/>
A collection of links to articles about asexuality.
- **Ace Dad Advice** - <https://acedadadvice.com/>
This website belongs to Cody Daigle-Orians, who calls himself¹² "Ace-Dad". He can be found on several social media platforms. He also wrote a book, and offers peer support groups.

We want to emphasize that this study was purely academic in nature, and your responses will be kept strictly confidential. Your participation was completely voluntary, and you are free to withdraw from the study at any time without consequence. Thank you once again for your valuable participation, we appreciate your help in furthering our understanding on these important issues.

¹¹ We were notified of this spelling mistake by one of the participants, who pointed the mistake out in their comment at the end of the survey.

¹² Several participants correctly pointed out that Cody Daigle-Orians now uses they/them pronouns.

Now that you have read all the information about the purposes of the study, do you still agree with the use and processing of your data?

- Yes, I consent to the use and processing of my personal data
- No, I do not consent to the use and processing of my personal data, and my data should be permanently deleted

We are very grateful for your participation! If you have any further questions, complaints or if you would like to know more about the results of the study, please contact us via n.j.m.de.ruijter@student.rug.nl or a.b.de.boer@student.rug.nl. Or if you want to leave a comment right now, you can do so below.

Click on the arrow to leave the questionnaire.

End of Block: final

Appendix B – Assumption Checks

Manipulation Check

Assumptions of continuity, random sampling, absence of outliers (assessed by a box-plot inspection) were met. The Levene's test of homogeneity of variances was significant, so equal variances were assumed ($F(1,340) = .011, p = .916$). The assumption of normality was violated. Replies on the manipulation check items were not normally distributed for either condition, as assessed by PP-plots. However, this violation was not considered concerning, since the sample sizes of both conditions were relatively large.

Main Analysis

The assumptions for linear regression are independence of observations, homoscedasticity, normality, linearity, and absence of extreme outliers. Independence of observations was assessed using a Durbin Watson test, homoscedasticity was assessed using residue plots, normality was assessed using PP-plots, linearity was assessed by inspecting scatterplots, and extreme outliers with residuals bigger than three standard deviations were identified using casewise diagnostics. For both dependent variables independence of observations and linearity were judged not to be violated. For the variable self-acceptance of sexuality no extreme outliers were identified. For the variable internalized heterosexism one extreme outlier was identified in the intervention condition, and two extreme outliers were found in the control condition. Because we used several preregistered exclusion criteria, these outliers were kept in the data. Assumptions of homoscedasticity and normality were judged to be violated. However, since bootstrapping is relatively robust against such violations (Preacher et al., 2007), and since the data is randomized and the sample size relatively large ($N = 342, n_{intervention} = 165, n_{condition} = 177$), this was not considered a problem.

Assumption Checks for the Sample of Sexuality = 7

For the combined variable of SAS and IHS (perceiving one's sexuality as a problem), independence of observations and linearity were judged not to be violated. One extreme outlier was identified in each condition. Because of the use of attention checks and randomization, these outliers were kept in the data. Assumptions of homoscedasticity and normality were judged to be violated. Since the exploratory analysis concerns only a part of the sample ($N = 186$, $n_{intervention} = 84$, $n_{condition} = 102$), results should be interpreted with caution.