BACKGROUND
Previous research indicated that a positive body image is indirectly related to young adult women’s sexual satisfaction through protecting them from appearance-related self-consciousness during physical intimacy. The aim of the present study was to investigate thin-ideal internalization as a potential factor associated with positive body image, and subsequently appearance-related self-consciousness during physical intimacy and sexual satisfaction.

PARTICIPANTS AND PROCEDURE
Using a cross-sectional design, 250 young adult Dutch women (age: $M = 22.98$, $SD = 2.98$) filled in an online survey measuring the relevant variables.

RESULTS
A path analysis revealed that lower thin-ideal internalization was related to greater sexual satisfaction through a more positive body image and less appearance-related self-consciousness during physical intimacy, and also consecutively via both.

CONCLUSIONS
These findings suggest that thin-ideal internalization may trigger processes that are detrimental to sexual satisfaction in women. Consequently, strengthening sociocultural pressure resistance skills in young adult women could facilitate the development and maintenance of positive sexual experiences.

KEY WORDS
sexual health; appearance ideals; self-attitudes
BACKGROUND

As sexual satisfaction is a crucial element of overall quality of life (Flynn et al., 2016) it is important to discover its determinants and underlying mechanisms. Previous research identified positive body image (i.e., the presence of satisfaction, love, respect, acceptance, and appreciation for one’s body; Tylka & Wood-Barcalow, 2015) as an essential predictor of sexual satisfaction among young adult women (Gower & Ward, 2018; Linardon et al., 2022; Van den Brink, 2017). The embodiment model of positive body image (Menzel & Levine, 2011), objectification theory (Fredrickson & Roberts, 1997), and cognitive models of sexual functioning (Silva et al., 2016) propose that a positive body image promotes sexual satisfaction, because it protects women from self-objectification (i.e., seeing oneself as an object to be looked at and evaluated on the basis of appearance; Fredrickson & Roberts, 1997) and from having appearance-related distracting thoughts during sexual activity, which in turn facilitates sexual satisfaction. Empirical findings support this assumption by showing that appearance-related self-consciousness during physical intimacy at least partially mediates the relationship of positive body image with sexual pleasure and satisfaction (Carvalheira et al., 2017; Poovey et al., 2022; Van den Brink, 2017). In this paper, thin-ideal internalization is proposed to be a potential factor preceding the relationship between positive body image and sexual satisfaction through lower appearance-related self-consciousness during physical intimacy.

Thin-ideal internalization refers to the extent to which girls and women accept the sociocultural appearance ideal of thinness and strive to attain it. As the current ideal of thinness in western societies is unattainable for most women, internalizing this ideal is proposed to be a major risk factor for body image disturbance (Thompson & Stice, 2001). Empirical findings confirm the impact of thin-ideal internalization on body dissatisfaction (for a meta-analysis, see Paterna et al., 2021), with lower thin-ideal internalization being related to a more positive body image (Andrew et al., 2016; Frederick et al., 2022; Jarman et al., 2021). Moreover, previous research found that higher thin-ideal internalization is associated with more objectified body consciousness and appearance-related self-consciousness during physical intimacy (Avery et al., 2021; Rousseau et al., 2017). However, little is known about the relationship between thin-ideal internalization and sexual satisfaction in young adult women.

The present study explored associations between thin-ideal internalization, positive body image, appearance-related self-consciousness during physical intimacy, and sexual satisfaction in young adult women. Previous research showed that young adult women are more at risk of sociocultural appearance concerns such as thin-ideal internalization compared to older women (Frederick et al., 2022). Also, discovering sexual experiences often takes place at a rapid pace in early adulthood (Arnett, 2000), which makes this period in life of particular interest. Based on the presented theoretical frameworks and previous empirical findings, lower thin-ideal internalization was expected to be related to a more positive body image and less appearance-related self-consciousness during physical intimacy. Furthermore, it was hypothesized that low thin-ideal internalization would be associated with greater sexual satisfaction consecutively through a more positive body image and lower appearance-related self-consciousness during physical intimacy (see Figure 1 for a graphical representation of the latter hypothesis).

PARTICIPANTS AND PROCEDURE

PROCEDURE

Participants were invited to take part in this online study via social media and a university website listing ongoing research projects. Inclusion criteria for participation were 1) female gender, 2) age between 18 and 30 years, and 3) having been sexually active with a partner in the past. After opening the link to the questionnaire, all participants had to complete an informed consent form that described the content of the aims of the study and highlighted voluntary participation and anonymity. In order to avoid missing data, all items were mandatory and could not be skipped. Students from Utrecht University received course credit for participation, while other participants were not compensated. The study followed the principles of the Declaration of Helsinki and participants were treated according to the American Psychological Association ethical standards. The Ethics Committee of the Faculty of Social and Behavioral Sciences of Utrecht University approved the study protocol (#21-0357).

PARTICIPANTS

Expecting on average medium correlations between the study variables (Andrew et al., 2016; Avery et al., 2021; Frederick et al., 2022; Gower & Ward, 2018; Linardon et al., 2022; Rousseau et al., 2017), a sample size calculation with the Monte Carlo power analysis for indirect effects (Schoemann et al., 2017) revealed that 236 participants would be required to detect indirect effects with 80% power and a 95% confidence level.

A total of 250 women who had been sexually active with a partner in the past with a mean age
of 22.98 years ($SD = 2.98$, range 18-30 years) fully completed the questionnaire. The majority of participants (67.2%) reported currently having a romantic partner. Of all participants, 91.2% indicated being heterosexual, 1.6% being lesbian, 6.4% being bisexual, and 0.8% an unspecified sexual orientation. The highest level of completed or current education was secondary school in 2.8%, vocational education in 36.8%, and university in 60.4% of the participants.

MEASURES

The survey was administered in Dutch. All measures were translated from English to Dutch with the translate-retranslate method (retranslation by a native speaker), unless otherwise stated. After assessing sociodemographic information, thin-ideal internalization, positive body image, appearance-related self-consciousness during physical intimacy with a partner, and sexual satisfaction were measured. Means and standard deviations for all relevant measures can be found in Table 1.

**Thin-ideal internalization.** Thin-ideal internalization was assessed by the Thin/Low Body Fat subscale of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4; Schaefer et al., 2015). The five items (e.g., “I want my body to look very thin”) assess to what degree a participant internalizes a thin body with low body fat as an ideal. Items were answered on a 5-point scale from 1 (strongly disagree) to 5 (definitely agree) and averaged, with higher scores indicating higher thin-ideal internalization. The SATAQ-4 is a widely used measure of sociocultural factors affecting body image (e.g., Schaefer et al., 2019). Research has supported the reliability and psychometric validity of the SATAQ-4 and its subscales in young adult women (Schaefer et al., 2015). Cronbach’s $\alpha$ in the current sample was .88.

**Positive body image.** Positive body image was measured by using the Dutch version (Alleva et al., 2016) of the 10-item Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015). The items (e.g., “I feel love for my body”) assess participants’ acceptance of, favorable opinions toward, and respect for their bodies. Items were answered on a 6-point scale from 0 (never) to 6 (always) and averaged, with higher scores indicating a more positive body image. The BAS-2 is widely used and, compared to other positive body image measures, its items most closely and most precisely tap the core construct of positive body image (Swami et al., 2020). Research has supported the reliability and psychometric validity of the BAS-2 in Dutch young adult women (Alleva et al., 2016). Cronbach’s $\alpha$ in the current sample was .92.

**Appearance-related self-consciousness during physical intimacy.** Appearance-related self-consciousness during physical intimacy with a partner was assessed by the Body Image Self-Consciousness Scale (BISQ: Wiederman, 2000). The 15 items (e.g., “During sexual activity, I am concerned about how my body looks to my partner”) assess participants’ thoughts and emotions about one’s own body while engaging in physical intimacy with the partner. Responses were given on a 6-point scale from 0 (never) to 5 (always). Items were summed up, with higher scores indicating higher appearance-related self-consciousness during physical intimacy. The BISQ is a widely used instrument and research has supported its reliability and psychometric validity in young adult women (Szymańska-Pytlińska, 2019; Wiederman, 2000). Cronbach’s $\alpha$ in the current sample was .94.

**Sexual satisfaction.** Sexual satisfaction was measured by using the Sexual Satisfaction Scale for Women (SSS-W; Meston & Trapnell, 2005). This 30-item measure includes five domains of sexual well-being: contentment, communication, compatibility, personal concern, and relational concern. Items (e.g., “I feel content with the way my present sex life is”) were scored on a 5-point scale from 1 (strongly disagree or not at all satisfactory) to 5 (strongly agree or completely satisfactory). Items were recoded if appropriate and a total score was calculated as a weighted sum of the five domain sum scores, with higher scores indicating greater sexual satisfaction. The SSS-W is broadly used as an overall measure assessing sexual satisfaction (Santos-Iglesias et al., 2018). Research has supported the reliability and psychometric validity of the SSS-W in young adult women (Meston & Trapnell, 2005). Cronbach’s $\alpha$ in the current sample was .89.

DATA ANALYSIS

Data were analyzed using SPSS 28 and Mplus 8.5. Bivariate associations between the study variables were examined by Pearson correlation analyses. The mediation model with thin-ideal internalization as an independent variable, positive body image and appearance-related self-consciousness during physical intimacy as sequential mediators, and sexual satisfaction as a dependent variable was tested by path analysis based on maximum likelihood estimation. The indirect effects of the independent variable on the dependent variable via the mediator(s) were estimated by bootstrapping with 10,000 bootstrap samples as recommended by Hayes (2009). It should be noted that, due to the cross-sectional data, the mediation analysis reflects an atemporal mediation yielding evidence of correlational associations rather than evidence of causality (Winer et al., 2016).

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*Thinness internalization and sexual satisfaction*
RESULTS

BIVARIATE ASSOCIATIONS BETWEEN STUDY VARIABLES

The correlation analyses (see Table 1) revealed that lower thin-ideal internalization was related to a more positive body image, less appearance-related self-consciousness during physical intimacy, and greater sexual satisfaction. Moreover, a more positive body image and less appearance-related self-consciousness during physical intimacy were associated with greater sexual satisfaction. Also, there was a negative relationship between positive body image and appearance-related self-consciousness during physical intimacy.

TOTAL, DIRECT, AND INDIRECT EFFECTS OF THIN-IDEAL INTERNALIZATION ON SEXUAL SATISFACTION THROUGH POSITIVE BODY IMAGE AND APPEARANCE-RELATED SELF-CONSCIOUSNESS

The results of the mediation model controlled for relationship status are displayed in Figure 1. A significant negative total effect of thin-ideal internalization on sexual satisfaction was found, indicating that lower thin-ideal internalization is associated with greater sexual satisfaction when the mediators are not taken into account. This effect became non-significant when the mediators were included in the model, indicating that thin-ideal internalization is not directly related to sexual satisfaction. Rather, a significant negative total indirect effect of thin-ideal internalization on sexual satisfaction via the mediators was found, $\beta = -0.18$, BC 95% CI $[-0.25, -0.12]$. Further analyses revealed that all three specific indirect effects of thin-ideal internalization on sexual satisfaction were significantly negative; first via positive body image, $\beta = -0.05$, BC 95% CI $[-0.11, -0.01]$, second via appearance-related self-consciousness during physical intimacy, $\beta = -0.07$, BC 95% CI $[-0.12, -0.04]$, and third via positive body image and subsequently appearance-related self-consciousness, $\beta = -0.05$, BC 95% CI $[-0.09, -0.03]$. These specific indirect effects indicate that lower thin-ideal internalization is related to greater sexual satisfaction through a more positive body image and less appearance-related self-consciousness during physical intimacy, and also consecutively via both1.

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Table 1

<table>
<thead>
<tr>
<th>Bivariate correlations of study variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thin-ideal internalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.84 (1.01)</td>
</tr>
<tr>
<td>2. Positive body image</td>
<td></td>
<td>-.40***</td>
<td></td>
<td></td>
<td>3.61 (0.60)</td>
</tr>
<tr>
<td>3. Appearance-related self-consciousness</td>
<td></td>
<td></td>
<td>.49***</td>
<td>-.61***</td>
<td>16.36 (12.97)</td>
</tr>
<tr>
<td>4. Sexual satisfaction</td>
<td></td>
<td>-.20**</td>
<td></td>
<td>.35***</td>
<td>-.49***</td>
</tr>
<tr>
<td>5. Romantic relationship (no/yes)</td>
<td></td>
<td>-.16*</td>
<td>.16*</td>
<td>-.39***</td>
<td>.50***</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001.

Figure 1

Results of the mediation model

Note: Standardized path coefficients are reported. The path coefficient in parentheses represents the total effect. Control paths of romantic relationship status (no/yes) on positive body image ($\beta = -0.10$, p < 0.03), appearance-related self-consciousness during physical intimacy ($\beta = -0.27$, p < 0.001), and sexual satisfaction ($\beta = 0.37$, p < 0.001) were omitted for figure clarity. *p < .05, ***p < .001.
DISCUSSION

The present study investigated thin-ideal internalization as a potential factor associated with positive body image, and subsequently appearance-related self-consciousness during physical intimacy and sexual satisfaction.

As expected and in line with previous research, lower thin-ideal internalization was related to a more positive body image (Andrew et al., 2016; Frederick et al., 2022; Jarman et al., 2021) and to less appearance-related self-consciousness during physical intimacy (Avery et al., 2021; Rousseau et al., 2017). Accordingly, our findings support the notion that internalization of the current thin ideal can be considered a risk factor for body image disturbance and appearance-related distracting thoughts during physical intimacy in women.

More importantly, the present findings extend previous research by suggesting that thin-ideal internalization is also a risk factor for sexual dissatisfaction and a preceding factor in the relationship between positive body image and sexual satisfaction through appearance-related self-consciousness during physical intimacy. More specifically, an indirect relationship between lower thin-ideal internalization and greater sexual satisfaction through a more positive body image and subsequently less appearance-related self-consciousness during physical intimacy was found. This sequential pathway connecting thin-ideal internalization and sexual satisfaction suggests that the resistance to internalizing the current thin ideal helps women to experience their body in a positive way, which in turn protects them from experiencing appearance-based distraction in physically intimate situations and enables them to focus on what is pleasurable in intimacy, which subsequently contributes to greater sexual satisfaction. The results also revealed indirect relationships between thin-ideal internalization and sexual satisfaction through both mediators independently, underpinning the importance of both positive body image and appearance-related self-consciousness during physical intimacy as underlying mechanisms.

PRACTICAL IMPLICATIONS

Currently, thin-ideal internalization is primarily investigated and targeted in relation to body image in the context of eating pathology (e.g., Paterna et al., 2021). However, our results highlight the relevance of addressing thin-ideal internalization also in the prevention and treatment of sexual problems in young adult women. For example, interventions could incorporate cognitive techniques promoting sociocultural pressure resistance skills, such as protective filtering, i.e., accepting information that is consistent with positive body image while rejecting the thin ideal (Andrew et al., 2015). These skills might be supportive in building and maintaining a positive body image (Wood-Barcalow et al., 2010), which in turn might prevent young adult women from having appearance-related disruptive thoughts during physical intimacy, and thus help them to use intimate and sexual activities with a partner as a source of positive sexual experiences.

LIMITATIONS

First, due to the cross-sectional study design, the direction of causality in the associations between the constructs could not definitely be determined (Winer et al., 2016). Although the tested model is based on theoretical assumptions and empirical findings, it is also reasonable to assume that the interrelation of the variables is much more complex. For example, positive body image and appearance-related self-consciousness during physical intimacy might also be reciprocally related. Second, the present Dutch convenience sample is self-selective and primarily consisted of heterosexual and highly educated young adult women. Thus, the findings may not generalize to women with a different educational background, sexual orientation, and age. Lastly, the present study did not capture the multidimensional nature of body image (Cash, 2002; Tylka & Wood-Barcalow, 2015), as only one aspect of positive body image, i.e., body appreciation, was assessed. Furthermore, other factors likely to impact positive body image, such as social and appearance comparison (Jarman et al., 2021), were not included in this study. Future research may profit from using more comprehensive body image measures and taking into account other important determinants of body image in order to better understand the role of thin-ideal internalization in the relationship between various aspects of body image and sexual satisfaction.

CONCLUSIONS

In sum, the present study revealed that low thin-ideal internalization is associated with greater sexual satisfaction and identified one potential route through which this association occurs, i.e., through a more positive body image, which prevents women from experiencing appearance-related self-consciousness during physical intimacy. These findings suggest that promoting sociocultural pressure resistance skills may contribute to positive sexual experiences in young adult women.

ENDNOTE

1 It has been explored whether the associations between the model variables differ between women...
with and without a current romantic partner by estimating the mediation model and adding the relationship status (no/yes) as a moderator on all paths. In this moderated mediation analysis, none of the six interaction terms and three indices of moderated mediation yielded significance (results not shown). This indicates that the presented results are equally true for single women and women in a romantic relationship.

References


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