

The Association Between Mindfulness and Sexual Satisfaction in Women:

The Mediating Role of Positive Body Image

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Abstract

Prior studies found an important association between positive body image and sexual satisfaction. The present study examined if mindfulness precedes this association by assessing the relationship between mindfulness and sexual satisfaction and the mediating role of positive body image. In this cross-sectional design, 139 females completed self-report online questionnaires assessing mindfulness (MAAS), positive body image (BAS-2) and sexual satisfaction (GMSEX). Data were analyzed with regression and bootstrap analyses. The results revealed mindfulness to be positively associated with sexual satisfaction, and positive body image to be a mediator to this relationship. This finding suggests that mindfulness precedes the relationship between positive body image and sexual satisfaction. Thus, the positive influence of mindfulness-based interventions might extend beyond improvements in positive body image to increasing the level of sexual satisfaction. *Keywords*: mindfulness; positive body image; sexual satisfaction

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Sexual satisfaction (i.e., the emotional response that follows from the personal appraisal of a subject's sexual relationship; Lawrance & Byers, 1995), is a fundamental aspect of life, as it is not only a relevant component of sexual health but also of overall health and general well-being (Davison et al., 2009). For instance, previous research revealed that higher levels of sexual satisfaction are associated with better psychological and physical health (Eklund & Ostman, 2010; Flynn et al., 2016; Montesi et al., 2013). Subsequently, knowledge of determinants of sexual satisfaction is highly relevant.

Theoretical frameworks, such as the embodiment model of positive body image (Menzel & Levine, 2011) and objectification theory (Fredrickson & Roberts, 1997), propose that a positive body image is an important determinant of sexual satisfaction in women because it protects them from self-objectification and from being distracted by appearance-related thoughts during sexual activity, which in turn facilitates sexual satisfaction (van den Brink & Vollmann, n.d.). This assumption is empirically supported by research showing that positive body image (i.e., experiencing satisfaction with and love, respect, acceptance, and appreciation for one's body; Tylka, 2011) is linked with more sexual satisfaction among women (Grower & Ward, 2018; van den Brink et al., 2018; for an overview, see van den Brink, 2017). It is important to note that positive body image is conceptually different from negative body image as it reflects not only the absence of negative body image but also the presence of benign opinions of and positive feelings about the body (Tylka & Wood-Barcalow, 2015; van den Brink et al., 2016). Based on prior research, positive body image is important in the context of sexual satisfaction and factors promoting positive body image

A potential factor preceding the relationship between positive body image and sexual satisfaction is mindfulness. Mindfulness is moment-to-moment awareness characterized by non-judgmental acceptance and cognitive processing in absence of bias (Kabat-Zinn, 2015; Stewart, 2004). Positive aspects of practicing mindfulness have shown to be of physical (Bhasin et al., 2018; Grossman et al., 2004) as well as psychological (Brown & Ryan, 2003; Davis & Haynes, 2012; Dijkstra & Barelds, 2011) nature. The embodiment model of positive body image (Menzel & Levine, 2011) links mindfulness with positive body image by identifying embodying activities (i.e., mindful activities that stimulate being aware and attentive to one's body) as crucial for developing a positive body image. Similarly, objectification theory and the embodiment model of positive body image tie mindfulness with body image by theorizing embodiment to decrease self-objectification (Mahlo & Tiggemann, 2016; Impett et al., 2006). Mindful activities, such as yoga, are thought to lead to mind-body integration and protect against taking an external perspective on the self (Menzel & Levine, 2011). Thus, theory proposes mindfulness to be important for the development of a positive body image through mindful activities that turn attention inward rather than outward (Impett et al., 2006; Mahlo & Tiggemann, 2016).

In line with the embodiment model and self-objectification theory, research on the influence of mindful activities on body image has shown that yoga participants have a more positive body image, greater embodiment, and lower self-objectification than participants who did not do yoga (Mahlo & Tiggemann, 2016). Furthermore, participation in yoga has shown to support an increase in positive body image (Cox & McMahon, 2019). Next to yoga, other mindful activities that emphasize the appreciation of the function of the body in absence of appearance-related concerns such as belly dance (Tiggemann et al., 2014) or hiking in nature (Piran, 2015) have found to be beneficial for positive body image development. Thus, the link between mindfulness and body appreciation is empirically supported.

Mindfulness could antecede the relationship between body image and sexual satisfaction, as a possible indirect determinant of sexual satisfaction. Research has supported an association between mindfulness and sexual satisfaction, with key elements of mindfulness, such as non-judgmental processing, attention to the present and awareness, being positively associated with sexual satisfaction (Fink et al., 2009; Khaddouma et al., 2015). In support of this, Brotto et al. (2009) suggest practicing mindfulness (e.g., through yoga) may help to enhance sexual satisfaction through minimizing appearance-related distraction and enhancing bodily awareness of sensory cues. Furthermore, a mindful state with attendance to internal and external here-and-now sensations and in absence of judgment supports a positive body image and is proposed to contribute to increased sexual satisfaction (Khaddouma et al., 2015). Higher levels of bodily awareness and appreciation facilitated by mindfulness might explain the positive effects mindfulness has on sexual satisfaction.

To summarize, the embodiment model of positive body image (Menzel & Levine, 2011), self-objectification theory (Fredrickson & Roberts, 1997) and the results of empirical studies support a clear link between positive body image and sexual satisfaction (Grower & Ward, 2018; van den Brink et al., 2018) as well as a potentially important link between mindfulness and positive body image (Mahlo & Tiggemann, 2016; Tiggemann et al., 2014), and between mindfulness and sexual satisfaction (Fink et al., 2009; Khaddouma et al., 2015). However, the role of positive body image in the relationship between mindfulness and sexual satisfaction has not been assessed yet. Since sexual satisfaction facilitates positive mental and physical health outcomes (Eklund & Ostman, 2010; Flynn et al., 2016; Montesi et al., 2013), further research on the underlying mechanisms of sexual satisfaction would be highly valuable.

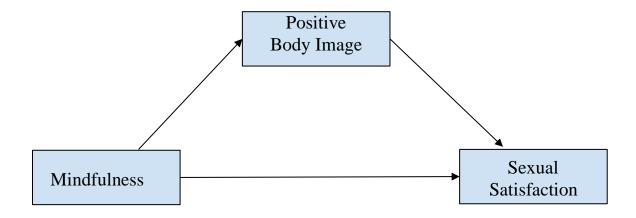
The Present Study

This study explored mindfulness as a factor preceding the established association between positive body image and sexual satisfaction in women. Firstly, based on the embodiment model of positive body image and previous empirical findings (e.g., Cox & McMahon, 2019; Mahlo & Tiggemann, 2016), it is expected that higher levels of mindfulness would be related to a more positive body image and to greater sexual satisfaction. Secondly, based on prior research (Fink et al., 2009; Khaddouma et al., 2015; van den Brink et al., 2018) it is expected that positive body image mediates the relationship between mindfulness and sexual satisfaction. These proposed hypotheses are schematically summarized in Figure 1.

Figure 1

Schematic Summary of the Hypothesized Relationship Between Mindfulness and Sexual

Satisfaction and the Mediating Role of Body Image



Methods and Materials

Participants and Procedure

Participants were recruited via social networking sites and the SONA system (i.e., a student website of Utrecht University which gives an overview of ongoing research projects). For this online study, female participants who are 18 years or older, living in the Netherlands and have been sexually active in the past were invited. The study was created using Qualtrics and was distributed through social media by sharing the online address (URL). Participants were

additionally recruited through the SONA system of Utrecht University. After accessing the survey's URL, participants were provided with information regarding the questionnaires and study background. In this text, they were guaranteed anonymity and voluntary participation. In order to proceed, participants were asked to give informed consent by ticking a box. Thereafter, participants were asked demographic questions (e.g., age, gender, level of education) and questions regarding their sexual orientation and relationship status. These questions were followed by questionnaires about mindfulness, body appreciation, and sexual satisfaction. All texts, questions and questionnaires were provided in English and Dutch. At the end of the questionnaire, social science students from Utrecht University were given the option to receive course credits for participation. Other participants were not compensated for participation. The study was approved by the Ethics Committee of the Faculty of Social and Behavioral Sciences of Utrecht University, the Netherlands (FETC-20-0447).

A total of 139 participants completed the survey. Participants were between 18 and 37 years old with a mean age of 22.55 (SD = 3.26). Most participants reported being heterosexual with 82%, followed by bisexual with 13.7% and homosexual with 3.6%. Of the participants, 0.7% did not identify with the three given sexual orientations. The majority of participants' highest level of current or completed education is a bachelor's degree with 71.9%, then a master's degree with 16.5% and high school with 11.5%. A total of 92.1% of the participants are currently students, followed by 6.5% of participants that chose the answer option "Other, namely" and specified that they are students as well as working. A small number of participants (1.4%) were only working. The majority, 61.5%, of the participants are currently in a relationship in which 97.6% are sexually active with their partner.

Measures

All scales were translated from English to Dutch with the translate-retranslate method, unless otherwise stated.

Mindfulness

Mindfulness was assessed with the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003). Respondents answered the 15-items by indicating on a 6-point Likert scale from $1 = almost \ always$ to $6 = almost \ never$ how frequently they have a certain experience (e.g., "I find it difficult to stay focused on what's happening in the present."). The items reflect experiences of mindfulness and mindlessness with a higher mean score being indicative of more mindfulness. The scale was shown to be a reliable and valid measure of mindfulness (Brown & Ryan, 2003). Cronbach's alpha in the current study was $\alpha = .89$.

Positive Body Image

Positive body image was assessed with the Dutch (Alleva et al., 2016) and English version of the Body Appreciation Scale-2 (BAS-2; Tylka & Wood- Barcalow, 2015). The scale consists of 10 items that measure respect and appreciation for one's body as well as attention to its needs (e.g., "I am attentive to my body's needs."). The items are assessed with a 5-point Likert scale, ranging from 1 = never to 5 = always. Higher mean scores reflect a more positive body image. The BAS-2 is reported to have high reliability ($\alpha = .97$) and validity (Tylka & Wood-Barcalow, 2015). Cronbach's alpha in the current study was $\alpha = .93$.

Sexual Satisfaction

Sexual satisfaction was measured via the global measure of sexual satisfaction (GMSEX; Lawrance & Byers, 1995). This scale consists of five 7-point dimensions (i.e., *Good-Bad*, *Pleasant-Unpleasant, Positive-Negative, Satisfying-Unsatisfying, Valuable-Worthless*) that assess how the participant would describe their sexual relationship. The scale is scored additively, with higher scores indicating higher levels of sexual satisfaction (Mark et al., 2013). Prior research has shown that the GMSEX has good test-retest reliability and internal consistency (Lawrance & Byers, 1995). Cronbach's alpha in the current study was $\alpha = .93$.

Statistical Analysis

For all statistical analyses, IBM SPSS Statistics Version 26 was used. Bivariate associations between the study variables (i.e., mindfulness, positive body image, and sexual satisfaction) were analyzed using Pearson correlation coefficients.

The mediating role of positive body image was determined using Hayes' Process Macro plug-in for SPSS (Model 4; Hayes & Little, 2018), with mindfulness as independent variable, positive body image as mediator, and sexual satisfaction as dependent variable. The mediation analysis involved the following steps: First, a simple regression analysis was calculated, to estimate the effect of mindfulness on positive body image. Second, in order to estimate the total effect of mindfulness (Step 1), the direct effect of mindfulness as well as the effect of positive body image (Step 2) on sexual satisfaction, a hierarchical regression analysis was conducted. Third, the indirect effect of mindfulness on sexual satisfaction through positive body image was determined using a bootstrap analysis with 5.000 bootstrap samples (Hayes & Little, 2018). All coefficients will be reported in standardized form.

A post-hoc power analysis was conducted with G*Power Version 3.1 in order to estimate the observed statistical power of the tests based on the effect size estimates and sample size.

Results

Bivariate Associations Between Mindfulness, Positive Body Image, and Sexual Satisfaction

Correlations between variables are shown in Table 1. In line with the first hypothesis, mindfulness was significantly positively related to positive body image. Also in line with the expectation, mindfulness was significantly positively associated with sexual satisfaction.

Thus, higher levels of mindfulness are associated with higher levels of positive body image

as well as sexual satisfaction. In addition, a more positive body image was significantly related to higher levels of sexual satisfaction.

Table 1Means, Standard Deviations and Bivariate Associations Between Study Variables

Variable	1	2	3	M	SD
1. Mindfulness	-	.46**	.19*	3.60	.79
2. Positive Body Image		-	.28**	3.51	.72
3. Sexual Satisfaction			-	28.30	5.71

^{***}p < .001, **p < .01, *p < .05.

Total, Direct and Indirect Effects of Mindfulness on Sexual Satisfaction Through the Mediation of Positive Body Image

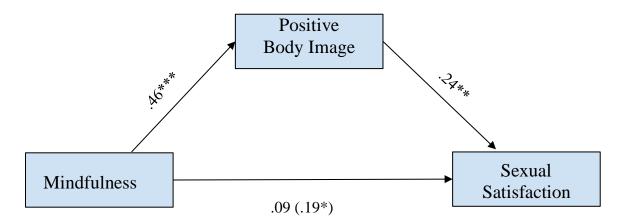
The assumptions of linear regression analysis (i.e., normality, linearity, homoscedasticity) were tested and met. The simple regression analysis revealed a significant positive direct effect of mindfulness on positive body image (Figure 2). A total of 20% of the variance in positive body image could be explained by mindfulness, F(1,138) = 35.84, p < 0.001.

The hierarchical regression analysis revealed a significant positive total effect in Step 1 and a non-significant positive direct effect of mindfulness on sexual satisfaction in Step 2 (Figure 2). Moreover, in Step 2, a significant positive direct effect of positive body image on sexual satisfaction was found. A total of 8.1 % of the variance in sexual satisfaction could be explained by positive body image and mindfulness, F(2,136) = 6.02, p < 0.01 (Figure 2).

The bootstrap analysis revealed a significant positive indirect effect of mindfulness on sexual satisfaction through positive body image, $\beta = .1075$, SE = .0458, BC 95% confidence interval [.0232, .2026] This finding supports the second hypothesis, that mindfulness is associated with sexual satisfaction through positive body image.

Figure 2

Results of the Simple and Hierarchical Regression Analyses That Were Calculated as Part of the Mediation Analysis Linking Mindfulness With Sexual Satisfaction via Positive Body Image



Note. The total effect is displayed in parentheses.

Post Hoc Analysis

A post hoc analysis (G*Power) revealed that, given the sample size of 139 and an effect size of r = .19, a power of 63.35% (type I error rate of 5%) was observed. This is lower than the desired power level of 80% (Cohen, 1988).

Discussion

The present study investigated mindfulness as a preceding variable to the relationship between positive body image and sexual satisfaction in women and assessed this by investigating the mediating role of positive body image in the association between mindfulness and sexual satisfaction.

As expected, higher levels of mindfulness were found to be associated with both higher levels of positive body image and higher levels of sexual satisfaction. This finding is in line with prior research that demonstrated the relationship between mindfulness and positive body image (Mahlo & Tiggemann, 2016; Tiggemann et al., 2014) as well as

mindfulness and sexual satisfaction (Fink et al., 2009; Khaddouma et al., 2015). Also, the results of this study showed that a more positive body image was related to higher sexual satisfaction which confirms preceding research (Grower & Ward, 2018; van den Brink et al., 2018) as well as suggestions from the embodiment model of positive body image (Menzel & Levine, 2011) and objectification theory (Fredrickson & Roberts, 1997).

Most importantly and in line with the expectation, positive body image was found to mediate the relationship between mindfulness and sexual satisfaction. More specifically, higher levels of mindfulness were associated with a more positive body image, which in turn was linked with higher levels of sexual satisfaction in women. Possibly, the beneficial effects of mindfulness, such as alleviating judgment and improving mind-body integration, strengthen and enhance a positive body image. In turn, a positive body image may have a protective function that shields women from negative appraisal as well as appearance-related concerns and increases their bodily awareness to sensory cues. This increased focus on the present may lead to more intense perception of sexual experiences as well as improved physiological responses to sexual stimuli, subsequently resulting in higher levels of sexual satisfaction.

No significant direct effect of mindfulness on sexual satisfaction was found. This finding may suggest that positive body image fully mediates the relationship between mindfulness and sexual satisfaction. However, a power difference between the tests of the direct and indirect effect, increased the likelihood to detect a non-significant direct effect (Kenny & Judd, 2014). Thus, the non-significant direct effect found in this study is possibly due to a power anomaly and not because of a full mediation by positive body.

Furthermore, the limited amount of explained variance (8.1%) implies that other variables next to positive body image and mindfulness are important determinants of the level of sexual satisfaction. In the current study, intrapersonal variables were point of focus.

However, sexual satisfaction has a dyadic nature and is also affected by the relationship with a significant other. Sexual communication between partners could be a potential explanatory factor, as it is important for meeting sexual needs as well as increasing responsiveness to positive sexual cues (Merwin & Rosen, 2020; Sterren & Verheij, 2009). Also, the overall quality of the partnered relationship could be a relevant dyadic factor as good relationship quality may support a positive body image and have subsequent positive impact on sexual satisfaction (Satinsky et al., 2012; van den Brink et al., 2016). Future research might profit from taking interpersonal factors, such as sexual communication and overall relationship quality into account in order to explain more variance in the level of sexual satisfaction.

Implications

The present study illustrates the beneficial implications of practicing mindfulness for positive body image and in turn sexual satisfaction. This approach is in line with positive psychology and focuses on discovering individual strengths and protective factors in women in order to experience more sexual pleasure. The positive associations found in this study are important to help women to achieve and improve well-being in multiple aspects of life.

Promotion of mindful living and the beneficial effect the distancing from negative judgment will have on positive body image could lead to improvements in the attentive perception of sexual experiences and subsequently increased sexual satisfaction. Thus, mindfulness-based practices, such as hatha yoga (i.e., a form of yoga that emphasizes body awareness as well as acceptance and involves meditation and physical postures) that have been shown to support a positive body image, might have further advantageous implications for sexual satisfaction (Impett et al., 2006; Alleva et al., 2020). On a societal level, popularizing the broad positive impact of mindfulness on multiple domains might add another incentive to engage in mindful practice. The promotion of mindfulness exercises for a positive body image could not only foster increased self-esteem and more body appreciation

but also cultivate sexual health as well as enriched sexual relationships next to other physical and mental health benefits in women.

Limitations

This study comes with certain limitations. The present sample is limited to women, of which the majority are currently studying in the Netherlands. Prior research has shown that student samples differ significantly from the general population (Hanel & Vione, 2016). Thus, the homogeneity of respondents may limit the representativeness of this study. Additionally, due to the limited sample, it was not taken into account how long ago the last sexual experience of a participant was. In participants whose last experience lies in the distant past, this may lead to a memory bias in their reporting. Therefore, it is suggested that future research uses a heterogeneous sample that controls for the time passed since the last sexual experience.

Moreover, only one aspect of positive body image (i.e., body appreciation) was assessed in this study. Possibly, other aspects of positive body image (e.g., appreciation of functionality of the body, inner positivity) are related to sexual satisfaction as well (Tylka, 2011). Future researchers may benefit from using more comprehensive measures of positive body image to discriminate between the role of numerous aspects of positive body image in the relationship between mindfulness and sexual satisfaction.

Lastly, due to the cross-sectional design, no definite conclusions on the direction of causality in the associations between the constructs can be drawn. Although the model used in this study is in line with suggestions by Grower and Ward (2018) as well as van den Brink et al. (2018) the associations between mindfulness, positive body image and sexual satisfaction could also be reversed and might have sexual satisfaction as a starting point (Tantleff-Dunn & Lindner, 2002). Future research could benefit from using a longitudinal design.

Conclusion

The current study replicated the results of prior studies and showed positive associations between mindfulness, positive body image and sexual satisfaction. Furthermore, the present findings indicate that mindfulness precedes the relationship between positive body image and sexual satisfaction. Given the fact that sexual satisfaction has been shown to be beneficial for well-being in women, elucidating its determinants is highly relevant (Eklund & Ostman, 2010; Flynn et al., 2016; Montesi et al., 2013). Despite the limitations, this study adds to the body of research on sexual satisfaction by examining beneficial factors from a positive psychology point of view.

References

- Alleva, J., Martijn, C., Veldhuis, J., & Tylka, T. (2016). A Dutch translation and validation of the Body Appreciation Scale-2: An investigation with female university students in the Netherlands. *Body Image*, *19*, 44–48. https://doi.org/10.1016/j.bodyim.2016.08.008
- Alleva, J. M., Tylka, T. L., van, O. K., Montanaro, E., Perey, I., Bolle, C., Boselie, J., Peters, M., Webb, J. B. (2020). The effects of yoga on functionality appreciation and additional facets of positive body image. *Body Image*, *34*, 184–195.

 https://doi.org/10.1016/j.bodyim.2020.06.003
- Bhasin, M. K., Denninger, J. W., Huffman, J. C., Joseph, M. G., Niles, H., Chad-Friedman,
 E., Goldman, R., Buczynski-Kelley, B., Mahoney, B. A., Fricchione, G. L., Dusek, J.
 A., Benson, H., Zusman, R. M., & Libermann, T. A. (2018). Specific Transcriptome
 Changes Associated with Blood Pressure Reduction in Hypertensive Patients After
 Relaxation Response Training. *The Journal of Alternative and Complementary*Medicine, 24(5), 486–504. https://doi.org/10.1089/acm.2017.0053
- Brotto, L., Mehak, L., & Kit, C. (2009). Yoga and sexual functioning: a review. *Journal of Sex & Marital Therapy*, *35*(5), 378–390. https://doi.org/10.1080/00926230903065955
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822–48. https://doi.org/10.1037/0022-3514.84.4.822
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Cox, A. E., & McMahon, A. K. (2019). Exploring changes in mindfulness and body appreciation during yoga participation. *Body Image*, 29, 118–121. https://doi.org/10.1016/j.bodyim.2019.03.003

- Davis, D. M., & Hayes, J. A. (2012, July). What are the benefits of mindfulness? *Monitor on Psychology*, 43(7). http://www.apa.org/monitor/2012/07-08/ce-corner
- Davison, S. L., Bell, R. J., LaChina, M., Holden, S. L., & Davis, S. R. (2009). Original research—psychology: the relationship between self-reported sexual satisfaction and general well-being in women. *The Journal of Sexual Medicine*, *6*(10), 2690–2697.

 [Abstract] https://doi.org/10.1111/j.1743-6109.2009.01406.x
- Dijkstra, P., & Barelds, D. P. H. (2011). Examining a model of dispositional mindfulness, body comparison, and body satisfaction. *Body Image*, 8, 419–422. http://dx.doi.org/10.1016/j.bodyim.2011.05.007
- Eklund, M., & Ostman, M. (2010). Belonging and doing: important factors for satisfaction with sexual relations as perceived by people with persistent mental illness. *The International Journal of Social Psychiatry*, *56*(4), 336–47. https://doi.org/10.1177/0020764008101635
- Flynn, K. E., Lin, L., Bruner, D. W., Cyranowski, J. M., Hahn, E. A., Jeffery, D. D., Barsky Reese, J., Reeve, B. B., Shelby, R. A., & Weinfurt, K. P. (2016). Sexual satisfaction and the importance of sexual health to quality of life throughout the life course of u.s. adults. *The Journal of Sexual Medicine*, *13*(11), 1642–1650. https://doi.org/10.1016/j.jsxm.2016.08.011
- Fredrickson, B.L., & Roberts, T.R. (1997). Objectification theory: toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21(2), 173–206. https://doi.org/10.1111/j.1471-6402.1997.tb00108.x
- Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: a meta-analysis. *Journal of Psychosomatic Research*, 57(1), 35–43. https://doi.org/10.1016/S0022-3999(03)00573-7
- Grower, P., & Ward, L. M. (2018). Examining the unique contribution of body appreciation

- to heterosexual women's sexual agency. *Body Image*, 27, 138-147. https://doi.org/10.1016/j.bodyim.2018.09.003
- Hanel, P. H., & Vione, K. C. (2016). Do student samples provide an accurate estimate of the general public? *Plos One*, *11*(12), https://doi.org/10.1371/journal.pone.0168354
- Hayes, A. F., & Little, T. D. (2018). Introduction to mediation, moderation, and conditional process analysis: a regression-based approach (Second, Ser. Methodology in the social sciences). Guilford Press.
- Impett, E. A., Daubenmier, J. J., & Hirschman, A. L. (2006). Minding the body: yoga, embodiment, and well-being. *Sexuality Research & Social Policy*, *3*(4), 39–48. https://doi.org/10.1525/srsp.2006.3.4.39
- Kabat-Zinn, J. (2015). *Mindfulness*, 6(6), 1481–1483. https://doi.org/10.1007/s12671-015-0456-x
- Kenny, D. A., & Judd, C. M. (2014). Power anomalies in testing mediation. *Psychological Science*, 25(2), 334–339.
- Khaddouma, A., Coop Gordon, K., & Bolden, J. (2015) Zen and the art of sex: examining associations among mindfulness, sexual satisfaction, and relationship satisfaction in dating relationships, *Sexual and Relationship Therapy*. *30*(2), 268-285, https://doi.org/10.1080/14681994.2014.99240
- Lawrance, K., & Byers, E. S. (1995). Sexual satisfaction in long-term heterosexual relationships: The interpersonal exchange model of sexual satisfaction. *Personal Relationships*, 2, 267-285. http://dx.doi.org/10.1111/j.1475-6811.1995.tb00092.x
- Mahlo, L., & Tiggemann, M. (2016). Yoga and positive body image: a test of the embodiment model. *Body Image*, 18, 135–42. https://doi.org/10.1016/j.bodyim.2016.06.008

- Mark, K., Herbenick, D., Fortenberry, J., Sanders, S.& Reece, M. (2013). A Psychometric Comparison of Three Scales and a Single-Item Measure to Assess Sexual Satisfaction.

 *Journal of sex research, 51, https://doi.org/10.1080/00224499.2013.816261
- Menzel, J. E., & Levine, M. P. (2011). Embodying experiences and the promotion of positive body image: The example of competitive athletics. In R. M. Calagero, S., Tantleff-Dunn & J. K. Thompson (Eds.), *Self-objectification in women: Causes, consequences, and counteractions* (pp. 163-186). Washington, DC: American Psychological Association.
- Merwin, K. E., & Rosen, N. O. (2020). Perceived partner responsiveness moderates the associations between sexual talk and sexual and relationship well-being in individuals in long-term relationships. *The Journal of Sex Research*, *57*(3), 351–364. https://doi.org/10.1080/00224499.2019.1610151
- Montesi, J. L., Conner, B. T., Gordon, E. A., Fauber, R. L., Kim, K. H., & Heimberg, R. G. (2013). On the relationship among social anxiety, intimacy, sexual communication, and sexual satisfaction in young couples. *Archives of Sexual Behavior*, 42(1), 81–91. https://doi.org/10.1007/s10508-012-9929-3
- Piran, N. (2015). New possibilities in the prevention of eating disorders: The introduction of positive body image measures. *Body Image*, *14*, 146–157.

 http://doi.org/10.1016/j.bodyim.2015.03.008
- Satinsky, S., Reece, M., Dennis, B., Sanders, S., & Bardzell, S. (2012). An assessment of body appreciation and its relationship to sexual function in women. *Body Image*, *9*(1), 137–144. https://doi.org/10.1016/j.bodyim.2011.09.007
- Sterren, P. G. S., & Verheij, M. J. W. (2009). The importance of sexual self-disclosure and perceived partner responsiveness in sexual intimacy: The proposition of an interpersonal process model [Master's thesis, Utrecht University]

- Stewart, T. M. (2004). Light on body image treatment: acceptance through mindfulness.

 Behavior Modification, 28(6), 783–811. https://doi.org/10.1177/0145445503259862
- Tantleff-Dunn, S., & Lindner, D. M. (2011). Body image and social functioning. In: T. F.Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2nd ed., pp. 263-270). Guilford Publications Inc, New York.
- Tiggemann, M., Coutts, E., & Clark, L. (2014). Belly dance as an embodying activity?: a test of the embodiment model of positive body image. *Sex Roles: A Journal of Research*, 71(5-8), 197–207. https://doi.org/10.1007/s11199-014-0408-2
- Tylka, T. L. (2011). Positive psychology perspectives on body image. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (pp. 56-64). New York: Guilford.
- Tylka, T. L., & Wood-Barcalow, N. L. (2015). What is and what is not positive body image? conceptual foundations and construct definition. *Body Image*, *14*, 118–129. https://doi.org/10.1016/j.bodyim.2015.04.001
- Van den Brink, F. (2017). *Body image in a sexual context: The relationship between body image and sexual experiences*. Publication No. 6750 [Doctoral dissertation, Utrecht University].
- Van den Brink, F., Smeets, M. A. M., Hessen, D. J., & Woertman, L. (2016). Positive body image and sexual functioning in dutch female university students: the role of adult romantic attachment. *Archives of Sexual Behavior: The Official Publication of the International Academy of Sex Research*, 45(5), 1217–1226. https://doi.org/10.1007/s10508-015-0511-7
- Van den Brink, F. & Vollmann, M. (n.d.). A Brief Report on the Association of Thin-Ideal

 Internalization with Sexual Satisfaction Through Positive Body Image and

Appearance-Related Self-Consciousness During Physical Intimacy in Young Adult Women. [Report].

Van den Brink, F., Vollmann, M., Smeets, M. A. M., Hessen, D. J., & Woertman, E. M. (2018). Relationships between body image, sexual satisfaction, and relationship quality in romantic couples. *Journal of Family Psychology*, 32(4). http://dx.doi.org/10.1037/fam0000407