



Good Nudes and Bad Nudes: How Naturism, Casual Stripping, and Sexting Predict Social Physique Anxiety and Body Appreciation

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Abstract

Prior research suggests that naturism leads to less social physique anxiety and more positive body image, but that other forms of public nudity (e.g., casual stripping, sexting) may be harmful, particularly for women. Two cross-sectional studies built on those previous findings. Study 1 ($N_1=6670$) found a positive relationship between generalised nude activity and body appreciation which was not moderated by gender. Study 2 ($N_2=331$) found that both naturism and casual stripping predicted more body appreciation, a relationship mediated by less social physique anxiety. Again, these relationships were not moderated by gender. In contrast, sexting did not predict body appreciation and predicted more social physique anxiety, but only in men. These findings highlight that some types of nudity may be more beneficial or harmful than others, and that future research and policy should specify the type of nudity under consideration in order to maximise positive effects.

Keywords Public nudity · Naturism · Sexting · Casual stripping · Body image · Body appreciation

Introduction

In many societies there remains a certain level of stigma attached to participation in public nudity, including an assumption of perversion or sexual deviance (Booth, 1997; Monterrubio & Valencia, 2019; West & Geering, 2018). Prior research is unclear about the relationship between public nudity and psychological wellbeing. Some research seems to find a negative relationship between the two (e.g., Sherman

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& Hackathorn, 2020), while others find mixed results (e.g., Liong & Cheng, 2019) or an unambiguously positive relationship (West, 2018, 2021). A potential reason for these conflicting findings is the confounding of various types of public nudity, each of which might have divergent effects. This research aimed to shed some light on these conflicting findings. Specifically, this research made clear distinctions between types of public nudity, and investigated the relationships between these activities and two specific outcomes – social physique anxiety and body appreciation. In so doing, this research added nuance to prior findings on public nudity, going beyond simplified suggestions that nudity is either good or bad.

Types of Public Nudity

Naturism

The practice of nudism or naturism (de Vries, 2018) involves the behaviour of being naked in the company of others without necessarily expecting or requiring a sexual motivation (Carr-Gomm, 2012; Deschenes, 2016). Many other aspects of naturism are a matter of debate. For example, there are strong and divergent opinions about the role of sexuality in naturism (Smith, 2007; Smith & King, 2009; West & Geering, 2018). Early research focused on (though largely failed to find) *negative* effects of participation in naturism or naturist-like behaviours (Lewis & Janda, 1988; Okami et al., 1998). Indeed, some research found unexpected *positive* associations between naturism and body image (Negy & Winton, 2008; Story, 1979, 1984). More recently, researchers have deliberately investigated and found positive associations between naturism and body image. These studies used a variety of designs including correlational (West, 2018), before-and-after (West, 2018, 2020), and experimental designs (West, 2021). The results of these studies were reliably similar; naturism predicted, preceded, or caused increases in positive body image, an effect mediated by decreases in social physique anxiety (West, 2018, 2020, 2021). Though this is still a growing area, research to date indicates that naturism has positive effects.

Casual Stripping

Sherman and Hackathorn (2020) defined casual stripping as “stripping outside of the purview of being a professional paid dancer” (p. 1219), with the implication that it involved sexual intention or sexual enjoyment. In sharp contrast with findings concerning naturism, prior research seems to show that casual stripping is associated with *negative* psychological outcomes. For example, Sherman and Hackathorn found that casual stripping was associated with higher levels of sociosexuality and parental rejection. These findings are in general agreement with a more pervasive belief that casual stripping is bad (e.g., Forsyth, 1992, Roach, 2011). However, there are reasons to treat these findings with caution. First, this is the only quantitative study to date to investigate casual stripping, hence, replication is needed to confirm the reliability and generalisability of the findings. Second, the participant sample

only included women, so it is unclear whether the effects would be similar for men. Lastly, though the study was intended to investigate casual stripping, the measure used items that could easily be interpreted as examples of naturism instead. These include [going] “skinny dipping” or [going] “skinny dipping with other people”. These activities do not necessarily involve any sexual activities or expectations. Therefore, it is worthwhile to build on the findings of Sherman and Hackathorn (2020) using a diverse sample and a more precise scale.

Sexting

Sexting has been defined as “sending sexually explicit or nude pictures of oneself through cell phones” (Liong & Cheng, 2019, p. 337). There is a reasonably large body of research on sexting. However, this research has not produced consistent results concerning its positive versus negative effects. For example, in a single study Klettke et al. (2019) found that sexting was associated with both increases (predictive of sexting) and decreases (following sexting) in body dissatisfaction. Other research found that sexting was associated with feeling more attractive, and with greater comfort with nudity, but also with higher levels of body surveillance, body shame, and body control beliefs (Liong & Cheng, 2019). Similarly, a large-scale survey (N=9,235) of a gay dating website found that most men used nude photographs primarily to receive affirmation (Lemke & Merz, 2018). This suggests a complex relationship between sexting and body image in which it may, depending on context, be associated with either more positive or more negative body image.

Although research seems to suggest that naturism, stripping and sexting have different outcomes, to date no research has investigated these activities simultaneously. Furthermore, the variety of outcome measures used in prior research (e.g., positive body image, body dissatisfaction, body shame, body surveillance), making it difficult to compare the findings directly. Thus, this research focused on two aspects of body image – body appreciation and social physique anxiety – to investigate how these were affected by public nudity.

Body Image

Body Appreciation

Methods of increasing positive body image are of significant practical importance as positive body image predicts such aspects of well-being as self-esteem, optimism, proactive coping, safer sex intentions, sexual satisfaction, general health-related behaviours, and sexual health expectations (Avalos et al., 2005; Grower & Ward, 2018; Robbins & Reissing, 2018; Satinsky et al., 2013; West, 2018). A central variable in the understanding of positive body image is *body appreciation* (Tylka, 2011). It refers to several intersecting concepts including respect for one’s body, holding favourable opinions about and accepting one’s body, and resistance to externally promoted ideals of attractiveness (Avalos et al., 2005; Tylka & Wood-Barcalow,

2015a). Body appreciation has also been found to predict gratitude (Homan & Tylka, 2018), physical activity independent of appearance related motivations (Homan & Tylka, 2014); intuitive eating (i.e., eating according to one's physiological cues of hunger and satiation; Tylka & Kroon Van Diest, 2013); and overall life satisfaction (West, 2018, 2020). It is also *negatively* associated with indicators of ill-health such as maladaptive perfectionism (Iannantuono & Tylka, 2012), body comparison (Homan & Tylka, 2018), restrained eating (Yao et al., 2021), and eating disorder symptomatology (Tylka & Kroon Van Diest, 2013). Thus, body appreciation was the central variable of interest in this research as well.

Social Physique Anxiety

Social physique anxiety is the concern that one's body is being judged or negatively evaluated by others (Ginis et al., 2003; Hausenblas et al., 2004). It predicts several negative outcomes such as disordered eating (Fitzsimmons-Craft et al., 2012) and lower levels of exercise (Mülazimoğlu-Balli et al., 2010). Prior research has also reliably found that physique anxiety predicts lower body appreciation (e.g., Alcaraz-Ibáñez et al., 2017; Jalalvand et al., 2012; Swami et al., 2014; West, 2021). It has also been shown that it can be reduced by brief interventions (Song et al., 2014), and has been shown to mediate the effects of nude activity on body appreciation (West, 2021). Thus, social physique anxiety was included as a potential mediator of the relationships between public nude activities and body appreciation in this research as well.

The Importance of Gender

Another question of interest was whether these findings differed for men and women. This was important for several reasons. Women (compared to men) face double standards and harsher social penalties for activities that appear sexual, and thus may consequently experience more negative emotional outcomes from nude activities than men do (Emmerink et al., 2016). Furthermore, some research has investigated the correlates of public nudity only for women (Sherman & Hackathorn, 2020). As mentioned earlier, there has been relatively little empirical research on nudity and body image, and even less has explicitly tested whether gender moderates the effects of nudity. However, the studies that have included gender as a predictor found somewhat reliable results. Men tended to have more positive body image than women did, but the associations between nudity and body image did not vary between gender (Liong & Cheng, 2019; Story, 1984; West, 2018). We thus included gender predictive variable in this research but did not expect to find that it moderated the relationship between public nudity and psychological outcomes.

Current Research

Two studies examined whether and how public nude activities were associated with body image and whether these were moderated by gender. This research was conducted in compliance with the ethical standards of the British Psychological Society and with the approval of the appropriate university ethics committee. Study 1 operationalised public nude activities with a simple ‘yes’ or ‘no’ answer to a question about having ever engaged in public nude activities and focused only on body appreciation. We hypothesised that generalised nude activity would predict higher body appreciation, but we did not expect this relationship to vary with gender.

Study 2 measured naturism, sexting, and casual stripping separately and used more nuanced measures of frequency of activity. This study also included both social physique anxiety and body appreciation as outcome measures. We further expected that more frequent engagement in naturism would be associated with higher body appreciation and that this relationship would be mediated by lower physique anxiety, but not moderated by gender. We remained agnostic about the relationships between casual stripping, sexting and the psychological outcomes.

Study 1

Methods

Participants and Recruitment

Using an Internet link advertised on the German television channel “Sat 1” participants were invited to complete a measure of their body image (i.e., a German translation of the BAS-2; (Tylka & Wood-Barcalow, 2015a) in exchange for information about their body image (i.e., their score on the BAS-2), information on how their body image scores compared to those of others, and what the correlates of body appreciation are. The link contained all necessary information and a full consent form for obtaining informed consent. Participants were informed that the research was investigating body image, but not aware that the research was investigating the link between nude activity and body image. No monetary incentive was offered for participation.

Between December 6, 2019, and April 14, 2020, 6670 German adults completed the survey; 1609 men (24.1%), 4992 women (74.8%), and 69 who identified as “other” or “prefer not to say” (1.0%). Participants’ *mean age* = 34.10, *standard deviation* = 11.77. Most participants were White (6452, 96.7%). Smaller proportions of the sample were South Asian (11, 0.2%), East Asian (6, 0.1%), Black (27, 0.4%) or “other” (174, 2.6%). Most participants (80%) completed the survey in 6 min or less. At the end of the survey all participants were thanked and fully debriefed.

Measures

The 10-item BAS-2 was translated into German by a team of 3 bilingual native German speakers and then back-translated by another bilingual English and German speaker to ensure that the original meaning was retained. All items asked participants to reflect on their responses to their bodies, e.g., “I respect my body”. The full list of items can be seen in the Appendix. Participants responded to all items on a 5-point scale (1 = *Never*, 2 = *Seldom*, 3 = *Sometimes*, 4 = *Often*, 5 = *Always*). In a subsequent demographics section, participants also indicated their age in years, their gender (*male*, *female*, *other/prefer not to say*), their ethnicity (*White*, *Black*, *East Asian*, *South Asian*, *Other*), and whether they had ever taken part in any public clothes-free activities (*no* vs. *yes*).

Results and Discussion

The German BAS-2

Skewness (-0.46 to 0.20) and kurtosis (-1.00 to -0.60) values were within critical limits (Kline, 2005); hence, neither the BAS-2 scale nor any item therein was transformed. Cronbach’s alphas were calculated separately for all three gender groups and were within acceptable limits in each case ($\alpha_{\text{men}}=0.95$; $\alpha_{\text{women}}=0.95$; $\alpha_{\text{other}}=0.96$). Principal components analysis based on Eigenvalues greater than 1 revealed that the scale had a single component for all 3 gender groups, and that all items loaded well on that component for men ($0.65 < \lambda < 0.90$), women ($0.66 < \lambda < 0.91$), and other participants ($0.73 < \lambda < 0.94$). The mean score on the BAS-2 in this sample was 3.03 with a standard deviation of 0.97.

The Link Between Public Nude Activity and Body Image

Of all participants, 45.6% had taken part in some nude activity. This proportion was higher among men (62.6%) than among women (40.2%) or other participants (40.6%); $X^2(2)=246.41$, $p < 0.001$. Table 1 displays the means and standard errors of body appreciation scores according to gender and participation in nude activity.

Table 1 Body appreciation scores according to gender and participation in nude activities, Study 1

	Men	Women	Other	Total
No nude activity	3.23 (.04)	2.70 (.02)	2.49 (.14)	2.80 (.05)
Nude activity	3.69 (.03)	3.13 (.02)	3.23 (.17)	2.86 (.11)
Total	3.46 (.02)	2.91 (.01)	2.86 (.11)	3.08 (.04)

1) All responses range from 1 to 5

2) Standard errors are shown in parentheses

3) Scores presented take age and ethnicity into account as covariates

To investigate whether participation in nude activity predicted higher body appreciation scores, and whether this relationship was moderated by gender, we used a 2 (Nude activity: No vs. Yes) \times 3 (Gender: Male vs. Female vs. Other) between-participants analysis of variance with body appreciation scores as the dependent variable and participant age and ethnicity (White vs. Ethnic Minority) as covariates. Bonferroni-adjusted comparisons were used to further investigate interactions and in the case of comparisons between multiple groups.

Similar to prior research (Demarest & Allen, 2000; Tylka & Wood-Barcalow, 2015a), we found a main effect of gender on body image, $F(2, 6662) = 200.03$, $p < 0.001$, $\eta_p^2 = 0.06$. Men reported higher levels of body appreciation than did women ($p < 0.001$) or other participants ($p < 0.001$), though the latter 2 groups did not differ significantly from each other ($p = 0.63$). There was also a significant effect of age on body appreciation $F(1, 6662) = 26.21$, $p < 0.001$, $\eta_p^2 = 0.004$. Older participants reported more body appreciation ($r = 0.03$, $p = 0.015$). There was, however, no significant effect of ethnicity on body appreciation $F(1, 6662) = 1.11$, $p = 0.29$, $\eta_p^2 < 0.001$.

Most relevant for this study, there was also a significant effect of nude activity on body image, $F(1, 6662) = 49.75$, $p < 0.001$, $\eta_p^2 = 0.007$. Participants who had taken part in nude activity reported higher body appreciation scores than those who had not. Furthermore, there was no significant interaction between gender and nude activity, $F(2, 6662) = 1.01$, $p = 0.37$, $\eta_p^2 < 0.001$. Thus, the positive association between nude activity and body appreciation did not differ between genders (see Fig. 1).

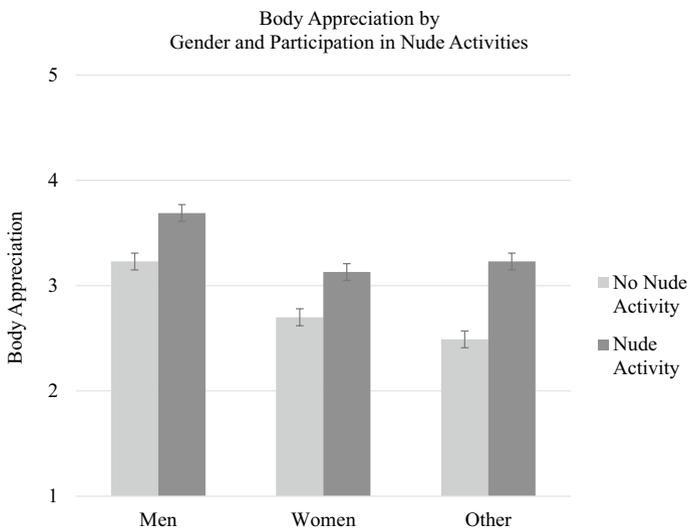


Fig. 1 Body Appreciation by Gender and Participation in Nude Activities Notes: (1) Participation in nude activity predicted higher body appreciation scores regardless of gender. (2) Scores ranged from 1 to 5. (3) Error bars represent the standard error of the mean. (4) Participants were 6670 German adults; 1609 men (24.1%), 4992 women (74.8%), and 69 who identified as “other” or “prefer not to say” (1.0%)

Study 2

Study 1 found that nude activity predicted positive body image and that this relationship was not moderated by gender. Study 2 looked at three types of nudity separately – naturism, sexting, and casual stripping – to investigate which ones predicted positive body image, whether the relationships were positive or negative, and which of these relationships were mediated by changes in social physique anxiety. As in Study 1, we also investigated whether these relationships were moderated by gender.

Methods

Participants and Recruitment

Using an Internet link advertised on social media channels (Facebook, Instagram) participants were invited to complete a short survey about their activities and body image in exchange for information about their body image (i.e., their score on the BAS-2), information on how their body image scores compared to those of others, and what the correlates of body appreciation are. The link contained all necessary information and a full consent form for obtaining informed consent. Participants were informed that the research was investigating body image, but not aware that the research was investigating the link between nude activity and body image. No monetary incentive was offered for participation.

Between March 14, 2021, and September 12, 2021, 376 adults completed the survey; 318 men (84.6%), 49 women (13%), and 9 who identified as “other” or “prefer not to say” (2.4%). Participants’ *mean age* = 46.95, *standard deviation* = 16.00. Most participants were White (349, 92.8%). Smaller proportions of the sample were South Asian (8, 2.1%), East Asian (2, 0.5%), Black (1, 0.3%) or “other” (16, 4.3%). Participants were also from internationally diverse backgrounds. The largest proportion of participants were British (164, 43.6%) followed by Polish (71, 18.9%), American (60, 16%) and numerous other, mostly European nationalities (81, 21.5%). At the end of the survey all participants were thanked and fully debriefed.

Measures

As in Study 1, in a demographics section, participants indicated their age in years, their gender (*male, female, other/prefer not to say*), their ethnicity (*White, Black, East Asian, South Asian, Other*), and their nationality. Frequency of participation in all nude activities was measured using the same 6-point scale with which participants indicated how often they took part in a specified activity (1 = *Never*, 2 = *Less than Once a Month*, 3 = *Once a Month*, 4 = *Once Every 2 Weeks*, 5 = *Once a Week*, 6 = *More than Once a Week*).

Naturism was measured with a 7-item scale ($\alpha = 0.85$) based on Smith and King (2009). Example items included: “Going to commercial naturist environments

(naturist clubs, spas, swims, or leisure centres)", "Going nude at the beach (official or unofficial naturist beaches)" or "Going nude in your private property (e.g., nude gardening or sunbathing)". The full list of items can be seen in the Appendix I.

Casual stripping was measured with a revised, 8-item scale ($\alpha=0.74$) from Sherman and Hackathorn (2020). Example items included: "Taking off your clothes (e.g., your shirt) at a party", "Flashing" a body part (e.g., shown breasts) for attention", "'Strip dancing" for a romantic partner". The full list of items can be seen in the Appendix II.

Sexting activity was measured with a 3-item scale ($\alpha=0.79$) developed for this study. Participants responded how often they did each of the following: "Sending nude, sexual photos of yourself to someone else", "Sending nude, sexual videos of yourself to someone else", "Posting nude, sexually explicit images of yourself online".

Social physique anxiety was measured with the 12-item ($\alpha=0.84$) Social Physique Anxiety Scale (Leary, 2013; West, 2020). Participants responded on a 5-point scale (1 = *Not at all characteristic of me*, 5 = *Extremely characteristic of me*). Example items include "In the presence of others, I feel apprehensive about my physique or figure." and "I usually feel relaxed when it's obvious that others are looking at my physique or figure." (reversed). As in Study 1, body appreciation was measured using the 10-item BAS-2 ($\alpha=0.93$).

Results and Discussion

Descriptive statistics and correlations between variables can be seen in Table 2. As can be seen in Table 2, both gender and age were associated with social physique anxiety and body appreciation, though ethnicity was not. As in prior research men ($M=2.55$, $SD=0.76$), reported less social physique anxiety than did women ($M=3.17$, $SD=0.90$), $p < 0.001$, but did not differ significantly from "other" participants ($M=2.73$, $SD=0.89$), $p=1.00$. Women also did not differ significantly from "other" participants, $p=0.26$. Men also reported higher levels of body appreciation ($M=3.89$, $SD=0.74$), than did women ($M=3.47$, $SD=0.91$), $p=0.001$, but did not differ significantly from "other" participants ($M=3.99$, $SD=0.78$), $p=1.00$. Women also did not differ significantly from "other" participants, $p=0.19$. Older participants reported less social physique anxiety and higher levels of body appreciation.

We also checked the proportion of participants who had engaged in some sort of public nudity at least once (i.e., those who did not respond "never" to all the items of these scales). As seen in Table 3, most participants had engaged in some form of public nudity; 88.3% had engaged in naturism, 61.7% had engaged in casual stripping and 56.6% engaged in sexting at least once. Interestingly, men were more likely to have tried naturism, while women were more likely to have tried casual stripping and sexting.

Table 2 Descriptive statistics and correlations for all relevant variables, Study 2

	Gender	Ethnicity	Age	Naturism	Stripping	Sexting	Anxiety	Body Image
Gender								
Ethnicity								
Age	-.38***	-.03						
Naturism	-.19***	.02	.50***					
Stripping	.08	-.07	.01	.27***				
Sexting	.14*	-.07	-.03	.15**	.38***			
Anxiety	.23***	-.002	-.33***	-.34***	-.12*	.06		
Body Apprecia- tion	-.12*	.98	.27***	.34***	.12*	.02	-.75***	
M (SD)			46.95 (16.00)	2.43 (1.12)	1.35 (.52)	1.78 (1.07)	2.64 (.74)	3.83 (.78)

1) * $p < .05$, ** $p < .01$, *** $p < .001$

2) All public nude activities used a 6-point scale (1 = *Never*, 2 = *Less than Once a Month*, 3 = *Once a Month*, 4 = *Once Every 2 Weeks*, 5 = *Once a Week*, 6 = *More than Once a Week*) to indicate how often participants engaged in each of the activities

3) Body appreciation and social physique anxiety scores ranged from 1 to 5

4) Means and standard deviations are not provided for gender and ethnicity as these variables are not continuous. Gender was coded as 1 = *men*, 2 = *women*, 3 = *other*; ethnicity was coded as 0 = *White*, 1 = *Ethnic Minority*

Associations Between Nudity, Social Physique Anxiety, and Body Image

Multiple regression analyses found that naturism predicted *less* social physique anxiety ($\beta = -0.15$, $p = 0.001$), as did casual stripping ($\beta = -0.17$, $p = 0.02$). In contrast, sexting predicted *more* social physique anxiety ($\beta = 0.08$, $p = 0.03$). Age ($\beta = -0.01$, $p = 0.004$) and gender ($\beta = 0.28$, $p = 0.004$) were also significant predictors.

Table 3 Number and percentage of participants who have engaged in naturism, sexting or casual stripping activities, Study 2

	Women	Men	Other	Total
No naturism	14 (28.6)	29 (9.1)	1 (11.1)	44 (11.7)
Naturism	35 (71.4)	289 (90.9)	8 (88.9)	332 (88.3)
No stripping	13 (26.5)	129 (40.6)	2 (22.2)	144 (38.3)
Stripping	36 (73.5)	189 (59.4)	7 (77.8)	232 (61.7)
No sexting	19 (38.8)	143 (45)	1 (11.1)	163 (43.4)
Sexting	30 (61.2)	175 (55)	8 (88.9)	213 (56.6)

1) 'No' indicates participants who answered "Never" to all the items from the corresponding naturism, sexting, and casual stripping scales

2) Percentage is shown in parentheses

Multiple regression analyses also found that naturism predicted higher levels of body appreciation ($\beta=0.17$, $p<0.001$), though neither casual stripping ($\beta=0.15$, $p=0.16$) nor sexting ($\beta=-0.02$, $p=0.56$) predicted body appreciation. Neither age ($\beta=0.01$, $p=0.06$) nor gender ($\beta=-0.15$, $p=0.16$) was a significant predictor of body appreciation in these analyses.

Mediation by Social Physique Anxiety

We also tested a mediation model in which naturist activity predicted higher levels of body appreciation via lower levels of social physique anxiety using PROCESS Macros, Model 4, with 5000 bootstrap samples, 95% confidence intervals, the following variables in the mediation analysis; X=Naturism, M=Social Physique Anxiety, Y=Body Appreciation, and the following variables as covariates; casual stripping, sexting, age, and gender. We found the hypothesised mediated relationship between naturism and body image via social physique anxiety. Naturism directly predicted less social physique anxiety ($b=-0.13$, $p<0.001$), and more body appreciation ($b=0.07$, $p=0.02$). Social physique anxiety also directly predicted less body appreciation ($b=-0.77$, $p<0.001$). Finally, naturism also *indirectly* predicted more body appreciation via less social physique anxiety, $b=0.10$, 95% C.I.=0.05, 0.16.

Using the same analyses (PROCESS Macros Model 4, but with casual stripping as the predictor and both naturism and sexting as covariates) we found a similar mediated relationship between casual stripping and body image via social physique anxiety. Casual stripping directly predicted less social physique anxiety ($b=-0.17$, $p=0.02$), but not body appreciation ($b=-0.02$, $p=0.75$). Social physique anxiety also directly predicted less body appreciation ($b=-0.77$, $p<0.001$). Finally, casual stripping also *indirectly* predicted more body appreciation via less social physique anxiety, $b=0.13$, 95% C.I.=0.01, 0.26.

However, these analyses (PROCESS Macros Model 4, but with sexting as the predictor and naturism and casual stripping as covariates) did not find a mediated relationship between sexting and body image via social physique anxiety. Sexting directly predicted more social physique anxiety ($b=0.08$, $p=0.03$), but not body appreciation ($b=0.04$, $p=0.18$). As before, social physique anxiety directly predicted body appreciation ($b=-0.77$, $p<0.001$), but sexting did not indirectly predict body appreciation via social physique anxiety, $b=-0.06$, 95% C.I.=-0.13, 0.003.

Moderation by Gender

We tested whether gender moderated the previously established mediated relationships between naturism and body appreciation and between casual stripping and body appreciation. First, we used PROCESS Macros, Model 8, with 5000 bootstrap samples, 95% confidence intervals, the following variables in the moderated mediation analysis; X=Naturism, M=Social Physique Anxiety, Y=Body Appreciation, W=Gender, and the following variables as covariates; casual stripping, sexting, and age. These analyses again revealed a mediated relationship between naturism

and body appreciation via reduced social physique anxiety but, importantly, gender did not moderate either the association between naturism and social physique anxiety ($b = -0.18, p = 0.05$) or the association between naturism and body appreciation ($b = -0.08, p = 0.29$).

We repeated the analyses using casual stripping as the predictor and naturism as one of the covariates. Similar to the previous analyses, we once again found the mediated relationship between stripping and body appreciation via reduced social physique anxiety but, importantly, gender did not moderate either the association between stripping and social physique anxiety ($b = -0.30, p = 0.10$) or the association between stripping and body appreciation ($b = -0.05, p = 0.69$).

Concerning sexting, as the previous mediation analyses did not find a mediated relationship between sexting and body appreciation, we instead tested a simpler moderated model in which sexting predicted social physique anxiety and this relationship was moderated by gender (PROCESS Macros, Model 1, with 5000 bootstrap samples, 95% confidence intervals, the following variables in the moderated mediation analysis; X = Sexting, Y = Social Physique Anxiety, W = Gender, and the following variables as covariates; casual stripping, naturism, and age). This analysis revealed a positive association between sexting and social physique anxiety ($b = 0.35, p < 0.001$) as well as a significant moderation by gender ($b = -0.21, p = 0.02$). Sexting predicted more social physique anxiety for men ($b = 0.14, p < 0.001$), but not for women ($b = -0.07, p = 0.40$).

General Discussion

These two studies replicated, clarified, and built on previous findings concerning nudity and psychological outcomes. Using a large, age-diverse and gender-diverse sample, Study 1 found that participation in public nudity generally predicted more positive body image (i.e., higher levels of body appreciation). Furthermore, the lack of moderation by gender, despite the substantial sample size in that study, is a strong indicator that this moderation may be very small or genuinely absent. The positive associations between public nudity and body image appear to apply for those who identify as men, women, or neither.

Study 2 extended these findings by investigating three specific types of public nudity simultaneously: naturism, casual stripping, and sexting. In line with prior research (West, 2021) *naturism* predicted more body appreciation, and that this relationship was mediated by lower levels of social physique anxiety. Seemingly in contrast with prior research (Sherman & Hackathorn, 2020), *casual stripping* was also associated with positive outcomes: less social physique anxiety and (indirectly) more body appreciation. As in Study 1, these positive associations were not moderated by gender. Only *sexting* was associated with negative outcomes and this was the only association moderated by gender: sexting predicted more social physique anxiety in men (but not in women) and had no relationship with body appreciation. Below, we discuss these findings considering their implications, strengths and limitations, and suggestions for future research.

Implications

The positive effects of naturism on body image have been already documented in previous research (e.g., West, 2018, 2020, 2021). Nonetheless, these findings add to the generalisability of the relationship between naturism and body image. In particular, Study 1 used a very large sample of German participants, and Study 2 used a sample of mixed European participants. The consistency between these findings and prior research can increase our confidence about the positive effects of naturism, and the generalisability of these effects beyond a limited range of English-speaking countries.

Perhaps more surprising, these findings appear to contradict previous research which found that casual stripping was associated with negative (not positive) psychological factors (i.e., Sherman & Hackathorn, 2020). However, we can propose some potential reasons for these divergent findings. First, as mentioned before, Sherman and Hackathorn's measure of casual stripping included items that could have applied to other forms of public nudity, making it unclear exactly what the scale was measuring. Second, Sherman and Hackathorn investigated different variables. Specifically, they found (1) associations between casual stripping and paternal neglect (which seemed to be a precursor and not consequence of casual stripping) and (2) associations between casual stripping and sociosexuality, a variable that can only be interpreted as negative if one holds a priori beliefs about the value of a woman's modesty and sexual selectivity. It seems quite reasonable to interpret their findings differently, in line with prior research (e.g., Lewis & Janda, 1988) that found positive associations between nudity and comfort with one's sexuality. In that light, it is also understandable that casual stripping may be similarly associated with lower levels of social physique anxiety and higher levels of body image in both men and women. In any case, research on stripping and psychological outcomes remains scarce and somewhat unclear, with some finding associations even between professional stripping and positive psychological outcomes (see, e.g., Sweet & Tewksbury, 2000; Wood, 2000). Thus, future research could be useful to clarify what the positive and negative effects of stripping may be.

Only one finding indicated associations between some form of public nudity and negative psychological outcomes (i.e., the association between sexting and social physique anxiety) and this finding only applied to men. While these findings do not go beyond prior research showing that sexting was sometimes associated with negative outcomes (Liong & Cheng, 2019), they do add meaningfully to these current findings in two ways. First, they clarify that not all forms of public nudity have similar associations with psychological outcomes; while naturism and casual stripping were associated with positive outcomes, sexting was associated with negative outcomes. Second, they undermine the simplistic interpretation of our findings that high levels of body image and low levels of anxiety about one's body are necessarily the causes of more involvement in public nudity. At the very least, lower levels of anxiety about one's body is associated with *less* frequent sexting (though more frequent naturism and casual stripping) suggesting that a more complex relationship exists between nudity and body image.

Finally, though this was not a central aspect of the study, it is noteworthy that a large proportion of the participants in both studies had engaged in some communal nude activity (Study 1 – 46%, Study 2 – 88% naturism, 62% casual stripping, 57% sexting). This suggests that willingness to take part in nude activity may be more widespread than it is often assumed to be.

Limitations and Future Research

These studies benefit from a number of strengths including theoretical replication across two studies, a very large sample size in Study 1, participants of varied nationalities, and participants who were more diverse than the widely overused student samples common in social psychology (Henrich, Heine, & Norenzayan, 2010). Practically, this research also provides a valuable tool for assessing body image in German-speaking countries by using the translation of the most recent version of the BAS-2, which has several advantages over the previous versions of the Body Appreciation Scale (Tylka & Wood-Barcalow, 2015a).

However, this research also has limitations. As both studies are cross-sectional, it is not possible to infer causal effects. Thus, a potential criticism is that this research merely shows that people who like their bodies are more likely participate in nudity. While it is plausible that a causal relationship exists in that direction, neither these current data nor prior research support the simplistic interpretation that this is the *only* causal relationship. As mentioned, this interpretation is incompatible with the finding that less anxiety about one's body is associated with *more* of some forms of public nudity (naturism and casual stripping), but *less* of other forms (sexting). Furthermore, prior experimental research has shown a causal effect of public nudity on social physique anxiety and body image (West, 2021).

While the participants were diverse in some ways, most participants identified as White, and sexual orientation and cisgender or transgender status was not explicitly investigated. Also, despite the large samples, some amount of self-selection likely occurred, meaning that only participants were likely already interested in body image. Similar limitations found in other research on nudity and body image (West, 2018, 2020, 2021). Nonetheless, future research should specifically investigate whether the effects of public and communal nudity differ for participants who are not White, cisgender, and heterosexual.

We note that the effect size of the relationship between nude activity and body image in Study 1 was quite small. However, this could be due to the use of a relatively crude all-or-nothing measure of participation in nude activity; participants merely indicated (“yes” vs. “no”) whether they had ever taken part in such activity. Effect sizes were notably larger in Study 2, in which we used more nuanced measures. This further suggests that even more nuanced studies that include measures of how frequently, recently, or under what conditions participants took part in such activities may yield yet larger effect sizes, as well as more information about the ways to maximise the link between nudity and body appreciation.

Finally, though this research investigated specific, positive relationships between nude activities and body appreciation, future research should also continue to investigate the possible relationships between nude activity and *negative* outcomes. Several potential outcomes were not included in this research, such as body shame, body surveillance, overall life satisfaction, or even self-esteem. Including such outcomes may provide a more rounded picture of the positive and negative effects of all these activities.

Conclusions

Though this area of research is still in its early stages, this study adds meaningfully to a slowly expanding body of work indicating a link between public nude activities and positive body image. While the nature of the link is far from conclusive, initial work suggests that both naturism and casual stripping are largely positive, while sexting appeared to be more negative. Resources invested into future research, particularly longitudinal and experimental research, may yield important insights concerning whether, when, why, and what types of nude activity improve body image and other psychological outcomes.

Appendix 1

Items for the German Translation of the BAS-2

Instructions: Bitte geben Sie nun an, ob die Aussagen unten niemals, selten, manchmal, oft oder immer auf Sie zutreffen.

1. Ich respektiere meinen Körper.
2. Ich bin mit meinem Körper im Reinen.
3. Ich finde, dass mein Körper zumindest einige gute Eigenschaften hat.
4. Ich habe eine positive Einstellung gegenüber meinem Körper.
5. Ich achte auf die Bedürfnisse meines Körpers.
6. Ich liebe meinen Körper.
7. Ich weiß die unterschiedlichen und einzigartigen Eigenschaften meines Körpers zu schätzen.
8. Ich verhalte mich wie jemand, der eine positive Einstellung gegenüber seines Körpers hat, zum Beispiel gehe ich mit erhobenem Haupt und lächle.
9. Ich fühle mich wohl in meinem Körper.
10. Ich fühle mich schön, auch wenn ich nicht dem Schönheitsideal der Medien entspreche (z.B. Models, SchauspielerInnen...).

Appendix 2

Items from the Revised, 8-Item Casual Stripping Scale

Instructions:

"Casual stripping" can be defined as removing one's clothes to allow others to see and enjoy one's nudity in a sexual way, but not for the purpose of making money or fulfilling work obligations (e.g., as a nude dancer). This can occur in a variety of contexts including stripping for the sole pleasure of one's partner or in a group or party setting.

Please indicate how frequently (on average) you engage in these forms of "casual stripping".*

1. Taking off your clothes (e.g., your shirt) at a party.
2. Taking off your clothes (e.g., your shirt) for money.
3. "Flashing" a body part (e.g., shown breasts) for attention.
4. "Flashing" a body part (e.g., shown breasts) as a joke.
5. "Flashing" a body part (e.g., shown breasts) to get what you want.
6. "Flashing" a body part (e.g., shown breasts) to fit in.
7. "Strip dancing" for a romantic partner.
8. "Strip dancing" for two or more people at the same time.

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Declarations

Conflict of interest There are no conflicts of interest in this research.

Data Availability These data are available upon request and will be sent (containing no personal or identifiable information) by the corresponding author if requested.

Ethical Approval Statement This study was approved by the Psychology Department's Research Ethics Committee at Goldsmiths, University of London.

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