Perceptions of Low Agency and High Sexual Openness Mediate the Relationship Between Sexualization and Sexual Aggression

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Abstract

Researchers have become increasingly interested in the saturation of popular Western culture by female hypersexualization. We provide data showing that men have more sexually aggressive intentions towards women who self-sexualize, and that self-sexualized women are vulnerable to sexual aggression if two qualifying conditions are met. Specifically, if perceivers view self-sexualized women as sexually open and lacking agency (i.e., the ability to influence one’s environment), they harbor more sexually aggressive intentions and view women as easier to sexually victimize. In Experiment 1, male participants viewed a photograph of a woman whose self-sexualization was manipulated through revealing versus non-revealing clothing. In subsequent experiments, men and women (Experiment 2) and men only (Experiment 3) viewed a photograph of a woman dressed in non-revealing clothing but depicted as open or closed to sexual activity. Participants rated their perceptions of the woman’s agency, then judged how vulnerable she was to sexual aggression (Experiments 1 and 2) or completed a sexually aggressive intentions measure (Experiment 3). Results indicated that both men and women perceived self-sexualized women as more vulnerable to sexual aggression because they assumed those women were highly sexually open and lacked agency. Perceptions of low agency also mediated the relationship between women’s self-sexualization and men’s intentions to sexually aggress. These effects persisted even when we described the self-sexualized woman as possessing highly agentic personality traits and controlled for individual differences related to sexual offending. The current work suggests that perceived agency and sexual openness may inform perpetrator decision-making and that cultural hypersexualization may facilitate sexual aggression.

Keywords: sexual aggression, agency, self-sexualization, sexual openness; sexual intent
Self-sexualization is the normalized adoption of overtly sexualized behavior (Nowatzki & Morry, 2009). Examples of self-sexualized behavior include recreational pole-dancing, wearing extremely sexualized clothing (e.g., the ‘underwear as outerwear’ fashion trend), and publicly disseminating semi-nude images of one’s self (e.g., sexting). Experts are divided on whether self-sexualization empowers women or harms them. Self-sexualization can empower women by elevating feelings of sexual efficacy (Kipnis & Reeder, 1997; Lerum & Dworkin, 2009). Conversely, self-sexualization can harm women by negatively affecting how they are perceived and treated by others (Infanger, Rudman, & Sczesny, 2014).

The purpose of the present work was to examine whether people would be likely to target self-sexualized women for sexually aggressive acts. We define sexual aggression as a person engaging in sexual behavior with someone who does not or cannot consent to engage in that behavior (Basile & Saltzman, 2002). Our theoretical model is presented in Figure 1. We tested and found support for the hypothesis that self-sexualized women are more vulnerable to sexual aggression because both men and women assume self-sexualized women are highly sexually open. We further found that perceptions of high sexual openness reduced perceptions of a woman’s agency. People who lack agency are broadly thought to be unable to think for themselves or affect their environment. Perceptions of low agency, in turn, increased perceptions of women’s vulnerability to sexual aggression and men’s intentions to sexually aggress.

Self-Sexualizing Behavior

The reasons women engage in self-sexualization are complex and varied. Women report self-sexualizing to look and feel attractive and to capture the attention of potential mates (Smolak, Murnen, & Myers, 2014; Yost & McCarthy, 2012). Increasing attractiveness is important for women because physical attractiveness elevates women’s social status and value as
a romantic partner (Barber, 1995). Self-sexualization can also be empowering for women: by transcending the boundaries of socially sanctioned femininity, self-sexualization can exemplify contemporary sexual agency (Baumgardner & Richards, 2004; Lerum & Dworkin, 2009). Self-sexualization can thus afford women considerable benefits, and women who self-sexualize report that it is both enjoyable and empowering (Liss, Erchull, & Ramsey, 2011).

Although self-sexualization can be empowering for women, some women report feeling socially pressured to self-sexualize (Yost & McCarthy, 2012). A report by the American Psychological Association’s Task Force on the Sexualization of Girls indicated that the pressure on women to sexualize starts when they are very young (APA, 2007). Moreover, the report outlined much evidence that sexualization negatively affects women’s cognitive functioning, sexuality, attitudes, beliefs, and physical and mental health. Evidence further suggests that although women may feel empowered by self-sexualization, women who self-sexualize sometimes suffer social and economic penalties (Infanger et al., 2014). To this extent, self-sexualization may be inadvertently harmful to women.

To investigate the potential relationship between self-sexualization and sexual aggression, we consider two byproducts of self-sexualization. First, we review the literature on sexualization and perceptions of high sexual openness. Second, we consider the relationship between women’s sexualization and their objectification. Both byproducts may increase the likelihood of women being sexually aggressed against, for reasons we outline below.

**Byproducts of Self-Sexualization: Perceptions of High Sexual Openness**

One byproduct of self-sexualization is that people perceive that self-sexualized women are more intent on and open to sexual activity than non-sexualized women (Cahoon & Edmonds, 1989; Farris, Treat, Viken, & McFall, 2008). For example, men report that women self-sexualize
in order to seduce them (Moor, 2010), and women report self-sexualizing to elicit male sexual
desire (Smolak et al., 2014). Such findings suggest that self-sexualization can elicit perceptions
that a woman is open to and seeking sexual activity with others. To this extent, self-sexualization
may inadvertently elicit or even threaten corresponding sexual goals in others.

When a woman seeks sexual activity, self-sexualization can accurately signal her sexual
intentions. One problematic aspect of cultural hypersexualization, however, is that some women
feel pressured to self-sexualize even when they are not seeking sexual encounters. Indeed, self-
sexualization is associated with women receiving unwanted sexual advances (Liss et al., 2011)
and can induce misperceptions that self-sexualized women are more sexually open than they
actually are (Farris et al., 2008). Men notoriously overestimate women’s sexual intent (Abbey,
Jacques-Tiura, & LeBreton, 2011; Abbey, McAuslan, & Thompson Ross, 1998; Farris et al.,
2008), and some men believe this misperception justifies sexual assault (Willan & Pollard,
2003). To this extent, self-sexualization may unintentionally communicate and activate sex goals
in a way that facilitates sexually aggressive mating strategies in some men. For these reasons, we
predicted that perceptions of high sexual openness would mediate the relationship between self-
sexualization and sexual aggression.

**Byproducts of Self-Sexualization: the Objectification of Women**

A second byproduct of self-sexualization is objectification. Objectification is defined as a
process whereby someone is treated or seen not as a person, but as an object that is valued for its
use and consumption by others (Fredrickson & Roberts, 1997). One consequence of
objectification is that people often fail to appreciate that objectified people have subjective
experiences (Nussbaum, 1999). Instead, they perceive that objectified others lack essentially
human qualities and thus treat them as instruments to use as they see fit.
Two essentially human qualities denied to objectified people are their *agency* and capacity for *experience*. Agency refers to an individual’s mental capacity for thoughts and intentions (their *mental agency*) and their status as a moral agent who can affect their environment by committing moral and immoral deeds (their *moral agency*; Gray, Gray, & Wegner, 2007; Gray & Wegner, 2009). Experience refers to an individual’s mental ability to experience emotions and sensations (their *mental experience*) and their moral capacity to be the recipient of moral and immoral acts (their *moral patiency*; Gray et al., 2007; Gray & Wegner, 2009). Although these four dimensions have unique elements, much evidence indicates that mental and moral agency, and mental experience and moral patiency, are theoretically related, show considerable overlap, and are highly correlated (Cikara, Farnsworth, Harris, & Fiske, 2010; Gray & Wegner, 2009; Gray, Young, & Waytz, 2012).

Compelling evidence demonstrates that sexualized women are frequently objectified by others and denied agency and experience (e.g., Holland & Haslam, 2013). One explanation for this finding is that objectification is theoretically grounded in the cognitive process of goal pursuit (Vaes, Loughnan, & Puvia, 2013). By activating sex goals in men, sexualized portrayals of women attune men to women’s instrumental ability to satisfy sexual desire and thus increase objectification (e.g., Confer, Perilloux, & Buss, 2010; Vaes, Paladin, & Puvia, 2011). Women also objectify other sexualized women, which may allow women to distance themselves from potentially problematic or threatening representations of their own gender (Vaes et al., 2011). Self-sexualized women may thus be especially prone to objectification by both men and women. In the current work, we predicted that self-sexualized women would be objectified—operationalized as reduced perceptions of agency and experience—by both men and women if they perceived self-sexualized women as sexually open.
Various studies indicate that when women are objectified, they are at greater risk of harm. For instance, objectification is a mediating variable between men’s heavy alcohol consumption and their enactment of sexual violence (Gervais, DiLillo, & McChargue, 2014). Being denied agency or experience also makes people seem less deserving of fair treatment and protection from harm (Bastian, Laham, Wilson, Haslam, & Koval, 2011). Denials of a woman’s agency specifically, however, may have a unique role in increasing sexual aggression. If a self-sexualized woman is seen as lacking agency, she may be perceived as easier to cajole, less able to resist sexual advances, and unlikely to report sexual aggression to police. For these reasons, we predicted that perceptions of reduced agency—a result of the objectification of women who are perceived to be sexually open—would increase the likelihood of women being targeted for sexual aggression.

Research Overview

Figure 1 presents our model of the predicted relationship between self-sexualization, sexual openness, agency, and sexual aggression. This model depicts the effect of self-sexualization on sexual aggression as indirectly serially mediated by intervening psychological processes. We did not expect self-sexualization to elicit a direct tendency to sexually assault women: as such, the statistical significance of this path in our mediation model is not a required assumption (see Shrout & Bolger, 2002, for an explanation of the validity of mediation models that do not assume an $X \rightarrow Y$ association). We instead suggest that self-sexualization may be associated with sexual aggression if two qualifying conditions are met. The first is that self-sexualization increases assumptions of a woman’s sexual openness. The second condition is that sexually open women are perceived to lack agency. Not all perceivers will make these
connections, but when they do, we suggest that people will perceive sexualized women as easier to sexually aggress against.

Although we focus on women’s self-sexualization, we caution against any interpretation of our data that suggests blaming women for being sexually victimized. Women are frequently blamed in situations of real or hypothetical sexual assault (e.g., Koepke, Eyssel, & Bohner, 2014), and our intent is not to fuel these kinds of attributions. We stress that any transgression committed against a woman is the responsibility of the perpetrator. However, just like scientific research into perceptions of other types of clothing (e.g., white laboratory coats or suits) has advanced our understanding of priming and cognition (Hajo & Galinsky, 2012), scientific research that examines perceptions of self-sexualization may provide much-needed insight into the psychological processes associated with perpetrating sexual aggression. Understanding whether men are more likely to target sexualized women for sexually aggressive acts is an important contribution for the scientific community and for women generally.

**PILOT STUDY: Establishing the Validity of the Model**

A pilot study investigated the predicted links between self-sexualization, perceived sexual openness, sexual aggression, and objectification (operationalized as lower perceptions of capacity for agency and experience). One hundred and forty-four male Americans ($M_{age} = 30.33$ years, $SD = 9.43$) viewed a photograph of a woman wearing revealing or non-revealing clothing. They then rated her sexual openness, how vulnerable she was to sexual aggression, judged her agency and then her capacity for experience.¹

Vulnerability to sexual aggression was measured via two items: how easy it would be to pressure/deceive/exploit the woman into having sexual intercourse, and how easy it would be to sexually assault the woman (Cronbach’s $\alpha = .63$; $1 = \text{not at all easy, } 7 = \text{very easy}$; adapted from
Goetz, Easton, Lewis, & Buss, 2012). Sexual openness was rated via three items: how sexually available the woman was in general, how open to sexual activity she was, and how sexually interested she was in others (1 = not at all, 7 = very; $\alpha = .88$). Perceptions of agency were evaluated via five mental agency items (from Gray et al., 2007; 1 = not at all capable, 7 = very; e.g., thinking) and five moral agency items (from Holland and Haslam, 2013; 1 = not/none at all, 7 = very; e.g., ‘how intentional is this person’s behavior?’). The woman’s perceived capacity for experience was evaluated via five mental experience items (from Gray et al., 2007; 1 = not at all capable, 7 = very; e.g., experiencing joy) and five moral patiency items (from Holland and Haslam, 2013; 1 = not/none at all, 7 = very; e.g., feeling pain). Mental and moral agency and mental experience and moral patiency respectively, are theoretically related and highly correlated (Gray, Young, & Waytz, 2012). Agency and experience also uniquely correlate with different dimensions of humanness, providing evidence of discriminant construct validity (Bastian et al., 2011). For these reasons, agency items were combined to form an overall indicator of agency ($\alpha = .87^2$), as were experience items to form an overall indicator of experience ($\alpha = .79$).

Three independent samples $t$-tests indicated that the self-sexualized woman was perceived as more sexually open and as having less agency and capacity for experience than the woman wearing non-revealing clothes (Table 1). As expected, there was no direct main effect of clothing on perceived vulnerability to sexual aggression. We next investigated whether sexual openness then objectification (operationalized as reduced perceptions of agency versus reduced perceptions of experience) serially mediated the effect of self-sexualization on vulnerability to sexual aggression. We used nonparametric bootstrapping analyses with 10,000 resamples. In these analyses, mediation was significant if the 95% bias-corrected and accelerated confidence intervals (CI) for the indirect effect did not include zero (Preacher & Hayes, 2004).
As predicted, mediation analyses indicated that self-sexualization predicted vulnerability to sexual aggression by increasing perceptions of sexual openness (agency model: Ind1 Estimate = 0.60, $SE = 0.14$, CI [0.34, 0.91]; experience model: Ind1 Estimate = 0.64, $SE = 0.14$, CI [0.39, 0.96]). However, only agency and not experience mediated the effect of sexual openness on vulnerability to sexual aggression (agency model: Ind2 Estimate = 0.07, $SE = 0.05$, CI [0.004, 0.19]; experience model: Ind2 Estimate CI [-0.01, 0.11]). Agency but not experience also mediated the effect of self-sexualization on vulnerability to sexual aggression (agency model: Ind3 Estimate = 0.07, $SE = 0.05$, CI [0.004, 0.19]; experience model: Ind3 CI [-0.02, 0.20]). These findings provided initial support for our hypotheses. They further suggested that when self-sexualized women were perceived as sexually open and thus as lacking agency, then they were perceived as more vulnerable to sexual aggression. A diagram of the agency mediation model is in Figure 2 and full details are provided online on the Open Science Framework (OSF; https://osf.io/2ak6/).

**EXPERIMENT 1: Revealing Clothing (Male Participants)**

Results from the pilot study indicated that self-sexualized women were seen as more vulnerable to sexual aggression because people assumed such women were highly sexually open and lacked agency. The aim of Experiment 1 was to directly manipulate the agency mediator to investigate boundary effects of perceived sexual openness on sexual aggression, thereby strengthening causal inferences (Spencer, Zanna, & Fong, 2005). Male participants viewed a photograph of a woman wearing sexualized clothing or non-revealing clothing and read five traits about her personality (pre-tested as high or low in agency). Participants assessed the woman on the same measures as the pilot study, including the experience items. We also included individual difference measures that characterize men who are likely to sexually offend.
We included these to determine whether our findings would be robust when controlling for these variables.

Method

Participants and Design

Two hundred and sixteen male Americans (\(M_{\text{age}} = 30.78\) years, \(SD = 8.90\)) recruited from Amazon’s Mechanical Turk (an online platform which facilitates paid psychological research studies) were paid US$1.20 to participate and passed two attention checks. All participants provided written informed consent and were debriefed in accordance with the Declaration of Helsinki. Participants were randomly assigned to one of four conditions, in a 2 (agentic personality: low, high) \(\times\) 2 (self-sexualization: non-revealing clothes, self-sexualized) between-participants design.

Procedure and Materials

Participants viewed an image of their target then read a description about her agency. As in the pilot study, they evaluated the woman’s sexual openness, agency, capacity for experience, and perceptions of her vulnerability to sexual aggression (as > .72); they then completed five individual difference measures.\(^4\)

Target image pretesting. Twenty-three men in a separate pilot study rated photographs of 10 women on attractiveness and age (from Shutterstock.com). All targets were photographed smiling, from the knees up, facing the camera. Pairwise comparisons from a within-subjects ANOVA indicated that two women varying by self-sexualization were equivalent in age, (\(M_{\text{nr}} = 26.46, SD = 3.02, M_{\text{ss}} = 24.21, SD = 2.97; p = .367\)), and attractiveness, (\(M_{\text{nr}} = 5.42, SD = 0.97, M_{\text{ss}} = 5.58, SD = 0.97; p = 1.00\)). Images were re-colorized to grayscale and both women had similarly colored hair and body shapes.
**Agency manipulation pretesting.** Twenty-six participants in a separate pilot study read a description of the concept of agency then rated 61 traits on agency and desirability on two 7-point scales (1 = very much describes non-agency/very undesirable, 7 = very much describes agency/very desirable). Paired-samples $t$-tests indicated that five dyads matched on desirability ($t_s \leq 1.40, ps \geq .171$) but had significantly different agency ratings ($t_s \geq 4.05, ps \leq .001$), thus comprising the agency manipulation (low agency: relaxed, happy-go-lucky, easygoing, deferential, obedient; high agency: decisive, intentional, persistent, authoritarian, unyielding; see the OSF).

**Individual difference measures.**

**Rejection sensitivity.** The Rejection Sensitivity Questionnaire (Berenson et al., 2009) comprises nine situations where rejection by another is possible (e.g., you ask your supervisor for help with a problem at work). Participants indicated their anxiety about the outcome of each situation and the perceived likelihood that they would be rejected on two 6-point scales (1 = very unconcerned/unlikely; 6 = very concerned/likely). Scores were an average of the likelihood of rejection multiplied by the degree of anxiety ($M = 16.66, SD = 5.25, \alpha = .85$).

**Mate value.** Mate value was measured using the Components of Self-Perceived Mate Value Survey (Fisher, Cox, Bennett, & Gavric, 2008) and the Mate Value Inventory (Kirsner, Figueredo, & Jacobs, 2003). The Components of Self-Perceived Mate Value comprises 22 items shown to relate to mate value (e.g., relationship history). The Mate Value Inventory comprises 17 traits (e.g., healthy) and participants are asked, “How well do you feel these attributes apply to you currently?” on a scale of -3 (extremely low on this trait) to +3 (extremely high). All items were on a 7-point scale and were averaged ($M = 4.68, SD = 0.79, \alpha = .92$).
**Rape myth acceptance.** Ten items from The Rape Scale (Bumby, 1996) measured agreement with the cognitive distortions of rapists (e.g., ‘women who get raped probably deserved it’). Participants indicated their agreement to each statement on a 4-point scale (1 = strongly disagree, 4 = strongly agree) and items were averaged ($M = 1.51, SD = 0.54, \alpha = .89$).

**Hostility towards women.** The Hostility towards Women Scale was adapted from Abbey et al. (2011). Participants assessed the extent that seven statements characterized them on a 5-point scale (1 = extremely uncharacteristic of me, 5 = extremely characteristic; e.g., ‘women always seem to get the breaks’). Items were averaged ($M = 1.96, SD = 0.85, \alpha = .88$).

**Sociosexual orientation.** The revised Sociosexual Orientation Inventory (Penke & Asendorpf, 2008) comprises nine questions that assess sociosexual attitudes, behavior, and desires (e.g., ‘sex without love is okay’). Scores were aggregated ($M = 42.17, SD = 14.95, \alpha = .86$).

**Results**

**Sexual Openness**

A 2 (agentic personality: low, high) × 2 (self-sexualization: non-revealing clothes, self-sexualized) ANOVA indicated that the self-sexualized woman ($M = 5.12, SD = 1.04$) was rated as more sexually open than the woman in non-revealing clothes ($M = 4.55, SD = 0.97$), $F(1,212) = 17.96, p < .001, \eta^2_p = .08$. In addition, the non-agentic woman ($M = 5.07, SD = 0.94$) was perceived as more sexually open than the highly agentic woman ($M = 4.58, SD = 1.10$), $F(1,212) = 13.76, p < .001, \eta^2_p = .06$. There was no interaction between agency and self-sexualization ($p = .939, \eta^2_p < .01$).
Agency

A 2 × 2 ANOVA indicated main effects of self-sexualization and the woman’s agentic personality on perceived agency, $F(1,211) = 4.81, p = .029, \eta^2_p = .02$, $F(1,211) = 34.31, p < .001, \eta^2_p = .14$, respectively. The self-sexualized woman ($M = 5.27, SD = 0.88$) and the non-agentic woman ($M = 5.07, SD = 0.90$) were attributed less agency than the woman in non-revealing clothes ($M = 5.51, SD = 0.88$) and the highly agentic woman ($M = 5.73, SD = 0.73$). There was no interaction between the woman’s agentic personality and self-sexualization, $p = .363, \eta^2_p < .01$.

Experience

A 2 × 2 ANOVA indicated the woman’s agentic personality affected her perceived capacity for experience, $F(1,212) = 14.68, p < .001, \eta^2_p = .07$. The non-agentic woman ($M = 5.47, SD = 0.68$) was attributed more experience than the highly agentic woman ($M = 5.10, SD = 0.70$), but self-sexualization did not affect experience perceptions, $p = .529, \eta^2_p < .01$. There was no interaction between agency and self-sexualization, $p = .478, \eta^2_p < .01$.

Perceptions of Sexual Aggression Vulnerability

A 2 × 2 ANOVA indicated a main effect of the woman’s agentic personality but not self-sexualization on perceptions of sexual aggression vulnerability, $F(1,212) = 55.29, p < .001, \eta^2_p = .21; p = .505, \eta^2_p < .01$. The non-agentic woman ($M = 4.28, SD = 0.13$) was perceived as more vulnerable to sexual aggression than the highly agentic woman ($M = 2.94, SD = 0.13$). There was no interaction between agency and self-sexualization, $p = .210, \eta^2_p < .01$.

Mediation Analysis

As in the pilot study, we conducted bootstrapped mediation models to determine whether perceived sexual openness then agency (or by comparison, experience) mediated the effect of
self-sexualization on perceptions of sexual aggression vulnerability. We included the agency manipulation as a predictor of the dependent variable, see Figure 3.5

**Agency mediation model.** As predicted, agency perceptions decreased as sexual openness perceptions increased. The regression of self-sexualization, the woman’s agentic personality, sexual openness, and perceived agency on perceptions of sexual aggression vulnerability indicated that all variables except self-sexualization significantly contributed to the model, $R^2 = .39, F(4,210) = 33.93, p < .001$. Two indirect paths were significant, Ind1 Estimate = 0.27, $SE = 0.08$, CI [0.14, 0.45], and Ind2 Estimate = 0.04, $SE = 0.02$, CI [0.01, 0.11]. The self-sexualized woman was seen as more vulnerable to sexual aggression because people assumed she was more sexually open and thus less agentic (Figure 3).

We ran an additional mediation analysis to explore individual difference effects on perceptions of sexual aggression vulnerability. Rape myth acceptance, hostility towards women, rejection sensitivity, sociosexual orientation, and mate value were entered as covariates of the dependent variable. We also included Caucasian ethnicity, heterosexuality, age, gross income, and single relationship status. Including these 10 variables did not nullify the significance of the direct effects of sexual openness, the woman’s agentic personality, or perceived agency ($ps < .001$) and produced only $\Delta R^2 = .06$. The indirect paths remained significant, Ind1 Estimate = 0.28, $SE = 0.08$, CI [0.14, 0.47], Ind2 Estimate = 0.04, $SE = 0.02$, CI [0.01, 0.11].

**Experience mediation model.** The regression of self-sexualization, the woman’s agentic personality, sexual openness, and perceived capacity for experience on perceptions of sexual aggression vulnerability indicated that all variables except self-sexualization and perceived experience significantly contributed to the model, $R^2 = .33, F(4,211) = 25.97, p < .001$. As in the
Pilot Study, the mediation paths via experience were not significant, CIs [-0.04, 0.003; -0.01, 0.10].

Discussion

Experiment 1 suggested an association between female sexualization and sexual aggression. To the extent that people assume self-sexualized women are highly sexually open and thus lack agency, self-sexualized women may be more likely to be targeted for sexually aggressive acts. These effects were specific to perceptions of reduced agency and not perceptions of a woman’s capacity for experience. Furthermore, this mediation remained significant even after controlling for individual differences related to sexual offending and when participants were explicitly told the woman was highly agentic.

EXPERIMENT 2: Explicit Information about Sexual Openness (Male and Female Participants)

Experiment 1 indicated that men perceived self-sexualized women as sexually open. To this extent, self-sexualization may induce an instrumental mindset in men, attuning them to women’s sex goal relevance while simultaneously negating perceptions of women’s essentially human qualities (i.e., their agency). In Experiment 2, we included female participants to investigate whether these perceptions of self-sexualized women would extend to both genders. We also directly manipulated sexual openness in lieu of self-sexualization to strengthen causal inferences (Spencer et al., 2005). All participants saw the same woman, read a description about her sexual openness and her agentic personality, then assessed her on the same measures from Experiment 1. We expected to replicate the findings of Experiment 1 in male and female perceivers, albeit likely for different reasons as we outline below.
Previous research indicates that women frequently objectify other women (Strelan & Hargreaves, 2005), negating their human qualities when those women are portrayed in sexualized ways (Vaes et al., 2011). Objectifying other women can also function to distance women perceivers from problematic representations of the female gender (Vaes et al., 2011) and may diminish the threat of intrasexual rivals (Vaillancourt, 2013). Given that sexually open women are a greater intrasexual threat than sexually non-receptive women, we expected that female perceivers would similarly objectify sexually open women and perceive them as more vulnerable to sexual aggression.

**Method**

**Participants and Design**

One hundred and seventy-seven Americans (108 men; $M_{age} = 34.00$ years, $SD = 11.72$) recruited from Amazon’s Mechanical Turk were paid US$1.25 to participate. All participants provided written informed consent, passed four attention checks, and were debriefed in accordance with the Declaration of Helsinki. Participants were randomly assigned to one of four conditions, in a 2 (agentic personality: low, high) × 2 (sexual openness: non-receptive, open) between-participants design. Participant gender was an additional independent variable.

**Procedure and Materials**

All participants viewed an image of a woman wearing non-revealing clothing. They read a description about her agentic or non-agentic personality (from Experiment 1) and her sexual openness, then evaluated her on the same variables from Experiment 1 (rating her agency, experience, how vulnerable she was to sexual aggression, then completing the individual difference items; $\alpha \geq 0.67$).
Sexual openness manipulation. Sexual openness was manipulated by the following description: ‘She believes sex without emotional commitment is (not) okay, is (not) comfortable having casual sex with different partners, and is strictly non-monogamous (monogamous)’.

Target image. The target image was purchased from Shutterstock.com and re-colorized to grayscale.

Individual difference items. Rejection sensitivity, mate value, rape myth acceptance, hostility towards women, and sociosexual orientation were measured as in Experiment 1. For female participants, the hostility towards women scale was reworded to form an index of hostility towards men (all references to women were replaced with references to men; e.g., ‘men always seem to get the breaks’).

Results

Sexual Openness Manipulation Check

A 2 (agentic personality: low, high) × 2 (sexual openness: non-receptive, open) × 2 (participant gender: male, female) ANOVA indicated that the sexual openness manipulation was effective, $F(1,169) = 820.75, p < .001, \eta^2_p = .83$. The sexually non-receptive woman ($M = 2.51, SD = 0.97$) was rated less sexually open than the sexually open woman ($M = 6.28, SD = 0.72$).

Neither the woman’s agentic personality nor gender affected perceptions of sexual openness and there were no interactions between agency, gender, or sexual openness ($ps \geq .173, \eta^2_p s \leq .01$).

Agency

A $2 \times 2 \times 2$ ANOVA indicated that the sexual openness manipulation affected perceptions of the woman’s agency, $F(1,169) = 43.60, p < .001, \eta^2_p = .21$, as did the agentic personality manipulation, albeit marginally, $F(1,169) = 3.26, p = .073, \eta^2_p = .02$. The sexually open woman ($M = 5.11, SD = 0.95$) and the non-agentic woman ($M = 5.39, SD = 1.01$) were ascribed less
agency than the sexually non-receptive woman ($M = 5.90, SD = 0.71$) and the agentic woman ($M = 5.58, SD = 0.83$). There was no effect for gender but we did find a marginal interaction between gender and sexual openness, $p = .094$. No other interactions were significant ($ps \geq .396, \eta^2_p < .01$).

**Experience**

A $2 \times 2 \times 2$ ANOVA indicated that the sexual openness manipulation affected perceptions of the woman’s capacity for experience, $F(1,169) = 4.11, p < .001, \eta^2_p = .02$, as did the agency manipulation, $F(1,169) = 9.70, p = .002, \eta^2_p = .05$. The sexually open woman ($M = 5.06, SD = 0.09$) and the non-agentic woman ($M = 5.41, SD = 0.09$) were ascribed less capacity for experience than the sexually non-receptive woman ($M = 5.48, SD = 0.10$) and the agentic woman ($M = 5.14, SD = 0.10$). There was no effect of gender and no other interactions were significant ($ps > .291, \eta^2_p < .01$).

**Perceptions of Sexual Aggression Vulnerability**

A $2 \times 2 \times 2$ ANOVA indicated that the sexual openness manipulation affected perceptions of how vulnerable the woman was to sexual aggression, $F(1,169) = 94.98, p < .001, \eta^2_p = .36$, as did the agency manipulation, $F(1,169) = 26.89, p < .001, \eta^2_p = .14$. The sexually open woman ($M = 4.47, SD = 0.14$) and the non-agentic woman ($M = 4.03, SD = 0.14$) were seen as more vulnerable to sexual aggression than the sexually non-receptive woman ($M = 2.57, SD = 0.14$) and the high agency woman ($M = 3.02, SD = 0.14$). There was also an effect for gender, $F(1,169) = 8.39, p = .004, \eta^2_p = .05$; women believed the target was more vulnerable to sexual aggression than men did. No interactions were significant ($ps > .191, \eta^2_p < .01$).
Mediation Analysis

The mediation models tested whether perceived agency or experience mediated the effect of sexual openness on perceptions of sexual aggression vulnerability. We included the agency manipulation and gender as predictors of the dependent variable.\(^8,9\)

**Agency mediation analysis.** Consistent with the Pilot Study and Experiment 1, as sexual openness increased, perceived agency decreased. The regression of sexual openness, the woman’s agentic personality, gender, and perceived agency on perceptions of sexual aggression vulnerability indicated that all variables significantly contributed to the model, \(R^2 = .49, F(4,172) = 40.77, p < .001\). The woman was seen as more vulnerable to sexual aggression when she was perceived as sexually open and less agentic, had a non-agentic personality, or if the perceiver was female (Figure 4). The indirect effect of sexual openness on vulnerability to sexual aggression mediated by perceived agency was significant, estimate = 0.39, \(SE = 0.11\), CI [0.21, 0.64]. High sexual openness—even in the absence of congruent clothing cues—predicted greater sexual aggression vulnerability both directly and indirectly. The sexually open woman was seen as more vulnerable to sexual aggression because she was sexually open and thus less agentic.

We conducted an additional mediation analysis including all individual difference measures as covariates of perceptions of sexual aggression vulnerability. We combined the hostility towards women and hostility towards men data to form an overall measure of hostility towards the opposite gender. Including these 10 individual difference measures produced a small \(R^2\) change, \(\Delta R^2 = .03, R^2 = .52, F(14,161) = 12.25, p < .001\). The direct effects of sexual openness, the woman’s agentic personality, and perceived agency sexual aggression vulnerability all remained significant (\(ps < .001\)), as did the mediation path, Estimate = 0.42, \(SE = 0.12\), CI
[0.22, 0.71]. The direct effect of female gender on sexual exploitability was rendered marginally significant ($p = .058$).

**Experience mediation model.** The regression of sexual openness, the woman’s agentic personality, gender, and perceived capacity for experience on perceived sexual aggression vulnerability indicated that all variables significantly contributed to the model, $R^2 = .44, F(4,172) = 34.33, p < .001$. The indirect effect of sexual openness on sexual aggression vulnerability mediated by perceived capacity for experience was significant, estimate = 0.10, $SE = 0.06$, CI [0.02, 0.26]. However, the confidence interval overlap indicated that the experience mediation path was significantly smaller than the agency mediation path (see Cumming and Finch, 2005).

**Discussion**

Relative to the sexually non-receptive woman, the sexually open woman was considered more vulnerable to sexual aggression even when dressed in non-revealing clothing. This relationship between sexual openness and aggression was partly due to men and women perceiving that sexually open women lack agency. The sexually open woman was also perceived to lack the capacity for experiences and sensations, which also contributed to greater perceptions of sexual aggression vulnerability. These effects are consistent with women objectifying other women as a strategy to distance themselves from and derogate problematic or threatening female others (Vaes et al., 2011; Vaillancourt, 2013). Consistent with Experiment 1, even a highly agentic woman described as sexually open was objectified and perceived as more vulnerable to sexual aggression. These results occurred in men and women and even when controlling for individual differences associated with sexual offending.
EXPERIMENT 3: Sexually Aggressive Behavioral Intentions (Male Participants)

Experiment 3 extended our findings from perceptions of sexual aggression vulnerability to sexually aggressive behavioral intentions. We strengthened the agency manipulation by specifying the woman’s reaction to hypothetical transgressions as highly agentic or non-agentic. Male participants saw a photograph of a woman wearing a t-shirt that was plain or contained a sexually suggestive slogan. They read a statement of her agentic or non-agentic reaction to hypothetical transgressions, rated her agency and capacity for experience, then completed a behavioral intentions task. We included the individual difference measures from Experiment 1 and measured past sexual offending. We expected to conceptually replicate and extend findings from Experiments 1 and 2 to sexually aggressive behavioral intentions.

Method

Participants

One hundred and ninety-seven male Americans (\(M_{\text{age}} = 23.78\) years, \(SD = 1.88\)) recruited from Amazon’s Mechanical Turk were paid US$1.50 to participate. All participants were 18–26 years old, primarily attracted to women (above the mid-point on a 7-point sexual attraction scale, 1 = attracted only to men, 7 = attracted only to women), and not in a committed romantic relationship. All participants provided written informed consent, passed one attention check, and were randomly assigned to one of four conditions, in a 2 (agency manipulation: low, high) × 2 (sexual openness: control, sexually open) between-participants design. They were then debriefed in accordance with the Declaration of Helsinki.

Procedure and Materials

All participants viewed an image of a woman in a white t-shirt. In the control condition, the t-shirt was plain. In the sexually open condition, the t-shirt read “I [heart] to f_ck”.
Participants read a statement of the woman’s agentic or non-agentic reaction to hypothetical transgressions, evaluated her agency and experience, then completed a filler task and demographics (including indicating college fraternity membership). Afterwards, participants completed the behavioral intentions measure, the individual difference measures from Experiment 1 (excluding the Components of Self-Perceived Mate Value scale and rape myth acceptance), and a measure of past sexual offending ($\alpha > .71$).

**Target image.** The target image was purchased from Shutterstock.com (see the OSF). The target was photographed from the hips up, facing front on, and smiling at the camera.

**Agency manipulation.** For the low agency manipulation, the woman stated: “I usually take a back seat in life & let others lead the way—if something upsets me, I pretty much just let it slide”. For the high agency manipulation, she stated: “I know what I want in life & assert myself in all situations—if something upsets me, I always do something about it”.

**Sexually aggressive intentions task.** Participants read about a hypothetical dating encounter between themselves and ‘Jenny’, the woman in the photograph (adopted from Loughnan, Pina, Vasquez, & Puvia, 2013). Participants were asked to imagine the encounter started with a dinner and movie and ended at the participant’s home on the couch. Participants then nominated the sexual advances they would engage in with Jenny. Advances started with apprehensively-received kissing (Step 1) and escalated to rape (Step 6). At each step, Jenny expresses increasing desire for the behavior to de-escalate. In the final step after the rape has occurred, Jenny runs out the door (see the OSF).\(^\text{10}\) Due to positive skew, the variable was log-transformed, which normalized the distribution.

**Past history of sexual aggression measure.** The Sexual Experiences Survey (Koss & Oros, 1982) assesses sexual aggression perpetration via 10 questions (e.g., “Have you engaged in
sexual intercourse when she didn’t want to because you gave her alcohol or drugs?”).

Respondents were classified according to the most severe sexual perpetration reported (0 = no sexual victimization, 4 = rape; $M = 0.11$, $SD = 0.54$). Due to positive skew, the variable was log-transformed, which normalized the distribution.

**Results**

**Agency**

A 2 (agency manipulation: low, high) × 2 (sexual openness: control, sexually open) ANOVA indicated that the sexual openness manipulation affected perceived agency, $F(1,193) = 14.72$, $p < .001$, as did the agency manipulation, $\eta^2_p = .09$, $F(1,193) = 24.50$, $p < .001$, $\eta^2_p = .14$. The sexually open woman ($M = 4.73$, $SD = 1.04$) and the non-agentic woman ($M = 4.65$, $SD = 0.94$) were attributed less agency than the woman in the plain t-shirt ($M = 5.30$, $SD = 0.88$) and the highly agentic woman ($M = 5.37$, $SD = 0.93$). There was no interaction between the woman’s agency and sexual openness, $p = .337$, $\eta^2_p < .01$.

**Experience**

A 2 × 2 ANOVA indicated that the sexual openness manipulation affected perceived capacity for experience, $F(1,193) = 7.26$, $p = .008$, $\eta^2_p = .04$, as did the agency manipulation, $F(1,193) = 4.39$, $p = .038$, $\eta^2_p = .02$. The sexually open woman ($M = 5.07$, $SD = 0.96$) and the non-agentic woman ($M = 5.10$, $SD = 0.97$) were attributed less capacity for experience than the woman in the plain t-shirt ($M = 5.40$, $SD = 0.76$) and the highly agentic woman ($M = 5.36$, $SD = 0.76$). There was no interaction effect, $p = .199$, $\eta^2_p < .01$.

**Sexually Aggressive Intentions**

There were no main or interaction effects for the agency and sexual openness manipulations on sexually aggressive behavioral intentions, $ps \geq .252$, $\eta^2_ps \leq .01$. 
Mediation Analysis

We conducted bootstrapped mediation models to determine whether agency or experience mediated the effect of sexual openness on sexually aggressive intentions, including the agency manipulation as a predictor of the outcome variable.

**Agency mediation model.** Consistent with Experiments 1 and 2, the sexually open woman was perceived to lack agency. The regression of sexual openness, the agency manipulation, and perceived agency on sexually aggressive intentions indicated that only perceived agency contributed to the model, \( R^2 = .03, F(3,193) = 2.13, p = .098 \). The indirect effect of sexual openness on behavioral intentions mediated by perceived agency was significant, Estimate = 0.02, \( SE = 0.01 \), CI [0.01, 0.05] (Figure 5). Participants had more sexually aggressive intentions towards the sexually open woman only because they perceived she lacked agency.

We ran an additional mediation analysis to explore individual difference effects on sexually aggressive intentions. Hostility towards women, mate value, rejection sensitivity, sociosexual orientation, college fraternity membership, and past history of sexual offending were entered as covariates of sexually aggressive intentions. Including these six variables produced a relatively large \( R^2 \) change, \( \Delta R^2 = .07, R^2 = .10, F(9,172) = 2.10, p = .032 \). The direct effect of perceived agency remained significant (\( p = .027 \)), as did the mediation effect, Estimate = 0.03, \( SE = 0.01 \), CI [0.005, 0.06].

**Experience mediation model.** Sexual openness decreased perceptions of the woman’s capacity for experience. The regression of sexual openness, the agency manipulation, and perceived experience on sexually aggressive intentions indicated that only perceived experience contributed to the model, \( R^2 = .05, F(3,193) = 3.01, p = .029 \). The indirect effect of sexual
openness on behavioral intentions mediated by perceived experience was significant, estimate = 0.02, SE = 0.01, CI [0.005, 0.04].

**Discussion**

Relative to a woman displaying no sexual openness cues, men were more likely to target a sexually open woman for sexually aggressive acts only when they perceived that woman lacked agency (and to some extent, lacked the capacity for experience). These effects remained significant despite the woman explicitly stating she responded to hypothetical transgressions in a highly agentic manner, and when controlling for individual differences related to sexual aggression perpetration.

**GENERAL DISCUSSION**

This research investigated the relationship between self-sexualizing behavior and sexual aggression. Specifically, we found that self-sexualized women were seen as more vulnerable to sexual aggression and more likely to be sexually aggressed against if two qualifying conditions were met. The first condition is that self-sexualized women must be perceived as highly sexually open. The second condition is that sexually open women must be perceived as lacking agency. These findings support the notion that sexualization can be associated with sexual aggression. Sexualization can also reduce perceptions of a woman’s capacity for experiences and sensations, although capacity for experience did not reliably predict increased sexual aggression.

Experiment 1 focused on self-sexualized appearances, operationalized via revealing clothing. This experiment demonstrated that women who self-sexualize are sometimes seen as highly sexually open, lacking in agency, and more vulnerable to sexual aggression. Experiment 2 manipulated sexual openness in lieu of self-sexualization and showed that even women perceive sexually open women as more vulnerable to sexual aggression. Experiment 3 demonstrated that
men have more sexually aggressive intentions towards sexually open women, but only to the extent that they think those women lack agency (and to a lesser extent, experience). All experiments manipulated agency directly and failed to establish boundary effects of sexual openness on sexual aggression. The core findings were observed while holding constant individual differences related to sexual offending.

The findings of the present research support previous work implicating misperceived sexual intent and women’s low agency in sexual offending (Abbey et al., 2011; MacGreene & Navarro, 1998; Malamuth & Check, 1980). The findings also add to a growing body of research on Western cultural hypersexualization and women’s potential marginalization (Aubrey & Frisby, 2011; Halliwell, Malson, & Tischner, 2011). We extend this work by investigating whether women’s personal expressions of cultural hypersexualization may increase the likelihood of sexual harm. Our work suggests a strong psychological relationship between perceptions of women’s sexual openness and low agency, and between perceptions of low agency and sexual harm. The consistency of these effects across male and female perceivers and despite controlling for individual differences implicates a problematic cultural backlash against self-sexualized women. The Western cultural trend of hypersexualization encourages and pressures women to express sexual openness, but women appear somewhat more vulnerable to sexual aggression when they do.

**Implications**

Findings in the current study point to the differential importance of perceived agency and experience for victimizing others. Previous work has demonstrated that people denied mental experience are thought to lack characteristics essential to human nature (e.g., interpersonal warmth), whereas those denied agency are stripped of their uniquely human aspects (e.g.,
These denials involve different forms of mistreatment. Those denied experience are seen as incapable of suffering and undeserving of protection (Bastian et al. 2011); those denied agency are seen as subservient and undeserving of blame or praise (Haslam, 2006). The current findings add to this literature by demonstrating that perceptions of low agency reliably facilitate harmful perceptions and intentions. Our experiments thus implicate objectification as a motivated process that facilitates the pursuit of sexually aggressive goals.

Future research investigating the role of experience and agency perceptions in perpetrator decision-making represents an important extension to our work. Given that denying experience is positively related to perceptions of reduced suffering (Loughnan et al., 2013), we expect that denying others the capacity for experiences and sensations facilitates immoral treatment when a transgression is clearly harmful (as in Experiment 3). Such denials may be implicated in offences characterized by an ongoing disregard for another’s welfare, such as repeated or systematic sexual abuse. We expect that agency denials contribute to perpetrator decision-making by encouraging thoughts that a target will respond non-assertively to transgressions. To the extent that sexualized women are seen to lack the capacity to assert themselves in specific situations, they may thus be more likely to be actively targeted for immoral acts.

Limitations

One notable finding is that individual differences associated with sexual offending did not change the pattern of data. Our effects are not due to the responses of a subset of sexually aggressive men and appear to be universal (at least in American men and women). However, we acknowledge that there are numerous predictors of sexual offending. The current experiments only included a proportion of these. Future research is necessary to examine how other offender characteristics influence perceptions of sexual openness, agency, and sexual aggression.
vulnerability. Determining whether sexual offenders target women whom they perceive lack agency for aggressive sexual acts would be particularly valuable.

Another limitation to the current work is that for ethical reasons we did not measure sexually aggressive behavior. Such research is challenging because it can be ethically problematic, though we note that behavioral paradigms for sexual aggression are being developed (Davis et al., 2014). We acknowledge that our findings would be strengthened by replication in a laboratory context where sexual aggression was more directly assessed.

Conclusions

The current work suggests that men may target self-sexualized women for sexually aggressive acts if two conditions are met. If people assume that a self-sexualized woman is highly sexually open and that high sexual openness leads to perceptions of low agency, self-sexualized women may be more likely to be targeted for sexual aggression.
Endnotes

1, 4, 7, 10 Other variables were measured but not analyzed and are listed in the OSF at https://osf.io/28ak6/. These variables were not central to our hypotheses.

2 Agency reliability increased with the removal of one item (the moral agency item measuring blame) in all experiments except Experiment 3; as such all other items were averaged to form a subscale with high reliability. In Experiment 3 the agency scale showed higher reliability with the inclusion of the moral agency item measuring blame and this item was retained. We note that the mediation effect was identical when the moral blame item in Experiment 3 was removed (estimate = .02, SE = .01, CI [.01, .05]).

3, 5, 8 In the Pilot Study and Experiments 1 and 2 we ran mediation models to determine if these variables predicted how vulnerable the target was to mistreatment generally. In all experiments, self-sexualization and sexual openness did not directly predict vulnerability to mistreatment generally (ps ≥ .09). The indirect effect of sexual openness on mistreatment vulnerability (via agency) was not reliably significant, but the agentic personality manipulation and perceived agency did result in perceptions she was more vulnerable to mistreatment generally, ps ≤ .001; see the OSF.

6 We also examined whether the individual difference variables interacted with the independent variables to predict sexual openness or agency. No significant pattern of two- or three-way interactions was retained across experiments (see the OSF).

9 A moderated mediation analysis indicated that gender did not moderate the effect of sexual openness on perceived agency, B = .21, SE = 0.15, CI [.02, .54].
References


http://dx.doi.org/10.1177/0361684311414818
### Table 1. Pilot Study Descriptives and T-Test Results.

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<th>Self-sexualized clothes</th>
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<td>4.10 1.26</td>
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Note. ***p < .001.
Figures

Figure 1. Model depicting relationship between self-sexualization, sexual openness, agency, and sexual aggression.
Figure 2. Mediation model for the pilot study.

Note. *p < .05, **p < .01, ***p < .001. All paths are significant. Parameter estimates are standardized.
Figure 3. Mediation model for Experiment 1.

Note. *p < .05, **p < .01, ***p < .001. Dashed lines indicate non-significant paths. Parameter estimates are standardized.
Figure 4. Mediation model for Experiment 2.

Note. All paths are significant. Parameter estimates are standardized.
Figure 5. Agency mediation model for Experiment 3.

Note. Parameter estimates are standardized.