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Feminist Women's Health Movement Practices, Mindfulness, Sexual Body Esteem, and Genital Satisfaction

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FEMINIST WOMEN'S HEALTH MOVEMENT PRACTICES, MINDFULNESS, SEXUAL BODY ESTEEM, AND GENITAL SATISFACTION

by

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Abstract

There is a significant issue in society today regarding the lack of knowledge about and positive regard attributed to women's bodies, but more specifically female genitalia. This is detrimental to women in that it causes us to see ourselves in a negative light, or to overly sexualize certain aspects of ourselves, which may lead to severe psychological damage (American Psychological Association Task Force on the Sexualization of Girls, 2010). The 1970's Women's Health Movement presented a way for women to get to know their own bodies in a way that was private from society in order to make their own judgments free from the pressures and input of the larger public: vaginal self-examinations. This study proposed a modified exam, a genital self-exam, as a way to counteract the negative attitudes projected on women's genitals by giving women a chance to examine and decide for themselves. Participants were encouraged to practice mindfulness, a mental state achieved through focusing one's awareness on the present moment while calmly accepting one's feelings, during the exam as accounts of the 1970's vaginal exams suggest a mindfulness-like attitude was also adopted during exams. This was done by randomly assigning participants to either complete a self-exam or to not and then measuring genital self-image and satisfaction, sexual body esteem, and mindfulness. The results were largely non-significant, save a few interesting minor findings. However, there is evidence to suggest a biased sample; recommendations for further research in this area are suggested.

For centuries, society's fear of female sexuality has robbed women of their sexual autonomy, which has been incredibly psychologically, and in some cases physically, damaging. Today, women in the media are needlessly sexualized, demoting them to a status of objects intended only for male pleasure. This phenomenon has been implicated in many psychological detriments such as body dissatisfaction, depression, and low self-esteem (American Psychological Association Task Force on the Sexualization of Girls, 2010), as well as self-objectification (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). There have been efforts, such as genital exams popular during the United States Women's Health Movement (Murphy, 2004), to counteract the negative effects of society's condemnation of female sexuality, however, that particular attempt did not gain enough publicity and support to demonstrate its effectiveness. Therefore, there is still a pressing existent issue, as witnessed by the disproportionate number of women who suffer from serious psychological problems related to this rampant sexualization.

Women's Health Movement

The 1970's United States feminist self-help movement (also called the women's health movement) served as a way to both fill the gaps of knowledge surrounding women's bodies and also to create a more positive attitude towards them. According to Nancy Tuana (2006), the women's health movement was a kind of resistance movement aimed at eliminating the production of ignorance regarding women's health and bodies. The women's health movement took place during a time when feminists felt that women's bodies were being controlled by society, as seen in the case of the abortion laws at the time (*Roe v. Wade* did not occur until 1973; Boston Women's Health Collective,

2013). However, due to the fact that the medical profession was almost exclusively dominated by men, feminists wanted to create a knowledge of the female anatomy that did not exist through the male lens dominating gynecology at the time (Tuana, 2006). It was, in the eyes of many feminists, this male lens that had cast such a negative picture of female genitalia historically, and it was time to create a new understanding; one that celebrated the female genitalia rather than condemned it.

One method of celebrating and learning about the female body that emerged during the movement was the vaginal self-examination. Introduced by abortion activist Carol Downer, vaginal self-exams originally were meant as a way to educate women about the method for completing an at-home abortion, but they quickly became a popular way for women to feel more engaged with their bodies (Murphy, 2004). The vaginal self-exam was performed with a speculum and a mirror, and allowed women to see their cervix as well as the inside of their vaginal canals. Fellow feminist Lorraine Rothman in 1971 (as cited in Murphy, 2004) described her first experience with a self-exam, of being able to look at her vagina in the same matter of fact way that you look at your face every morning, as "revolutionary" (p. 116). The vaginal self-exam thus evolved from being only a means for an abortion to a way for women to feel more connected to their bodies and to take control of them. Some women would perform frequent self-exams and track the changes in their bodies throughout their menstrual cycles.

The women's health movement was essentially a way, in addition to educating women and eradicating the ignorance surrounding the female body, to take back women's bodies for women in a way that was empowering. This would involve a new way of thinking about women's genitalia: to observe without judgment and to get to

know the female genitalia from a purely female perspective, irrespective of society's opinions. Unfortunately, it seems that this knowledge base created by women for women was short-lived in the popular discourse. Nowhere in the mainstream culture today are women encouraged to examine their own genitals, be it in a sexual or non-sexual way. The message conveyed is that women's bodies are not theirs; that they are the property of the male gaze and exist for other's pleasure (Braun & Wilkinson, 2001).

Mindfulness

The act of observing without judgment and being intentionally more aware of one's surroundings and body is currently termed in positive psychology as mindfulness (Fink, Foran, Sweeney, & O'Hea, 2009). A relatively new emerging focus in psychology, mindfulness has been implicated in such positive benefits as higher levels of general body-esteem (Stewart, 2004) and also more specifically with sexual body esteem (Fink et al., 2009). Having its roots in Buddhist tradition, the technique has been developed over thousands of years as a tool for self-development (Bryant & Wildi, 2008). Mindfulness allows one to experience negative emotions and evaluations without fixating on them. This represents a kind of cognitive flexibility, as opposed to the cognitive rigidity of so called "mindlessness" (Carson & Langer, 2006).

It could be said that in their epistemological movement, feminists began by taking a mindful approach to experiencing their genitalia as their own, or as they put it, learning in a new way (Murphy, 2004). It is discussed in an article by Carson and Langer (2004) that the antithesis to mindfulness, what they call mindlessness, is characterized by a "rigid mindset," in which thought-processing is governed by "rules, routines, and

previously constructed categories" (30). Carson and Langer also claimed that these previously constructed categories and rules are often created by an authority figure, or as argued by the feminists in the women's self-help movement, the men who for centuries had written of the evils of female genitalia, sometimes going so far as to say that the clitoris was the root of feminine moral decline (Studd & Schwenkhagen, 2009). Their practice of creating new knowledge for themselves using their own subjective experiences rather than the popular thought at the time, of being cognitively flexible and mindful, could have contributed to their feelings of empowerment at performing vaginal self-exams.

Although mindfulness does encourage a kind of self-consciousness, it also by definition requires that the individual not fixate on the negative self-evaluations generally associated with self-consciousness. This kind of negative self-evaluation, perhaps due to the perception of what is normal as defined by the media, has huge consequences in terms of sexual functioning. Becoming fixated on one's conscious experiences of their body, especially in sexual situations, has been called genital image self-consciousness, or a preoccupation with the appearance and function of their external genitalia (Schick, Calabrese, Rima & Zucker, 2010). This genital image-self-consciousness leads to what has been termed "spectatoring." This is considered a form of mindlessness, because it entails rigid thinking and automatic emotional experiences, regardless of the present circumstances (Fink et al., 2009). Specifically, if person is overly conscious of, and focused on, any aspect of their body, that anxiety and consciousness takes a certain amount of attention away from any activity that in which they are currently participating. There is no small number of women experiencing self-consciousness during sexual

encounters. In fact, it has been reported that 35% of college women feel self-conscious about their bodies while participating in sexual activity (Weiderman, 2000). This lack of attention and mindfulness can lead to lower sexual arousal in women, which often contributes to dyspareunia and anorgasmia (Phillips, 2000).

This genital self-consciousness has also been viewed as having roots in body shame, and perhaps more specifically for women, menstrual shame. Menstrual shame often generalizes to a shame about the vagina and surrounding external structures (Rempel & Baumgartner, 2003; Schooler, Ward, Merriwether, & Caruthers, 2005), so much so that many women regard their genitals to be "dirty, smelly, [and] shameful" (Braun & Wilkinson, 2001, p. 25). Braun and Wilkinson (2001) say that these views stem from women's internalizations of societal representation of women's genitals, and that negative representations of female genitalia predominate the discourse. For instance, the vulva has been said to resemble a wound or gash, more specifically, the wound of castration (Jayne, 1984).

Negative Attitudes Perpetuated by Society

One major consequence of media influence on women is self-objectification, outlined by Barbara Fredrickson and Tomi-Ann Roberts' (1997) objectification theory. This theory posits that self-objectification occurs when this objectifying attitude is internalized by the woman, who learns to treat herself as an object. Self-objectification has been implicated in heightened body consciousness and body shame, which in turn are correlated with higher levels of sexual dysfunction (Calogero, Pina, Park & Rahemtulla, 2010; Calogero & Thompson, 2009). When women take an observer's perspective of

themselves, they come to regard themselves as a collection of parts, rather than as a full individual. This fragmented view leads women to overemphasize the importance of certain specific features of their bodies, usually tending to focus on the negative features (Fink, Foran, Sweeney, & O'Hea, 2009). Areas are evaluated separately, as removed and disparate parts, rather than being thought of as aspects of an entire form or self. For instance, women tend to express more discontent with their torso areas than with their faces. This could potentially lead to disproportionate anxiety concerning only one small area of the body, also a symptom of body dysmorphic disorder (Phillips et al., 2010).

This fragmented view of the self can also be understood in terms of local processing, which, according to Gervais, Vescio, Förster, Maass, and Suitner (2012) in their study of sexual body part recognition bias, is the underlying cognitive process in object recognition. This is opposed to global processing, which is utilized for the purpose of person recognition. The breaking up of body parts as opposed to the portrayal of a woman as a whole human being aids in treating her as an object, as the focus is more localized on a single part, which can be sexualized without ever making the connection that it belongs to a whole person.

If it is true that women often perceive their bodies as a collection of parts, it might be useful to address the object of their anxiety directly. A woman might have positive feelings about the majority of her body, but if she is self-conscious about her genitals she will experience a certain amount of anxiety during a sexual encounter that may lead to sexual dysfunction. Therefore, this study proposes a method of focusing exclusively on the female external genitalia in order to ease negative genital self-image.

Recently, it has become more apparent that one specific area many women are concerned about the appearance of is their genitalia. In addition to the pressures women feel from the media to be thin and to adhere to society's idea of beauty, it seems that some women also feel pressure to have their genitals look a certain way, which could lead to genital self-consciousness. The media perpetuates misinformation regarding female external genitalia. For instance, the depiction of female genitalia as a smooth curve in women's magazines coupled with the skewed portrayals of what "normal" genitals look like in pornography and the fact that women have little, if any, exposure to the appearance of other women's genitals adds to the confusion of what constitutes "normal" (Bramwell, 2002; Bramwell & Morland, 2009). Many women have no idea of what normal or average genitals look like, and representations of what is in fact normal have been censored in the media (Dicker, 2013).

In order to raise awareness of and protest the censorship and over-sexualization of female body parts, an Australian college newspaper, *Honi Soit*, attempted to publish on their cover 18 pictures of vulvae. Students in charge of the paper were told to censor the images more, and so they added black bars to the images in order to partially obscure the vulvae. However, this was deemed not enough and all copies of the newspaper were taken off the shelves and discarded. It is events like this that make it next to impossible to be aware of what is actually "normal" also for female genitalia. The censorship of actual vulvae coupled with the very narrow standard for what is shown in pornography gives women a very skewed view of what is normal, although it has been shown that there is quite a wide variety of labia lengths and shapes that women may be unaware of (Blank, 1993). Only seeing part of the picture of what is "normal" may be a reason why

so many more women are resorting to extreme measures such as female genital cosmetic surgery, or more specifically labiaplasty – the reduction of the labia minora, which like any surgery can yield very serious consequences (Tiefer, 2008).

In addition to the widespread ignorance of what is normal in terms of genital appearance, there also seems to be a distinct void in knowledge concerning women's genitals more generally. In fact, it has been shown that women are more accurate at labeling diagrams of internal female genitalia than external genitalia (Kirby, 1998). How is it that women are better at recognizing internal structures than external ones? Would it not make more sense that it would be the other way around, as the external structures are just that, external? This would make sense except that the clitoris and many other external structures are not directly involved in the process of reproduction. Women tend to have a better knowledge of the internal structures that are directly involved in reproduction, and also tend to learn about them at an earlier age (Kirby, 1998). This is reminiscent of the puritanical view that sex is only for procreation, and therefore the only female genital structures that are important are the ones that are directly related to the act of procreation.

Even more disconcerting is the lack of knowledge on the part of adolescents concerning correct medical terminology, as weighted and offensive slang terms generally replace the neutral, and in this case unfamiliar, medical ones. In a study conducted in an adolescent clinic, there was a distinct lack of recognition of basic terminology for the female genital structures (Ammerman, Perelli, Adler, & Irwin, 1992). But there was knowledge of common slang terms for those same structures. This deficit in knowledge of the correct clinical names was demonstrated regardless of prior sexual education

background (Ammerman et al, 1992). This suggests that adolescents are getting much of their information about their sexual bodies from places outside of any formal sex education offered in schools, and therefore their knowledge more accurately represents the popular discourse surrounding sex. Because it is often difficult or uncomfortable for parents to discuss sexual topics with their children (Martin, Verduzco Baker, Torres, & Luke, 2010), it is likely that these same children turn to their peers for information. However, how much more informed are their peers? Considering that they are likely to have the same formal sex education background (or lack thereof), it is likely that they simply circulate misinformation that they heard from another peer, until this misinformation becomes the general knowledge. The perpetuation of offensive slang terminology in the popular vernacular also reinforces negative views of women and their place in sexual situations. This could not only lead to potential dangers for women, but it also leads to a negative self-image on their parts.

It was also shown in a study conducted by Braun and Kitzinger (2001) that it is not only adolescents who are spreading the ambiguity surrounding female genital structures. Both adult men and women frequently use slang terms and euphemisms to describe women's genitals. According to Braun and Kitzinger, the euphemisms used to describe female genitalia in particular were extremely vague and nonspecific. It was unclear from the slang terms what structure was actually being referenced: the terms for the labia could also be used for the clitoris and the terms for vagina doubled as terms for the anus, etc. This nonspecificity could be a contributing factor to women's confusion about the structures of their external genitalia. If women's understanding of their bodies comes from the general cultural understanding of them, then these cultural

representations are the only way that they have of making sense of their genitalia and their experiences with them (Braun & Wilkinson, 2001; Friedman, 2012).

It was also mentioned in the Braun and Kitzinger study that the euphemisms used to describe female genitalia connoted "space, receptacle, abjection, hair, animals, and money" (p. 156). None of these are particularly positive or flattering to say the least. The fact that popular slang terms are associated with things that are wretched and servile is clearly indicative of society's extremely negative views toward female genitalia.

The conception that women's genitals are dirty and smelly is also perpetuated by the media, which frequently display advertisements for feminine "hygiene" products that eliminate feminine odor, such as scented douches. However, douches can be very harmful to a woman's vagina because they alter the natural pH, which can easily lead to infection. In fact, normal, healthy vaginas should not smell; it is usually infections that cause the much discussed odor (Joannides, 2013). Even if women do not succumb to the pressures to rid themselves of their natural odor, these advertisements perpetuate the idea that women *do* smell and that their genitals are dirty things in need of cleaning. This message is received by both men and women, often resulting in unfounded anxieties regarding cunnilingus. These negative attitudes that women hold towards their genitalia can be very harmful in terms of their willingness or ability to discuss symptoms with, or seek help from, their healthcare providers if needed. Women are often ashamed and unwilling to examine their own genitals, and therefore are often unaware if there is a problem (Braun & Wilkinson, 2001). It has also been suggested that many women avoid the use of intervaginal products such as tampons and the NuvaRing because they are uncomfortable touching their genitals (Joannides, 2013).

In response to the apparently widespread shame and self-consciousness women experience about their bodies, the current study proposed that, as inspired by the feminist women's health movement practice of vaginal self-examinations, these negative effects could be lessened if women were encouraged to explore and appreciate their own bodies. It was hypothesized that these positive changes might occur in women's attitudes towards their sexual bodies because of an increased knowledge that they are normal or average, and that their bodies are not disgusting and dirty as they are often portrayed in the media and popular society. This increased knowledge hypothesis is suggested as opposed to a mere exposure effect (Petty, Wegener, & Fabrigar, 1997), in which women would start to develop a more positive attitude just through the process of being exposed to the appearance of their bodies multiple times. The reason for this is that it has been suggested that the mere exposure effect, which works below one's level of consciousness, although effective in the formation of attitudes is not as effective in the changing of previously determined attitudes (Crano & Prislin, 2006). Because this study rests on the assumption that women experience harmful psychological effects as a result of their internalization of society's negative attitudes, it is more useful to attempt to change an already formed opinion than to implant one where there exists another, contrary attitude. It has been shown that attitudes are more likely to change when the individual is presented with well-reasoned, logical (strong) arguments, and perhaps the personal perception of one's body as not being all that society has made it seem to be will constitute an argument concrete enough to convince some individuals to change their opinions of their own bodies.

Current Study

The aim of the current study was to demonstrate a connection between the feminist women's health movement practice of genital self-examination with the constructs of sexual self-esteem, and genital self-image and satisfaction, such that women who participate in the self-examination will exhibit a more positive attitude towards their bodies. It was hypothesized that this relationship would be mediated by a mindful mindset, which seems to have been used inadvertently during the original vaginal exams during the women's health movement and has already been established as relating to body esteem. In order to accomplish this, participants were recruited to take an anonymous internet survey that included a randomly assigned genital self-exam as a manipulation. It was hypothesized that participants who agreed to and were randomly assigned to complete a self-exam would exhibit higher levels of sexual self-esteem (SSE), and genital self-image (GSI) and appearance satisfaction (GAS) relative to other participants. In addition, it was hypothesized that mindfulness would be a significant mediator of the effect of self-exam on SSE, GSI, and GAS.

Method

Participants.

This study targeted women (those female-bodied individuals identifying as female) over the age of 18. The sample consisted of women over the age of 18 who responded to an ad for the survey on Mechanical Turk (MTurk), a resource through Amazon.com where individuals are paid small sums of money in order to complete tasks. MTurk was used as a recruitment tool as MTurk samples have been shown to be of more

diverse cultural and socioeconomic backgrounds, as well as age range, than generally found on a college campus (Casler, Bickel, & Hackett, 2013). The final sample included 259 participants, all identifying as female. All participants were treated within the APA Ethical Principals of Psychologists.

Materials.

Female Genital Self-Image. The Female Genital Self-Image Scale (FGSIS), developed by Herbenick and Reece (2010) was used to measure women's feelings and beliefs about their genitals. This scale was originally a 7 item scale, but as Herbenick et al. (2011) showed that a four-item version of the scale had better validity, the shorter version was used in this study. Participants rate their agreement with the statements given using 4 point Likert scales (higher numbers signifying more positive self-image).

Female Genital Appearance Satisfaction. The second construct investigated in this study, female genital appearance satisfaction, was measured using the Genital Appearance Satisfaction scale (GAS). This 11 item scale was developed by Bramwell and Morland (2009), where participants rate their agreement with statements about their genitalia on a 4 point Likert scale (higher numbers signifying higher satisfaction).

Sexual Body Esteem. Sexual body-esteem was measured using the 35 item Body Esteem Scale (BES, Franzoi & Shields, 1984), originally developed to measure men and women's level of body esteem. This scale has three subscales: Sexual Attractiveness, Weight Concern, and Physical Condition, all of which were used as in Fink et al.'s (2009) study of sexual body-esteem and mindfulness. As per their example, this study will also utilize the entire scale. For this scale, participants were asked to rank their feelings about

individual body parts on a 5 point Likert scale (from very negative to very positive feelings).

Mindfulness. The 20 item Philadelphia Mindfulness Scale (PMS, Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008) was used to assess a person's level of mindfulness. Participants rated how often each statement accurately described their feelings on a 5 point Likert scale ranging from *never* to *very often*. This scale also included two subscales, Acceptance and Awareness. The questions belonging to each subscale were alternated.

Liberal Sex Attitudes. The Liberal Sex Attitudes Scale developed by Snyder, Simpson, and Gangestand (1986) was used to measure and to control for participant's attitudes about sex. This scale consists of 6 items for which participants rate their level of agreement with the given statements on a 5 point Likert scale (higher number signifying a more liberal attitude towards sex).

Sexual Experience and Hygiene. This measure included a series of questions asking participants if they have engaged in certain behaviors, and if they had, they then rated their comfort level while engaging in those behaviors. One example of a question is:

> Do you use tampons? (*Yes, no*)
> If so, please rate your comfort level with using tampons (very comfortable, somewhat comfortable, somewhat uncomfortable, very uncomfortable).

These questions were aimed at assessing a woman's experience and comfort level with her genitals through her use of intervaginal products and participation in oral sex (for all questions used for this measure, see Appendix D).

Instructions for Self-Exam. A brief set of instructions (See Appendix B) was given to participants who indicated that they were willing to perform a self-exam and then were subsequently randomly assigned to one of two conditions (self-exam vs. no self-exam). In addition to giving basic instructions for a self-exam, the instructions also encouraged participants to maintain a mindful mindset (although the term "mindfulness" was not used, the construct was described).

Procedure.

Participants who responded to an ad on MTurk clicked on a link to the survey (which was on SurveyMonkey, a website used for creating and disseminating surveys). Upon providing informed consent, participants were asked their gender (*female, male, decline to state*). Any response other than female directed the participant to the end of the survey where they were thanked for their time. This question was aimed at weeding out people who agreed to participate even though the survey was for female participants only. If the participant clicked the "female" option, they were directed to a page that included a brief description of what a genital self-exam would entail. Then participants were asked whether or not they would be willing to perform a genital self-exam. If they indicated that they were not willing to do the exam, but were willing to answer questions related to genital self-image, appearance satisfaction, and sexual body esteem, they were directed to the rest of the survey questions. If they did provide consent, they were randomly assigned to either complete the self-exam following the provided instructions, or to continue straight to the other questions.

The first scale that all participants encountered was the Female Genital Self-Image Scale (FGSIS), then the Genital Appearance Scale (GAS), the Body Esteem Scale (BES), the mindfulness scale, the control measure of liberal sex attitudes, and finally, the sexual experience and hygiene supplementary questions were completed in this order. When finished with the survey, participants were thanked for their participation in the survey, and compensated through MTurk.

Results

It was found that participants generally scored highly on measures of the dependent variables, with the exception of perceived knowledge of female genital anatomy, in which participants showed a very low mean knowledge relative to the scale range (See Appendix D, Table 1).

It was hypothesized that in general women would have negative attitudes towards their genitals. However, the data from this study do not support this. It was found using a one sample t-test that participant's mean scores on the Genital Appearance Satisfaction scale ($M = 2.07$, $SD = .59$) did not significantly differ from the neutral score of 2.5 (the score in between "disagree" and "agree"), $t[206] = 1.47$, $p = .143$. On the other hand, participant means for Female Genital Self-Image did significantly differ from the neutral score (also 2.5), $t[239] = 30.19$, $p < .001$. However, the means of this group ($M = 3.34$, $SD = .69$) indicate that participants had a significantly positive genital self-image, suggesting the opposite of the original prediction.

Secondly, it was hypothesized that there would be a difference between groups of self-exam conditions (assigned, not assigned, opted out) on the dependent variables. When given the option to opt-out of the self-exam, only 10.04% of participants opted out,

leaving 89.96% in the pool to be randomly assigned. It was found using an analysis of variance that there was no significant effect of self-exam condition on FGSI, $F(1, 142) = .09$, $p = .771$, GAS, $F(1, 142) = 1.16$, $p = .282$, Mindfulness, $F(1, 142) = .04$, $p = .849$, or SBE, $F(1, 142) = .19$, $p = .666$. However, there was a marginally significant relationship between self-exam condition and LSA, $F(1, 142) = 2.59$, $p = .109$, suggesting that there is a relationship between self-exam condition and how liberal a person's attitude about sex is. The effect of self-exam condition remained insignificant on FGSI, GAS, and SBE even after LAS was controlled in an analysis of covariance ($F(1, 142) = .20$, $p = .658$, $F(1, 142) = .000$, $p = .988$, $F(1, 142) = .350$, $p = .555$, respectively). However, there was found to be a marginal effect of self-exam condition on Mindfulness, $F(1, 142) = 3.160$, $p = .077$, when LSA was controlled.

In light of the previously stated non-significant results, the proposed mediational analysis would not be appropriate, as in order to suggest that one variable mediates the relationship between two others (in this case self-exam condition and FGSI, GAS, or SBE, mediated by Mindfulness), a relationship between the first two variables must be found (i.e. between self-exam condition and FGSI, SBE, or GAS). However, exploratory analyses revealed a significant positive relationship was found between Mindfulness and Body Esteem, $r(163) = .24$, $p = .002$, FGSI, $r(186) = .37$, $p < .001$, GAS, $r(174) = .39$, $p < .001$, and LSA, $r(185) = .17$, $p = .023$. Interestingly, Mindfulness was found to have a significant negative relationship with Perceived Knowledge of Female Genital Anatomy (PKFGA, found using the question about the participant's level of anatomy knowledge), $r(189) = -.16$, $p = -.031$, where higher levels of mindfulness predicted lower levels of perceived knowledge.

Also interestingly, the two separate subscales of Mindfulness, Awareness and Acceptance, were found to be significant predictors of different dependent variables. As stated above, while Mindfulness significantly predicted all of the dependent variables, Awareness was found to have a significant positive relationship only with FGSI, $r(199) = .26$, $p < .001$, and Body Esteem, $r(172) = .41$, $p < .001$, while Acceptance was found to have a positive relationship with GAS, $r(184) = .41$, $p < .001$, and LSA, $r(198) = .23$, $p = .001$.

There also were found to be significant relationships between several other of the dependent variables (See Table 2), the strongest being the relationship between FGSI and SBE. Secondly, there was a relationship found between GAS and FGSI, which is unsurprising given the similarities between the two scales. Lastly, and arguably most interestingly, there was found to be a significant negative relationship between PKFGA and LSA.

A chi square test of independence was also used to assess whether self-exam condition and whether or not a participant masturbated, used tampons, engaged in cunnilingus, or their perceived knowledge of female anatomy were related. This test was found to be non-significant for all variables, meaning that self-exam condition was not demonstrated to have a relationship with tampon usage, $X^2(2, N = 216) = 2.85$, $p = .241$, perceived knowledge of anatomy, $X^2(4, N = 217) = 5.43$, $p = .246$, masturbation, $X^2(2, N = 215) = 2.77$, $p = .251$, or previous cunnilingus engagement, $X^2(3, N = 259) = .92$, $p = .821$.

Reliability measures were performed for the LSA, FGSI, GAS and SBE scales (See Table 3), with all scales showing good reliability with the exception of LSA.

Discussion

This study's preliminary hypothesis that women generally have a negative attitude towards their genitalia was not supported by the sample. This could be due to the fact that women do not actually hold negative feelings. However, there is evidence to support the possibility that the sample was not representative of women in the United States as a group. First of all, in order to comply with Amazon's adult content restriction rules, a warning was placed in the title of the task on MTurk notifying the workers that the task contained adult content, as well as a restriction limiting participation only to those workers who had an adult qualification. The adult content restriction is required for tasks containing explicit sexual content such as nudity. Although this study did not contain graphic images or descriptions, the adult content restriction was used as a safeguard considering the sexual nature of many of the questions. In so doing, this limited the sample to those who may have been attracted to a task that may contain adult content, and presumably these individuals would be more comfortable with sex and perhaps their own sexuality. Given the framework that this study adopted, this could potentially mean that because this sample was more comfortable with sexual topics they would have a more positive attitude concerning their own sexual bodies than the general population.

One possible outcome of a more sexually-comfortable sample was the surprising number of participants who opted in to complete a genital self-exam. Unexpectedly, the vast majority agreed, with 89.96% opting-in. It is arguable also as to why participants opted out of the self-exam. It may not have been due to a lack of discomfort with the exam itself, but that the participant's circumstances at the time were not conducive to

completing one at that time (perhaps they were in a coffee shop working on their computer, or surrounded by others) and therefore they opted out when they may have in other circumstances completed one.

The second hypothesis for this study that self-exam condition (self-exam, no self-exam, and opt-out) would affect Genital Appearance Satisfaction (GAS), Female Genital Self-Image (FGSI), and Sexual Body Esteem (SBE) also was not supported by the sample. The basis of this study rested on the assumption that a majority of women would have negative feelings toward their genitalia, and therefore a solution was proposed. However, the first condition was not met.

Although the main hypotheses were non-significant, there was an unexpected finding regarding the variable of Mindfulness, which according to the existing scale was separated into two subcategories: Awareness and Acceptance. It was found that Acceptance was a significant predictor of GAS and Liberal Sex Attitudes (LSA), while Awareness was a significant predictor of FGSI and SBE. It does not make intuitive sense why this is so, as the GAS and FGSI scales are very similar in both their wording and questions. In fact, the GAS scale has more questions pertaining to actual awareness of the individual's genitals (such as during exercise) than the FGSI scale, yet it correlated with Acceptance and not Awareness. The developers of the Philadelphia Mindfulness Scale also found that the two subscales do not correlate with each other, and therefore suggested that they should be examined separately (Cardaciotto et al., 2008). The awareness subscale was intended to measure the attention aspect of mindfulness, which is the actual behavioral part, while the acceptance aspect tapped into the lack of negative

evaluation aspect. However, it is unclear as to why the certain dependent variable scales were correlated with the aspect of mindfulness that they were.

Regarding the results of Mindfulness as a whole, the data confirmed the findings of previous studies (Fink et al., 2009; Stewart, 2004) that there exists a relationship between mindfulness and sexual body esteem. However, this study adds to the literature a demonstrated relationship between mindfulness and genital satisfaction and self-image. This finding adds to the body of work surrounding mindfulness as a contributor to more positive feelings about the self and one's body. It makes sense considering the literature mentioning the generalization of attitudes (Schooler, et al. 2005) that a more positive general body esteem, perhaps enhanced by a mindfulness approach, would generalize to other areas of the body, therefore including more positive feelings about one's genitalia. This suggests that education about mindfulness could be a more effective intervention for genital self-consciousness and dissatisfaction than genital self-exams through the overall increase in positive body esteem and satisfaction.

There was also found to be no significant relationship between self-exam condition and perceived knowledge of female anatomy, which suggests that the hypothesis that more knowledge of female genitalia would make a female more comfortable with her own. However, it could also be that because the group of participants who opted out of the self-exam was so small, this effect was not seen. Also, the nature of the manipulation being a one-time event of a short duration could have also mitigated any effect in this area. Contrary to expectations, it was also found that a more liberal sexual attitude predicted less perceived knowledge of female genital anatomy. This finding may also support the idea that more knowledge does not necessarily

translate to more comfort, or in this case, liberal attitude. There was also no significant relationship between self-exam condition and use of tampons, masturbatory habits, or previous engagement in cunnilingus, which were all expected to be more common among the group of participants who opted-in to complete the self-exam.

As discussed above, one limitation of this study was the nature of the manipulation itself. It is likely that a routine of genital self-exams would be more effective in creating an effect on a woman's satisfaction with, as well as increasing knowledge of her genitalia. Secondly, it would have been useful to include a manipulation check into the survey materials, as there was no way to confirm that participants did indeed complete the self-exam. Lastly, it was found post-data collection that the scale measuring Liberal Sex Attitudes did not exhibit satisfactory internal reliability, which could have affected the data associated with it.

Further directions for this research should involve obtaining a more representative sample of women, perhaps through the use of a service other than MTurk. Also, the genital self-exam would presumably be much more effective if done as a routine than as a one-time occurrence, so a longitudinal design would be helpful in determining the actual efficacy of the self-exam. However, the issue of obtaining willing participants still stands, as the women who elect to perform regular vaginal exams for the purpose of a psychological study are presumably more comfortable with their genitals and sexuality, thus skewing the participant pool once again.

It should also be further examined as to whether mindfulness approaches prove to be an effective intervention tool for women experiencing negative feelings toward their genitalia, or bodies in general. It would be useful to establish a channel of causation in

this relationship, as education about mindfulness could be a helpful therapy tool if proven to be effective in the increasing of positive emotions and attitudes.

One-time genital self-exams are not necessarily an effective method of increasing genital satisfaction, self-image, or body esteem, but perhaps through the implementation of a routine, or experimentation with a more representative sample, these effects could change. However, the practice of mindfulness does seem to be an effective tool and should be explored further.

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Appendix A:

M Turk Research Advertisement

The initial task advertisement: "Survey about women's genital self-image, genital satisfaction, and sexual self-esteem."

Information about the link contained in the M Turk survey: "This task provides a link to a survey that asks a series of questions regarding sexual self-esteem and self-consciousness. This survey should only be taken by those who identify as female and who have female external genitalia. Please note that this survey should be taken in a private space, as it contains potentially sensitive and private questions about sexual and hygiene practices. Participants may also be asked to complete a genital self-exam. If you elect to complete the exam, it should be done in a private space, with enough time to complete the self-exam and the questionnaire in one sitting (about 15-20 min). Therefore, if you choose to elect to the self-exam the survey link should not be opened while in a public space as the survey will have a time limit. All responses are completely anonymous, and at no point will you be asked to give any identifying information."

Appendix B:

Instructions for Self-Exam

Find a private space in which you are comfortable and give yourself time to complete the exam before moving on to the questionnaire. Please complete the questionnaire directly after completing the self-exam. Use a mirror to examine your genitals for 2-3 minutes. During the exam, try to look without judging. Be aware of your thoughts and reactions (positive or negative), but let them pass through your mind rather than dwelling on them.

Appendix C:

Additional Survey Questions

1) Are you a woman? (i.e. do you identify as female and have female genitalia?)

2) Do you elect to complete a genital self-exam, as discussed in the informed consent? (yes, no)

3) (If they elected to an exam and then were assigned the exam condition) Did you complete a genital self-exam? (yes, no)

4) How familiar do you feel you are with female genital anatomy? (for example, do you feel that you would be able to identify the labia minora and the clitoris on a diagram of the vulva?) (1: very familiar, I could definitely locate them on a diagram, 2: somewhat familiar, I could probably locate them on a diagram, 3: somewhat unfamiliar, I have heard of these terms but could not necessarily identify them on a diagram, 4: very unfamiliar, I have never heard of these terms)

5) Do you use tampons? (yes, no)

6) If not, why? (write in section)

7) Do you use the NuvaRing? (The NuvaRing is an intervaginal form of birth control in which a silicon ring is placed inside the vaginal canal where it stays for three weeks at a time. At the end of three weeks, the used must remove the ring by hand, leave it out for a week, and replace it with a fresh ring at the end of the week). (yes, no)

8) If not, would you consider using it? (yes, no)

9) If not, why?

10) Do you masturbate? (yes, no)

11) If not, why?

12) If so, how often? (give options per week)

13) Have you ever engaged in cunninglingus?

14) If so, please rate your comfort level with it. (1: very comfortable, 2: somewhat comfortable, 3: somewhat uncomfortable, 4: very uncomfortable).

Table 1

Mean Scores on Dependent Variables

Variable	*M*	*SD*	Scale Range
FGSI	3.34	.69	1-4
GAS	2.06	.59	1-4
SBE	3.88	.71	1-5
Mindfulness	3.10	.38	1-5
LSA	2.43	.8	1-5
PKFGA	1.96	.9	1-4

Table 2

Correlation between Dependent Variables

	FGSI	GAS	SBE	LSA	PKFGA
FGSI					
Pearson		.27	.43	NS.	NS.
Sig.		<.001	<.001		
GAS					
Pearson	.27		NS.	NS.	NS.
Sig.	<.001				
SBE					
Pearson	.43	NS.		-.18	NS.
Sig.	<.001			.014	
LSA					
Pearson	NS.	NS.	-.18		-.18
Sig.			.014		.008
PKFGA					
Pearson	NS.	NS.	NS.	-.18	
Sig.				.008	

Table 3

Reliability Measures

	Cronbach's α	Number of items
LSA	0.56	6
FGSI	0.71	4
GAS	0.75	11
BES	0.96	35