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Female Athletes' Experiences of Body Surveillance, Body Shame, Depression Symptoms, and Self-Compassion

Jennifer Yeoward

FEMALE ATHLETES' EXPERIENCES OF BODY SURVEILLANCE, BODY SHAME, DEPRESSION SYMPTOMS, AND SELF-COMPASSION

by

Jennifer Yeoward-Dodson

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Abstract

Female athletes are often recipients of conflicting messages about their bodies and these messages impact their mental health. Utilizing the framework of objectification theory, this online cross-sectional study focused on the reported experiences of body surveillance, body shame, and depression symptoms of female athletes (M_{age} = 34.21, SD_{age} = 9.45). The study tested a moderated-mediation relationship among body surveillance, body shame, depression symptoms, and self-compassion to determine if body shame mediated the relationship between body surveillance and depression symptoms, and if self-compassion moderated the indirect relationship, by weakening the relationship between body surveillance and body shame. Two hundred and fifty-one self-identified female athletes were recruited via social media to complete an online survey. We found that body shame mediated the relationship between body surveillance and depressive symptoms. Additionally, the indirect relationship was present at all levels of self-compassion, but was weaker for participants experiencing higher levels of self-compassion. Overall, this study shows that female athletes also experience body surveillance, body shame, and depression symptoms, which coincides with similar findings related to non-athlete women. Additionally, this study suggests that practitioners who work with athletes may be able to use self-compassion as a point of intervention to help decrease body image concerns and improve overall mental health concerns for female athletes. Additional implications and future research directions are discussed.

Keywords: body surveillance, body shame, objectification theory, female athletes, self-compassion

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Introduction

Women continue to hear frequent and strong messages about what their bodies should look like (Steinfeldt et al., 2013). Often this preferred body type is referred to as the *thin ideal* body type (Bair et al., 2014; Forbes et al., 2004; Goodman, 2002), which is characterized by "a slender, feminine physique with a small waist and little body fat" (Robinson et al., 2017, p. 65) that signifies attractiveness (Grossbard et al., 2009). The thin ideal is communicated through media and is frequently reinforced by women's peers and family members. Messages based on the thin ideal indicate that women will only be accepted and seen as successful in their careers, relationships, and in general if they achieve this thin and slender body norm (Bair et al., 2014; Smith 2012). Objectification theory (Fredrickson & Roberts, 1997) provides the framework for understanding the effects of societal sexualization on girls and women who live in a culture that objectifies them based on their physical selves and how women often internalize the external observer's perspective of their bodies.

Women who are unable to attain these unrealistic body standards often hear negative messages that they are not putting forth enough time or energy towards exercising (Lee & Pausé, 2016), they don't have enough self-control when eating (Bombak, 2015), or they are not beautiful or thin enough (Liss & Erchull, 2015). As these messages become internalized, women increase their monitoring of their bodies (i.e., body surveillance) and continue to strive for a frequently unattainable and unhealthy body size, which ultimately leads to body dissatisfaction (Bair et al., 2014; Tiggemann & Zaccardo, 2015). Even when women had generally positive feelings about their bodies, Steinfeldt et al. (2013) reported women felt negative about their bodies when they were in their social environments, because they compared their bodies to other women. The discrepancies that result from women comparing their actual bodies to the desired

thin ideal can become a source of emotional and psychological distress (Bair et al., 2014), including increased symptoms of depression as well as decreased self-esteem (Guertin et al., 2017). Although there is a large body of research on objectification, body surveillance, body shame, and mental health for women in general, there has been relatively little focus on female athletes. However, female athletes might have a different relationship with their bodies – viewing them from the perspective of function in addition to appearance. Given the dual focus of body function and beauty for female athletes, this study focused on body surveillance, body shame, and depression symptoms in women who identify as athletes.

Women who participate in sports receive conflicting messages from society regarding their bodies. For example, they are told that in order to succeed within their sport, they must be strong, muscular, and powerful (Steinfeldt et al., 2013), but then they are told they cannot be "too muscular" in order to maintain what is considered to be the societally-based "ideal" feminine body type (Krane et al., 2004; Steinfeldt et al., 2011). Furthermore, female athletes experience pressures to express their gender in ways dictated by society's definition of feminine behavior, such as wearing bows or ribbons in their hair (Krane et al., 2004). Depending upon their sport and the required uniform (e.g., volleyball versus wrestling), some women may feel they are competing for the benefit of the men who come to watch the event primarily to sexualize the women (Steinfeldt et al., 2013). Comments female athletes receive from coaches and peers can also have a significant negative impact on how they feel about their bodies (Engel et al., 2003). Similar to women who are not athletes, the various messages received from society can result in negative effects [e.g., body dissatisfaction and dietary restraint (Cohen et al., 2017); depression and habitual body monitoring (Liss & Erchull, 2015); weight dissatisfaction and a drive for thinness (Slater et al., 2017); lower self-worth (Stapleton et al., 2017)].

Objectification Theory Specific to Female Athletes

In objectification theory, women are thought of as objects that are used and consumed by others (Fredrickson & Roberts, 1997). For many women, the societal objectification they experience becomes so overwhelming that they internalize the observer's perspective and begin to objectify themselves, focusing on their bodies in regard to how they appear to others (Hill & Fischer, 2008). In doing so, women end up seeing themselves as collections of body parts that are separate from their actual selves (Bair et al., 2014). Objectification in athletics is based on societal messages that female athletes have to present as feminine while also expected to be lean and toned in order to perform (Salvatore & Marecek, 2010), even if being lean and toned is not beneficial to their sport. In athletes, research has shown that the concerns women have about their body image are partially due to the objectification they experience from the spectators, their coaches, their families, and their teammates (Steinfeldt et al., 2013; Varnes et al., 2015). In particular, for female athletes that participate in sports that are considered more objectifying (e.g., swimming, tennis, gymnastics, and volleyball), those athletes experience higher thin-idealization, which results in greater body shame (Varnes et al., 2015).

Pressure from the thin ideal is rampant in sports that emphasize a small body size or particular weight performance that require athletes to wear revealing sports attire, or in which judges are an integral component to the sport (Smith & Petrie, 2008). However, the damage is not restricted to only those sports; societal messages perpetuate the idea that having a thin body improves performance across *all* sports (Anderson et al., 2012). Despite what people may believe, weight loss in athletes can negatively impact their strength, power, and anaerobic capacity, which means female athletes' ability to train and compete could be negatively impacted (Smith & Petrie, 2008) by their self-objectification.

The internalization and self-objectification that is experienced by women increases body surveillance (Fredrickson & Robertson, 1997). Body surveillance is the extent to which women monitor their bodies in terms of how they appear to others. When negative messages become internalized, female athletes may begin to feel they will only be accepted in society and be successful at their sport if they are able to achieve the societal imposed body norms (Bair et al., 2014). However, those imposed body norms might be contradictory to the physical requirements of their sport. When female athletes are worried about how their bodies will be perceived, especially if seen as "fat" by societal standards, they may be more likely to engage in unhealthy behaviors such as dieting, excessive exercising or conditioning, and disordered eating (Krane et al., 2004), or see their teammates modeling similar behaviors (Anderson et al., 2012).

In particular, athletes who participate in sports that focus on beauty, are weight-dependent, or are endurance related have been found to be more likely to use weight-control methods like laxatives or diuretics (Smith & Petrie, 2008). Female athletes experience higher rates of bulimic and anorexic symptoms because they compare their eating habits to women who are not working out or are not expending similar amounts of energy (Benbow, 2016; Engel et al., 2003; Muscat & Long, 2008), creating the perception that the female athletes are 'over-eating.' In other words, female athletes may receive messages that there is always something about their bodies that can be improved, both as an athlete and a woman, heightening their experiences of body surveillance and resultant body shame.

Body shame is the emotion that can occur as a result of measuring oneself against the internalized cultural standard and perceiving an inability to meet that standard (Moradi & Huang, 2008). Body shame is experienced as a personal character flaw (Fredrickson & Roberts, 1997), a failure to appear as one is 'supposed' to. Many female athletes carry a high amount of general

anxiety and distress regarding their bodies (Busanich & McGannon, 2010) and the anticipation of threats and fear about when and how their bodies will be evaluated (Moradi & Huang, 2008). For example, they may worry their training partners will compare their body size and performance to their own (Mosewich et al., 2009). While participating in their sport, female athletes may worry about whether people see them as too muscular and unfeminine (Mosewich et al., 2009; Steinfeldt et al., 2011). Female athletes may hear from their coaches or other participants that having a smaller body size would improve their athletic performance (Anderson et al., 2012). Female athletes of a larger size might hear less about athletic performance, but may receive messages that they are lazy, less adherent to training, lacking self-discipline, and unable to engage in the physical activity that is required of them (Chrisler, 2012; Fikkan & Rothblum, 2012; Smith, 2012).

The experience of body shame can be so intense for some women that they focus all of their attention on the appearance-based aspects of their body (Lamont, 2019) rather than attending to work or other life roles and tasks. Body shame and even the anticipation of feeling that shame encourages the ongoing conformity to societal body standards (Scheff, 1988), creating a vicious cycle. Research has shown that higher feelings of body shame can account for decreased psychological and physiological health and well-being (Webb et al., 2016). The combination of body shame along with continuous experiences of body surveillance has been linked to higher rates of depression (Grabe et al., 2007; Liss & Erchull, 2015; Moradi & Huang, 2008; Szymanski et al., 2011; Tiggemann & Williams, 2012).

Many female athletes experience a combination of pride for what they can achieve physically, while also desiring smaller bodies (Krane et al., 2004) and feeling shame that their bodies do not match the societal thin ideal for women's bodies. As noted previously, both body

surveillance and body shame have been associated with depression symptoms (e.g., reduced interest in previously enjoyed activities, weight loss or gain, sleeping too much or too little, decreased energy, inability to concentrate, feelings of worthlessness or guilt, and thoughts of death or suicide; American Psychological Association, 2020). Even though research supports the prescription of exercise to improve mood and reduce depression symptoms (Craft & Perna, 2004), Hammond and colleagues (2013) as well as Turner et al. (2019) found that female athletes reported 1.32 more instances of depression-related symptoms as well as higher levels of depression symptoms in comparison to their male counterparts. In general, other research has found that female athletes experience symptoms of depression at an equal rate to their non-athlete counterparts (Yang et al., 2007). Previous research has consistently shown that body shame mediates the relationship between reported levels body surveillance and depression symptoms (Liss & Erchull, 2015; Moradi & Huang, 2008), but no research has determined whether body shame mediates the relationship between body surveillance and depression symptoms in female athletes, whose participation in sport might result in bodies that don't meet the thin ideal and who experience more focus on their bodies as a function of their athletic participation.

Self-Compassion as a Protective Factor

Self-compassion refers to individuals having feelings of kindness and understanding towards themselves, especially in instances of pain or failure (Mosewich et al., 2011). The goal of self-compassion is to be open and nonjudgmental to one's own suffering and to heal any suffering with kindness (Stapleton et al., 2017). Studies have shown that self-compassion serves as a protective factor against individuals' negative self-thoughts and reduces the experience of negative emotions (Leary et al., 2007). Given the self-critical aspects of body surveillance and

shame, researchers (i.e., Ingstrup et al., 2017; Liss & Erchull, 2015; Mosewich et al., 2013; Slater et al., 2017; Stapleton et al., 2017; Webb et al., 2016) are beginning to focus on self-compassion as a means to buffer the negative mental health consequences related to messages about women's bodies.

Since self-compassion does not involve the potential of comparing oneself to another person in order to feel good about oneself (Liss & Erchull, 2015), it might be particularly useful in buffering the negative effects of body surveillance. For example, Slater and colleagues (2017) found that simply viewing self-compassion quotes was related to increased body satisfaction in their female participants. Ultimately, when women utilize self-compassion, they are encouraging their own self-acceptance (Kelly et al., 2014). Webb et al. (2016) found that when women's levels of self-compassion increased, they experienced a decrease in feelings of body shame after being subjected to fat talk [i.e., when women make negative and disapproving comments about the amount of food a person consumes, that person's weight, or the person's body shape (Guertin et al., 2017)]. Additionally, self-compassion has been shown to reduce the relationship between body image disturbance and eating pathology, self-criticism, the experience of depression symptoms (Liss & Erchull, 2015), and has been linked to lower levels of depression, stress, and anxiety (Ford et al., 2017; Krieger et al., 2016; Liss & Erchull, 2015).

Related to the current study, Liss and Erchull (2015) found that women who reported higher levels of self-compassion reported lower levels of body surveillance and body shame, suggesting that self-compassion may interfere with the self-objectification process. An intervention utilizing self-compassion was found to be effective in reducing self-criticism revolving around sport competition (Mosewich et al., 2013) in a sample of female athletes. In their study, Mosewich and colleagues (2013) utilized psychoeducation and at-home writing

exercises to help manage self-criticism, rumination, and concern over mistakes in varsity female athletes. The positive results from those interventions were evident at post-intervention and at the 4-week follow-up mark. Hence, since self-compassions has been effective in addressing self-criticism, it seems likely that self-compassion will weaken the relationship between body surveillance and body shame in female athletes.

The Present Study

The researchers examined the relationship between body surveillance and depression symptoms in female athletes, and whether body shame mediated this relationship. The proposed relationships have not been studied with a focus on female athletes who experience an additional layer of focus on their bodies due to their sport. The current study also addressed a gap in the literature regarding the buffering effect of self-compassion on the relationship between body surveillance and body shame.

It was hypothesized that (H1) body surveillance would have a positive relationship with depression symptoms and that (H2) body shame would mediate the relationship between body surveillance and depression symptoms such that higher levels of surveillance would be related to more body shame and subsequent depression symptoms. Finally (H3), the study hypothesized that self-compassion would moderate the indirect relationship between surveillance and depression symptoms by buffering the negative effect of surveillance on body shame such that the relationship between body surveillance and body shame would be weaker when self-compassion was higher. Figure 1 displays the proposed model.

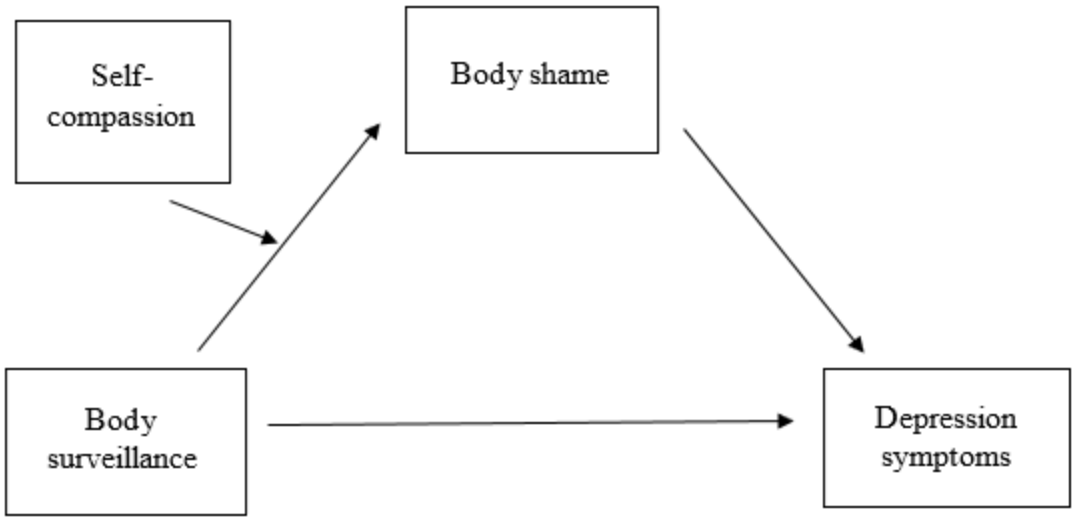

Figure 1

Model of the Moderated Mediation Analysis for Body Surveillance, Body Shame, Self-Compassion, and Depression Symptoms

Method

Participants

Participants consisted of 251 adult female self-identified athletes. Four hundred and eighty-three individuals accessed the online survey. After removing individuals who were under the age of 18, did not identify as athletes, were missing data on entire measures, or indicated their gender identity as male, the final sample comprised 245 cisgender women, 2 transgender women, 2 gender variant women, and 2 who selected the "prefer to identify" option and identified as gender fluid and transmasculine genderqueer. The participants were asked with which sex they identify, and all participants had selected "female." The range of participants' age was 19 – 72 with an average age of 34.21 years (*SD* = 9.45). The majority of the participants identified as White (*n* = 234, 93.2%). Participants were asked to report their height and weight in order to calculate Body Mass Index (BMI). The mean BMI of women who participated in the study was 24.10 (*SD* = 4.29) with a range from 17.2 – 42.6. The average number of years the participants

competed in their chosen sport was 10.48 (*SD* = 7.6) and ranged from 1 – 45. The average weekly hours the participants devoted to practicing their chosen sport was 8.75 (*SD* = 4.53) with a range of 1 – 30. Additional descriptive data regarding race, sexual orientation, grade classification, employment status, and identified involvement in sport are reported in Table 1. The type of sports represented in the sample include the following: volleyball, softball, soccer, cheerleading, cross country, basketball, mountain biking, martial arts, tennis, lacrosse, weightlifting/powerlifting, triathlons, track and field, ultra and trail running, gymnastics, swimming, golf, field hockey, rock climbing, obstacle course racing, competitive ballroom dancing, roller derby, water polo, ice hockey, and pole dancing. For many women, the number of competitions they participated in ranged from 3-4 times a week to once or twice a year. Participants were also asked an open-ended question about who provided the most influential or impactful messages about their bodies. This question was asked to guide future inquiry and was not formally analyzed in the current study. However, examples of responses included: self, family, friends, spouses/partners, teammates, peers, coaches, and media.

Table 1

Participant Descriptives

	N	Percent
Race		
White/Caucasian	234	93.2
Black/African-American	2	0.8
Asian/Pacific Islander	2	0.8
Latinx	7	2.8
Arab/Middle Eastern	1	0.4
Biracial	2	0.8
Multiracial	3	1.2
Sexual Orientation		
Heterosexual/Straight	210	83.7
Lesbian/Gay	10	4.0
Bisexual	24	9.6

Table 1 Continued

Participant Descriptives

	N	Percent
Other	4	1.6
Prefer Not to Disclose	3	1.2
Grade Classification		
First-year Student	2	0.8
Sophomore	5	2.0
Junior	7	2.8
Senior	11	4.4
Graduate Student	32	12.7
Not a Current Student	193	76.9
Employment Status		
Employed Full-Time	179	71.3
Employed Part-Time	47	18.7
Unemployed	24	9.6
Sport Involvement		
Professional Athlete	6	2.4
Amateur Athlete	187	74.5
University Athlete	20	8.0
Elite Athlete	9	3.6
Other	28	11.2
BMI		
Below 18.5	6	2.4
Between 18.5 and 24.9	164	65.3
Above 25	81	32.3

Measures

Body Surveillance

Body surveillance was measured utilizing the Body Surveillance subscale of the Objectified Body Consciousness scale (OBSC; McKinley & Hyde, 1996). There are 8 items on this subscale, which are measured on a 7-point Likert-type scale (1 = “strongly disagree” to 7 = “strongly agree”), and there is also a “not applicable” option. The item scores (not including the “not applicable” option) are averaged, and higher scores indicate higher levels of body surveillance. An example of an item from this scale is, “I often worry about whether clothes I am

wearing make me look good." McKinley and Hyde (1996) reported correlations between this scale and the Appearance Orientation Scale of the Multidimensional Body-Self Regulations Questionnaire (MBSRQ), $r(79) = .64$, $p < .001$, and the Body Consciousness Questionnaire (BCQ) Public Body Consciousness Scale, $r(79) = .46$, $p < .001$. The Cronbach's alpha in the current study was .86.

Body Shame

Body shame was measured utilizing the Body Shame subscale of the Objectified Body Consciousness scale (OBCS; McKinley & Hyde, 1996). This subscale consists of 8 items that are measured on a 7-point Likert-type scale (1 = "strongly disagree" to 7 = "strongly agree") with a "not applicable" option. The item scores are averaged, and higher scores indicate greater levels of body shame. An example of an item from this scale is "I feel ashamed when I haven't made the effort to look my best." The authors of the instrument demonstrated the validity of body shame by comparing it to a measure of internalized cultural body standards (McKinley & Hyde, 1996) and reported correlations between .51 and .55 in samples of college-aged and middle-aged women. The Cronbach's alpha in the current study was .88.

Depression Symptoms

Levels of depression symptoms were measured using the 7-item Depression subscale of the Depression Anxiety Stress Scales (DASS-21; Henry & Crawford, 2005). Items are answered on a 4-point Likert-type scale (0 = "Did not apply to me at all – NEVER" to 3 = "Applied to me very much, or most of the time – ALMOST ALWAYS"). The item scores are summed and multiplied by two in order to determine the level of severity of symptoms for a possible range of 0 - 42. An example item from this scale is "I couldn't seem to experience any positive feeling at all." This scale was validated on 1,794 individuals from the general adult population in the

United Kingdom (Henry & Crawford, 2005). Correlations between the DASS-21 Depression subscale and the Positive Affect Scale of The Positive and Negative Affect Schedule (PANAS; Crawford & Henry, 2004) were found to be significant with a negative relationship (r = -.48, z = 8.1, p < .001). The full-scale DASS was tested for convergent and discriminant validity against the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983), and there was a significant correlation between DASS Depression and HADS Depression scales, r = .66, t = 4.19, p < .001 (Henry & Crawford, 2005). The Cronbach's alpha for the depression subscale in the current study was .88.

Self-compassion

Self-compassion was measured using the Self-Compassion Scale (SCS; Neff, 2003b). This scale consists of 6 subscales (Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-identified), and on each subscale, the responses are coded on a 5-point Likert-type scale (1 = "almost never" to 5 = "almost always"). Items on the Self-Judgment, Isolation, and Over-identified subscales are reversed scored and the mean scores of the subscales are summed to produce an overall self-compassion score. Higher scores indicate higher levels of self-compassion. Some sample items include "I try to be loving towards myself when I'm feeling emotional pain," and "I try to see my failings as part of the human condition." This scale was validated on a sample of 391 undergraduate men and women, with 225 women being part of the sample. To test content validity, the SCS was correlated with the Social Connectedness scale, r = .41, p < .01 (Neff, 2003). The Cronbach's alpha in the current study was .92.

Procedure

The study was reviewed and approved by the university's Institutional Review Board (IRB) prior to data collection. The first author posted information and a link to the online

(Qualtrics) study on social media (e.g., Facebook and Instagram). Participants were asked to share the study information with peers who met the study characteristics (i.e., snowball sampling). Snowball sampling has been shown to be effective in reaching participants from diverse communities by asking individuals with desired characteristics to share the information with individuals from their social networks (Sadler et al., 2010). Potential participants clicked on the link that directed them to the survey. Once participants agreed to the informed consent, they completed the study measures. At the end of the survey, participants were directed to a separate survey where they had the option to input their email addresses to be eligible to receive one of ten $10 Amazon gift cards via a raffle.

Results

Preliminary Analyses

Assumptions of multiple regression (i.e., linearity of regression, multivariate normality, univariate and multivariate outliers, homoscedasticity, and lack of multicollinearity) were evaluated prior to completing the main analysis. Visual examination of scatterplots and histograms determined the linearity of regression relationships and normality of residuals. Skewness and kurtosis were within the acceptable range (+/-1.96; Tabachnick & Fidell, 2012). Univariate outliers were examined using *z* scores at +/- 3 and six outliers were removed from the data set (Tabachnick & Fidell, 2012). Multiple regression analyses of the total scores of body surveillance, body shame, depression symptoms, and self-compassion were conducted to obtain Cook's distances. No participant had a score greater than one, so there was no indication of multivariate outliers (Tabachnick & Fidell, 2012). Regression analyses were also conducted and scatterplots graphed to examine the assumption of homoscedasticity, and no variables were in violation of the assumption (Tabachnick & Fidell, 2012). Finally, variance inflation factors

(VIF), tolerance, and condition index values were assessed for the assumption of multicollinearity, and the assumptions were met (Belsley, Kuh, & Welsch, 1980; Tabachnick & Fidell, 2012).

Exploratory Analyses

As there has been minimal research with female athletes who are considered overweight (over a body mass index of 25; BMI; Center for Disease Control, 2017), exploratory analyses examined differences between female athletes considered to have a normal (or under 25) body mass index (BMI) with those who are considered overweight (over a BMI of 25). There were 170 participants with a BMI below 25 (6 with a BMI below 18.5 and 164 with a BMI between 18.6 – 24.9), and 81 with an overweight BMI (25 and above). The Levene's test for equality of variance for each variable are as follows: body surveillance, $F = 2.68$, $p = .103$, body shame, $F = 1.88$, $p = .172$; depression symptoms, $F = .40$, $p = .530$; and self-compassion, $F = .98$, $p = .324$. The non-significance of each variable means the variance between the two groups was approximately equal. ANOVAs indicated significant differences between normal BMI and overweight BMI women in reported levels of body surveillance [$F(1, 242) = 8.58$, $p = .004$, $\eta_p^2 = .034$], body shame [$F(1, 243) = 8.50$, $p = .004$, $\eta_p^2 = .034$], and self-compassion [$F(1, 242) = 4.02$, $p = .046$, $\eta_p^2 = .016$]. There was no significant difference in the levels of depression reported between groups, $F(1, 243) = 1.66$, $p = .199$, $\eta_p^2 = .007$. Despite the significance of these results, we found that the effect sizes for the differences between the groups was between a small and medium effect, meaning that the BMI grouping did not explain much of the difference between the two groups.

Main Analyses

Correlations, means, and standard deviations of the study variables are presented in Table 2. The first hypothesis that increased reports of body surveillance would be associated with

Table 2

Means, Standard Deviations, and Intercorrelations Among the Measures and Key Demographic Variables

Measure	1	2	3	4	5	6
1. Body Surveillance	-	.68***	.30***	-.51***	-.10	.17**
2. Body Shame		-	.44***	-.68***	-.17**	.18**
3. Depression Symptoms			-	-.52***	-.18**	.11
4. Self-Compassion				-	.20***	-.15*
5. Age					-	.00
6. Body Mass Index						-
N	250	251	251	250	251	251
M	4.28	3.71	7.87	2.86	34.21	24.10
SD	1.20	1.43	7.43	.67	9.45	4.29

Note: $*p < .05$. $**p < .01$. $***p < .001$

increased reports of depression symptoms was supported, $r = .30$, $p < .001$. As was expected, there were also positive relationships between body surveillance and body shame and between body shame and depression symptom. Self-compassion was negatively correlated to body surveillance, body shame, and depression symptoms; as reported levels of self-compassion increase, scores on the other measures decreased. Given that the correlations showed a significant relationship between age and the study variables, and research has suggested body

surveillance and body shame may decrease as women get older due to placing less significance on their physical appearance (Tiggemann, 2004), age was added as a covariate to the main analyses.

The second hypothesis was tested using PROCESS Model 4 for SPSS (Hayes, 2013) and stated that body shame (M) would mediate the relationship between body surveillance (X) and depression symptoms (Y). The full model was significant, $R^2 = .20$, $F(3, 246) = 20.78$, $p < .001$. Five thousand bootstrap samples were used to calculate a 95% confidence interval for the indirect effect. The bootstrapped estimate of the indirect effect of surveillance on depression symptoms was significant, $B = 1.73$, 95% CI = [1.09, 2.41]. Hypothesis 2 that body shame mediates the relationship between body surveillance and depression symptoms was thus supported. Age was included as a covariate, but was not a significant predictor of either body shame or depression symptoms.

The third hypothesis was analyzed using Model 7 of PROCESS for SPSS (Hayes, 2013) and examined whether self-compassion would moderate the indirect relationship between body surveillance and depression symptoms via body shame. As shown on Figure 2, self-compassion was hypothesized to moderate the relationship between body surveillance and body shame. As can be seen in Table 3, the body surveillance by self-compassion interaction term significantly predicted body shame, $B = -.15$, 95% CI = [-.28, -.03]. Additionally, the index of moderated mediation was significant, $B = -.33$, 95% CI = [-.60, -.11], indicating that self-compassion moderated the indirect relationship between body surveillance and depression symptoms. Hypothesis 3 was supported. Unstandardized coefficients for the moderated mediation model are presented in Figure 2. It is important to note that both models explain 20% of the variation in depression symptom scores. This suggests that the moderating relationship may not add much in

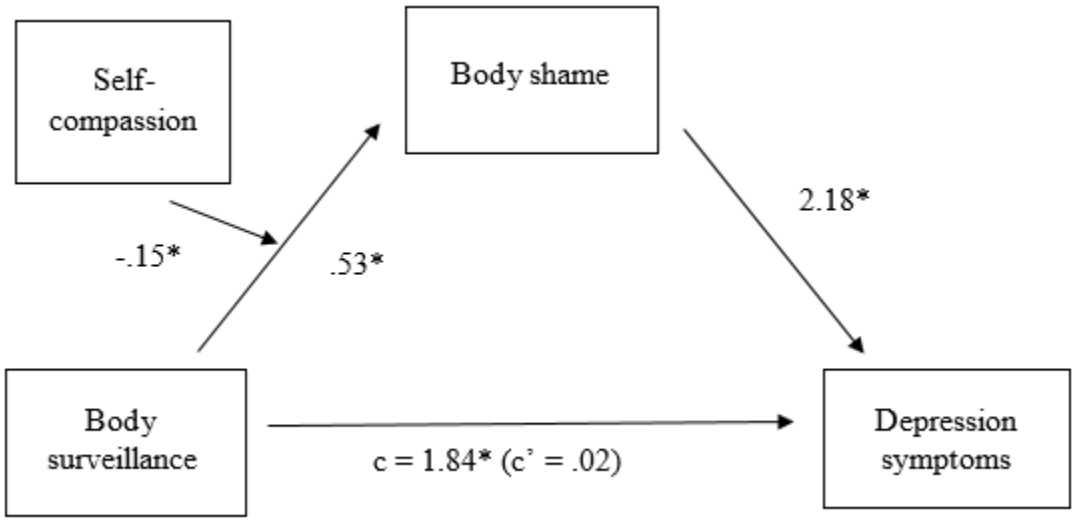

Figure 2

Model of the Moderated Mediation Analysis for Body Surveillance, Body Shame, Self-Compassion, and Depression Symptoms

Note. Unstandardized coefficients for the moderated mediation model. The total effect between body surveillance and depression symptoms is represented by c. The direct effect between body surveillance and depression symptoms is represented by c'.

*$p < .001$

terms of negatively buffering the depression outcome, although it does show a negative impact on body shame scores.

To further examine this moderation effect, body shame scores were plotted at high, medium, and low values of body surveillance, and self-compassion to illustrate the nature of the interaction (Figure 3). This graph illustrates that as reported levels of body surveillance increase, so do reported levels of body shame. This relationship, however, is weaker for the participants who experience high self-compassion. At low levels (1 *SD* below the mean) of self-compassion, every point of reported body surveillance results in a .63 points increase of reported experiences of body shame. At average (mean) levels of self-compassion, every point of body surveillance

Table 3

Moderated Mediation Analysis for Body Surveillance, Body Shame, Self-Compassion, and Depression Symptoms (N = 249)

Variable	*B*	*S.E.*	*t* value	*p* value	95% CI
Mediator (M): Body Shame					
Constant	3.82	.22	17.21	<.001	3.37 – 4.25
Predictor (X): Body Surveillance	.53	.06	9.58	<.001	0.42 – 0.64
Moderator (W): Self-Compassion	-.97	.10	-9.60	<.001	-1.17 – -0.77
Interaction (XW): Body surveillance X Self-compassion	-.15	.06	-2.36	.02	-0.28 – -0.03
Covariate: Age	-.00	.01	-.79	.43	-0.02 – 0.01
Outcome (Y): Depression Symptoms					
Constant	2.45	2.36	1.04	.30	-2.19 – 7.09
Mediator (M): Body Shame	2.18	.41	5.36	<.001	1.38 – 2.98
Predictor (X): Body Surveillance	.02	.48	.05	.96	-0.92 – 0.97
Covariate: Age	-.08	.05	-1.73	.09	-0.17 – 0.01

Note. For the final model, $R^2 = .20$, $F(3, 245) = 20.72$, $p < .001$

results in an increase of .53 points of body shame experiences. At high levels of self-compassion (1 *SD* above the mean), every point of body surveillance results in a .42 point increase in body shame. This finding indicates that female athletes with high levels of self-compassion have some protection against the negative effects of body surveillance, which overall reduces the intensity of the self-objectification process.

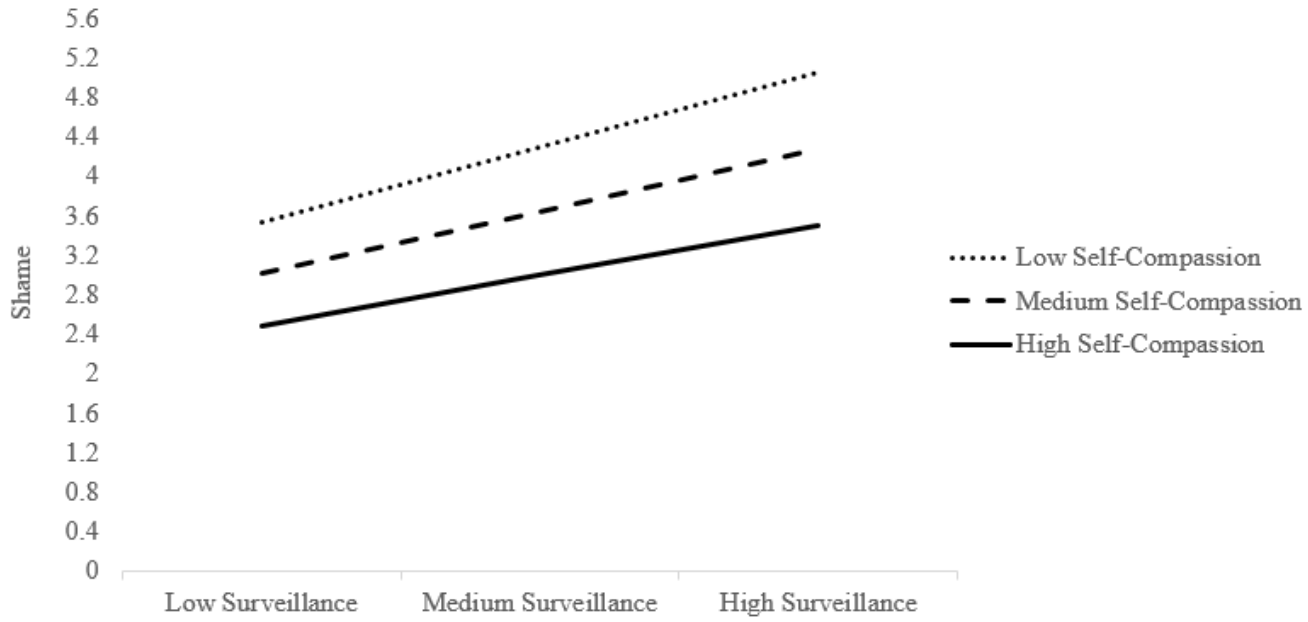

Figure 3

The Effect of Body Surveillance on Body Shame at High, Medium, and Low Levels of Self-Compassion

Discussion

The current study examined the relationship between body surveillance and depression symptoms via body shame in female athletes and whether self-compassion moderated the indirect relationship between body surveillance and depression symptoms. All hypothesized relationships were supported. This study addresses a gap in the objectification theory literature in two ways. First, the indirect relationship among body surveillance, body shame, and depression

symptoms has not been previously studied with female athletes, a population that, because of the physicality of being an athlete and the constant attention to their bodies, might have a different relationship with their bodies. Second, self-compassion had not previously been examined as a moderator of the indirect relationship (specifically the body surveillance to body shame path).

The results revealed that as female athletes reported more experiences of body surveillance, or monitoring the size and shape of their bodies, they reported experiencing higher levels of depression symptoms, which coincides with previous research that has been conducted (Liss & Erchull, 2015) and supports the first hypothesis of this study. Additionally, results of this study showed that body shame, or the emotion of feeling shameful about their bodies, explained the relationship between body surveillance and depression symptoms, which supports the second hypothesis of this study. This finding matches previous research utilizing objectification theory (Fredrickson & Roberts, 1997; Moradi & Huang, 2008) to explain the negative consequences of internalizing an external observer's perspective of one's body. Female athletes might experience pride in what their bodies are capable of as they participate in their sport (Krane et al., 2004), but they are also subject to heightened attention to their bodies as a function of their athletic activities as well as the societally based focus on women's bodies. It appears that despite whatever pride or appreciation they might have for their bodies, female athletes who are monitoring their physical appearance experience higher levels of body shame, due to feeling their bodies do not meet an external standard, and subsequent depressive affect. Furthermore, when it comes to female athletes, there is the additional potential of experiencing body shame as they compare their bodies to their teammates and competitors in regard to what they feel they should achieve in their sport (Mosewich et al., 2009). Some athletes may endorse feeling shame related to their bodies if they feel they are not training as hard as their peers, if they feel they

have not met the conditioning level they should be at, or if they feel they have lost progress after returning from an injury. Although this study was not able to separate body shame based on failure to meet societal standards of beauty from those related to performance, this might be an area for future research.

Lastly, the results indicated that self-compassion served as a buffer between reported levels of body surveillance and body shame, ultimately reducing the reported levels of depression, which supports the final hypothesis of this study. This coincides with previously conducted research stating that self-compassion reduces symptoms of depression (Mosewich et al., 2011) and that higher levels of self-compassion reduce the reported experiences of body surveillance, body shame, depression, and negative eating attitudes (Liss & Erchull, 2015). However, it was the first examination of self-compassion affecting the relationship between body surveillance and body shame and therefore moderating the indirect relationship between surveillance and depression symptoms. In the context of this research, the goal of self-compassion would be to help female athletes feel nonjudgmental about their bodies (Stapleton et al., 2017), which would, in turn, reduce negative thought patterns and negative emotional experiences (Leary et al., 2007). This would be especially helpful in protecting against body surveillance as body surveillance results from internalization of others' ideals about women's bodies (Fredrickson & Roberts, 1997).

Although the percent variation explained for depression symptoms scores did not change much when adding the moderating impact of self-compassion, our results did show a decreased experiencing of body shame at higher levels of self-compassion. Additionally, in our study 66% of the participants scored in the medium to high range of self-compassion, and this more restricted range of variance might have limited the strength of the buffering effect. Additionally,

the fact that only about 20% of the variance in the depression measure was explained might also be a function of the restricted range of variance in this measure as 73% of the participants scored in the normal to mild level of depressive symptoms.

Overall, the findings suggest that women who participate in sports are impacted by feelings of body surveillance and body shame, and due to this, experience symptoms related to depression. However, self-compassion can decrease the strength of the relationship between body surveillance and body shame, thus decreasing the intensity of the depression symptoms. This suggests that participation in athletics may not be as much of a protective factor against mental health concerns, such as depression, as has been previously been believed (Hammond et al., 2013; Yang et al., 2007), but with the utilization of positive psychology techniques (i.e., self-compassion), there are additional protective factors that can assist in reducing the impact of objectification on emotional well-being.

Implications

This study has implications for practitioners and researchers. While many studies have tested interventions addressing the negative sequelae of body surveillance (Liss & Erchull, 2015), body shame (Webb et al., 2016), and depression symptoms (Craft & Perna, 2004; Ford et al., 2017), many of those studies rely on interventions such as increasing self-esteem. However, the potential difficulty of using self-esteem is that it can rely on the comparison of oneself to another, which can also have negative consequences (Neff, 2003a). For practitioners working with female athletes, or even women who are regularly physically active, the utilization of self-compassion (i.e., being open and nonjudgmental to personal suffering and healing that suffering with kindness; Stapleton et al., 2017) can result in overall improvement related to their concerns about body image or their mood in general. Research has shown self-compassion is a beneficial

intervention when it comes to improving thoughts about performance (Ingstrup et al., 2017; Mosewich et al., 2011; Mosewich et al., 2013) as well as general mood improvement (Kelly et al., 2014; Leary et al., 2007; Liss & Erchull, 2015; Terry & Leary, 2011), but this study shows that there is benefit to utilizing this intervention to reduce the impact of body surveillance on body shame and depression symptoms.

As there is the possibility that some athletes may not seek professional counseling to address body image distress, a potential future direction for researchers can be to create manualized interventions that coaching staff can use to help combat the negative messages their athletes receive. For many athletes, the feedback they receive from their coaches can be among the most important messages they receive. To illustrate, in this study, many athletes acknowledged that some of the messages they received and internalized about their bodies came from their coaches. If coaches were taught to utilize brief positive self-compassion interventions with athletes, this could create a change in the athletes' feelings about their bodies. Additionally, it could be beneficial to engage in future research with coaches to understand their ideas regarding health, fitness, and nutrition for their athletes. Determining this information could result in positive changes, such as recommended trainings, for coaching staff so they could be positive resources for their athletes and assist in combatting body surveillance as opposed to contributing to it.

Limitations and Future Directions

Strengths of the study include diversity in the age range of participants and representation of sports. However, there was a lack of racial diversity in the sample (93.3% identified as White). Some research has indicated that other racial groups do not have as strict views on the thin body ideal as many white individuals do (Goodman, 2002; Moradi & Huang, 2008; Smith,

2012) so future research would benefit from have more racial and ethnic diversity among participants.

Additionally, the researchers had hoped to have a larger number of participants who reported a BMI that was overweight. This is an important area to examine as many studies that have been conducted about female athletes' perceptions of their bodies have primarily focused on women who have a BMI within the normal range (e.g., Krane et al., 2004; Lauer et al., 2018; Mosewich et al., 2011; Steinfieldt et al., 2011; Steinfeldt et al., 2013; Varnes et al., 2015). This restriction is problematic is because a normal BMI is not representative of all female athletes. For example, female athletes in sports like throwing in track and field, wrestling, or weightlifting do not have the same body type as women athletes who compete in long-distance running, basketball, and volleyball. This different body type helps them be successful in their chosen sport (Aoki et al., 2015; Hirsh et al., 2016; Houtkooper et al., 2007), but diverges from the thin ideal.

It is possible that plus-size athletes might experience even more challenges with body surveillance and shame, but the sample did not include enough of these participants to allow for examining whether the relationships among the study variables differed for them as compared to female athletes with a BMI considered as normal weight. Unfortunately, there is an inherent discrepancy in the number of sports that require plus-size body types (i.e., throwing events in track and field, wrestling, and weightlifting/bodybuilding) compared to sports that are more likely to be characterized by women with normal BMI (i.e., runners, basketball, softball). Additional methods of recruitment should be considered for future studies, such as directly contacting various professional sports organizations, or reaching out to specific Facebook groups to help reach an audience that would include more plus-size athletes.

An additional limitation was the requirement that participants respond, 'yes' to the question of whether they considered themselves to be an athlete. However, participants might have been unclear about the definition of an athlete and who identifies as an athlete. Are only professionals or individuals on teams allowed to call themselves athletes? What about the women who regularly participate in ultra-marathons, or Spartan races, or teach yoga and fitness classes numerous times a week? The confusion surrounding the term athlete might have dissuaded some individuals from participating or caused them to be removed from the study if they did not identify as an athlete. Future studies could benefit from making a clearer distinction of the definition of athlete (e.g., Araújo & Scharhag, 2016) or having a broader term for women who are consistently physically active, but may not consider themselves athletes.

Future research might also focus on individuals who identified as athletes in the past, but now that they are no longer actively training, struggle with body image. As noted earlier, it might be important to understand the experiences of women who once held pride in what their bodies were able to achieve athletically, and tease apart the distress that might come from feeling like their bodies were not as capable versus distress from feeling like they are not able to meet to the societal standards of body image as they did when they were active athletes. Future research could also include concepts such as body pride and accomplishment as protective factors for female athletes (Krane et al., 2004; Steinfeldt et al., 2011).

As there has been minimal research conducted on female athletes of a larger body size, another future research direction could be a qualitative study with these athletes. Some qualitative research has pointed out that obtaining the rich, detailed information gained from qualitative work is beneficial when no previous research has been done before in order to help lay a foundation for future research to explore (Hunt, 2011). Much of the research that has

previously been done about individuals of size has been geared towards the health repercussions or the negative views that society holds of them (Chrisler, 2012; Devlin et al., 2000; Fikkan & Rothblum, 2012; Lee & Pausé, 2016; Nutter et al., 2016; Smith, 2012). Recently, there has been a surge of research focused on the Health at Every Size movement (Bombak, 2015; Lee & Pausé, 2016; Webb et al., 2017), which can help highlight the athletic potential of women of a larger size.

Lastly, most of the studies with female athletes have been cross-sectional, only focusing on how the athletes are feeling at the present moment or reflecting upon their past experiences retrospectively (e.g., Aoki et al., 2015; Hirsh et al., 2016; Houtkooper et al., 2007; Krane et al., 2004; Lauer et al., 2018; Mosewich et al., 2011; Steinfieldt et al., 2011; Steinfeldt et al., 2013; Varnes et al., 2015). Although, this study adds to the literature base on female athletes, its cross-sectional nature is also a limitation, especially in testing mediated relationships. It would be beneficial to study the experiences of female athletes over an extended period of time to see how their reported levels of body surveillance, body shame, and depression symptoms change over time. For example, they may feel differently about their bodies in season in comparison to out of season. There may also be a difference in how female athletes feel about their bodies early on in their athletic careers in comparison to later on in their careers.

Conclusion

Female athletes have a lot to contend with; not only do they work to excel in their chosen sport, but they also live within the societal context emphasizing a thin and feminine physique. The constant surveying of their bodies has a negative impact on how they view themselves as a person as well as their overall mood. This study, which is the first to examine the relationship of body surveillance, body shame, and depression symptoms in female athletes, supports this

indirect effect of surveillance on depression symptoms through the experience of body shame. Further, the findings indicate the benefit of self-compassion in reducing the strength of this relationship. Clinicians and others who work with athletes might incorporate self-compassion interventions such as increasing self-kindness, common humanity, and practicing mindfulness.

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