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Body Image in Division Three Male Athletes:  
An Assessment of the Effects of Weight Pressure and Body Ideals on Body Image  
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### Abstract

Social and sport psychologists have studied the concept of body image for several years. Until recently, the body of research lacked insight into the body image of men. The current study looked at the way that collegiate male athletes view their bodies. This was done by attempting to find out if athletes view their bodies differently when they are aware it is their body versus when they are not aware. This was done by having male athletes from Augustana College complete two rating tasks, of a silhouette and an actual image, as well as the Weight Pressure in Sport Scale for Male Athletes. It was found that athletes rank the actual image higher than the silhouette and that the rating difference is not correlated to score on the Weight Pressure in Sport Scale for Male Athletes.

### Body Image in Division Three Male Athletes:

#### An Assessment of the Effects of Weight Pressure and Body Ideals on Body Image

Athletes are thought of by society as being in the ideal physical condition (Galli and Reel, 2009). While this may be true, recent studies have revealed that fewer and fewer athletes feel this way about their own bodies. Body image research has been extensively for social psychologist for a while, particularly with women, but recent research has started to include men. Muth and Cash (1997), describe body image as how people think, feel and behave with regard to their own physical attributes. While women are pressured, by society, to achieve a body that consists of a slim waist and a voluptuous bust, men feel pressure to be as muscular as possible. This changing ideal has been seen through not only media outlets, but also in models and even action figures (Pope, Olicardia, Gruber, and Borowiecki, 1998; Leit, Gray, and Pope, 2001; Hargreaves and Tiggemann, 2009). This new ideal body image for men is known as hypermesomorphia. The prefix hyper- meaning excess or exaggerated and mesomorph meaning having a muscular or sturdy body build. This stems from the original body type known as mesomorph and has just taken it to the extreme.

When assessing the human body, an individual will look at different physical aspects that can be readily observed. These physical aspects include things like height, weight and muscularity. The combination of these things can be used to define the term body image. These physical attributes they are referring to are those mentioned previously. For the purpose of the present investigation we will focus on the last attribute which is muscularity. Galli and Reel (2009) define muscularity as multidimensional and focusing around five main characteristics. The characteristics described by Galli and Reel are having well defined muscles, having large sized muscles, muscles being big but not “too big,” being strong and being athletic.

In the history of body image research, the male body image has been neglected. The female body has been the main focus of research because of the seemingly ever changing ideal that is present. The male body image, on the other hand, did not change significantly from 1960 to 1992 (McKinley, 1998). As stated earlier, the change that has occurred has led the ideal male body to be increasingly muscular. In a study conducted by Galli and Reel (2009), male athletes and non-athletes both desire bodies higher in muscle mass and lower in body fat. This finding is echoed by McCreary and Sasse (2000), when they present data showing that anywhere from 28% to 68% of “normal weight” adolescent boys and young men feel that they are underweight and want to gain muscle.

While there is a clear desire to be more muscular, there also seems to be a general higher level of satisfaction among those individuals that already have a higher muscle mass. This can be seen in Galli and Reel’s report when they showed that high school football players reported higher levels of satisfaction than cross country runners (2009). Part of this discrepancy in level of satisfaction can be observed in how others are viewing the athletes and their bodies. Athletes being in an environment in which others view body weight and appearance as important may lead to them reflecting these feelings (Galli, Petrie, Reel, Chatterton, and Baghurst, 2014). When a football player is covered in pads their body image is hidden to a certain degree. Cross country runners, on the other hand, have their entire bodies on display and a lack of muscularity is readily shown to those observing.

If there is an ideal male body image that individuals are striving for, then it seems to follow that there will be body dissatisfaction among at least some portion of males. While dissatisfaction in body image is common among males, the frequency of dissatisfaction is often much higher in males that are also athletes. Of all male athletes, 80% of those athletes reported

being dissatisfied with some aspect of their physique (Galli and Reel, 2009). While the frequency of dissatisfaction is higher, the level of dissatisfaction is often lower. Despite athletes experiencing dissatisfaction, approximately 70% of athletes in a study reported having some positive feelings about their bodies (Galli and Reel, 2009). The degree that an athlete experiences this dissatisfaction has been shown to be mediated by the sport that the individual participates in (Raudenbush and Meyer, 2003). This dichotomy between frequency of dissatisfaction and degree of dissatisfaction is interesting and would be worth looking into in a later study.

One way that body image has been studied in male athletes has been through the use of the Weight Pressures in Sport Scale for Male Athletes (WPS-MA). This scale was developed by Galli, Reel, Petrie, Greenleaf, and Carter in 2011. The items in the scale were generated through the use of scales concerning self-esteem, body image, negative affect, bulimic symptomology, drive for muscularity and desirability. The scale was originally comprised of 18 items and was later shortened to 14 items after initial factor analysis. The WPS-MA was developed as a tool for looking at body image and the things that effect body image for male athletes. The scale is comprised of items surrounding around the idea that pressure comes from the individuals uniforms, coaches, teammates, family and peers (Galli, Reel, Petrie, Greenleaf, and Carter, 2011). Of these five central categories, being teased by and receiving negative comments from coaches and teammates about body weight, shape, and size are the primary sources of pressure for male athletes (Galli, Petrie, Reel, Chatterton, and Baghurst, 2014). The findings of a similar study also show coaches and teammates as being primary sources of pressure. The study found that 70% of athletes reported feeling pressure from their coaches to attain an ideal body and 20%

of athletes reported feeling pressure from their teammates to improve their bodies (Galli and Reel, 2009).

Along with the WPS-MA, another common technique for measuring body image satisfaction is to use a size estimation technique. These techniques involve individuals either critiquing a body or comparing two or more bodies. A picture distortion technique has been used to estimate ideal and actual body image in athletes (Urdapilleta, Aspavlo, Masse and Docteur, 2010). Another size estimation technique that is common consists of using figure drawing to estimate ideal and actual body image (Raudenbush and Meyer, 2003). For the present study, a size estimation technique will be used that will consist of participants comparing silhouetted images of bodies as well as regular images of individuals upper bodies.

While research on body image has begun to be done in the male population, there still are several questions that remain unanswered. The majority of the research that has been done consists of individuals comparing their body to some other stimulus. The present study will instead have participants comparing their own body against itself. I expect to find that an individual will rank their body image higher when they do not know that it is their own body and that individuals that score higher on the WPS-MA will be more critical when judging their own bodies.

## **Method**

### **Participants**

This study used 20 collegiate aged, male athletes as participants. Male athletes from Augustana College were recruited through personal emails from the experimenter. Athletes from the football team, basketball team, lacrosse team, and soccer team. These sports were

specifically used due to the height and weight statistics that are readily available through the Augustana College Athletics webpage.

### **Measures**

The WPS-MA scale was used in order to find out the degree to which the participants felt pressured when it came to having a certain body size. The scale was developed by Galli, Reel, Petrie, Greenleaf, and Carter in 2011. It is a 14 item scale ( $\alpha = 0.90$ ) that has two subscales that each consist of seven items. These subscales are the Coach/Teammate Pressure subscale ( $\alpha = 0.87$ ) and the Appearance Pressures subscale ( $\alpha = 0.84$ ). The scale is scored by adding up the responses to each item and then dividing by 14. Each item is scored using a six point Likert scale ranging from 1 (Never) to 6 (Always).

### **Procedure**

The individual participants completed an informed consent form before the trial begins. Once the informed consent form is completed, the participant will first have their picture taken and then be weighed and have their height measured. Participants then began a within subjects study with two condition, rating silhouetted images and actual images.

To begin, the participant will be asked to remove their shirt, or sweatshirt, and stand against a blank wall so as to reduce any identifying attributes of the photos. Once the picture has been uploaded and the participant is changed back into their street clothes, the participant will fill out a brief questionnaire concerning their ideal height and weight. While the participant is filling out this information, the experimenter will be turning the previously taken photos into silhouetted images. After the questionnaire, the participant will complete a sorting task of silhouetted pictures. There will be eight photos of males, one of which is the participant, which have been blacked out so that no identifiable features can be detected. The participant will sort



the photos in order of desirability, with one being the most desirable and eight being the least desirable. After the silhouette sorting task, the participant will then take the WPS-MA, see Appendix A. Following the completion of the scale, the participant will then complete a final sorting task of eight untampered images, one of which is the participant. The participant is debriefed and allowed to leave after the completion of the final sorting task.

### **Results**

My hypotheses were that an individual will rank their body image higher when they do not know that it is their own body and that individuals that score higher on the WPS-MA will be more critical when judging their own bodies. No data was missing or excluded in the final analysis. Based on the collected data, I first subtracted the silhouetted rating from the actual rating to find the Rating Difference, which was used as my independent variable. The Weight Pressure Score, dependent variable, was determined by finding the average value among the participant's responses, as specified by Galli, Reel, Petrie, Greenleaf, and Carter (2011).

For my first hypothesis, that an individual will rank their body image higher when they do not know that it is their own body, a paired samples t-test of the two rating variables, actual and silhouetted, was conducted. This showed that on average, participants were ranking their bodies higher in the actual rating task than in the silhouetted rating task,  $t(20) = 2.042$ ,  $p = 0.055$ ,  $M = 0.900$ ,  $SD = 1.97$ . So the hypothesis was not supported, in fact, the results are significant in the opposite direction of what was predicted. This means that instead of individuals ranking their bodies higher when they do not know that it is theirs, they instead rated it higher when they did know that it is theirs.

For my second hypothesis, that individuals that score higher on the WPS-MA will be more critical when judging their own bodies, a two-tailed bivariate analysis of the correlation

between Rating difference and Weight Pressure Score was conducted. This showed that there was not a significant correlation between the two,  $r = -0.381$ ,  $p = 0.097$ . While the correlation between these two variables was high, it was not significant at  $\alpha = 0.05$ . So, the hypothesis was not supported.

### **Discussion**

The primary purpose of this study was to examine the way that male athletes perceived their bodies. This was done using a both a ranking task as well as the WPS-MA. The first way that this was done was by looking at the way participants ranked their bodies when they either were aware or unaware that an image was in fact their own body. According to McCreary and Sasse (2000), males, in general, tend to report low levels of satisfaction when it comes to body image. This distinction about attitudes in men also tends to hold true in male athletes (Galli and Reel, 2009). Based on previous research, it was hypothesized that participants would, on average, rank the silhouetted image higher than the actual image. However, the data revealed that the participants ranked the actual image higher than the silhouetted image. This is not consistent with my proposal that silhouetted images would be rated higher. Although the hypothesis was rooted in the previous research, I did not find what I was expecting and I suspect that there must have been some limiting factors. For example, none of the previous studies were done using students from a small liberal arts institution and the majority of the studies had a greater number of participants. The different demographic between the different studies may be pointing out a difference in these groups instead of an inconsistency in the population as a whole. It may also be worth noting that the experience that students get a liberal arts institution, such as Augustana College, is often different from that of a student at a state school. The number of participants was noted as a possible limiting factor because without further participants, it is

unknown as to whether or not the data would change to fit the hypothesis or continue to confirm that the hypothesis should be rejected. Another possibility could be that the silhouetted stimuli were altered to too high of a degree and, as a result, changed the way that the participant would normally view the image. The participants may have changed their rating due to faulty editing instead of just perception of the body. When it comes to participants, future research should be conducted using participants from a wider demographic range. This will also help to increase the generalizability of the results. As far as the stimuli are concerned, it may prove to be beneficial in future research to use either a program other than Adobe's Photo Shop or have the experimenter go through a more extensive training.

Along with the main hypothesis, I also looked to see if an individual's difference in ranking of images was correlated to their score on the WPS-MA. Negative views of body image are often the result of high levels of weight pressure, as shown through the WPS-MA (Galli, Reel, Petrie, Greenleaf, and Carter, 2011). It was hypothesized that Individuals that score higher on the WPS-MA will be more critical when judging their own bodies. The data revealed that there was not a significant correlation between WPS-MA score and Rating Difference. This means that the hypothesis was not supported. Although the hypothesis was not supported, there were still some positive signs as a result of the data analysis. For example, while the correlation was not significant, the correlation was sizable at  $r = -0.381$ . The fact that the correlation was this large is promising for future research. The largest limiting factor for this study was the limited time to collect participants. When a power analysis was done, based on the correlation that was found, I found that it would be appropriate to have 80 participants, instead of the 20 that were used, to achieve 80% power. This increase in power would then increase the chance of

finding a significant p value. If the correlation holds firm, then the future researchers should use 80 participants as a minimum number when conducting their research.

Based on the current findings, this study offers two main ideas to the study of body image in male athletes: Liberal arts students tend to rate their bodies as more desirable when they can recognize that it they are rating their own body and high scores on the WPS-MA are correlated to the way individuals rank their bodies, however, this correlation is not significant. These findings can be used by both coaches and the athletic departments at similar small liberal arts colleges across the country. By bringing awareness to the various outlets of weight pressure, there is a chance that the negative effects these outlets have on male body image may decrease.

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**Appendix A**

**Weight Pressure in Sport Scale for Male Athletes**

	Never	Rarely	Sometim e	Often	Usually	Always
1. My coach places an emphasis on team members' weight.	1	2	3	4	5	6
2. The leanest athletes get chosen for the best positions on the team of the best positions in a game/competition.	1	2	3	4	5	6
3. My teammates notice if I put on weight.	1	2	3	4	5	6
4. My team performance would improve if I gained at least 5 pounds of muscle.	1	2	3	4	5	6
5. My coach encourages athletes to gain muscle mass.	1	2	3	4	5	6
6. My team uniform makes me aware of my build.	1	2	3	4	5	6
7. The crowd scrutinizes my body and makes me concerned about my weight and appearance.	1	2	3	4	5	6
8. Body weight and appearance are important to my coach.	1	2	3	4	5	6
9. Body weight and appearance are important to my family.	1	2	3	4	5	6
10. Body weight and appearance are important to my friends outside of my sport.	1	2	3	4	5	6
11. Any of my body flaws are readily apparent in my uniform.	1	2	3	4	5	6
12. Weigh-ins are held periodically throughout the season.	1	2	3	4	5	6
13. My coach notices changes in my weight.	1	2	3	4	5	6
14. The leanest team members are at a distinct performance advantage.	1	2	3	4	5	6

**Appendix B**

Paired Samples T Test: Actual Rating vs Silhouette Rating

	Paired Differences							
	Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval		t	df	Sig. (2- tailed)
				Lower	Upper			
Actual vs. Silhouette	0.90	1.97	0.44	-0.02	1.82	2.04	19	0.055

Correlations Among Key Study Variables

	Rating Difference	WPS Score	Difference BW	Difference Height	Silhouette Rating	Actual Rating
Rating Difference						
WPS Score						
Difference BW						
Difference Height						
Silhouette Rating						
Actual Rating						

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).