

Association between Body Image and Injury Rate in Division III Collegiate Athletes

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ABSTRACT

Background/Purpose: Body image is a multidimensional psychological aspect for all human beings. There has been research done looking at multiple different aspects of body image, but falls short when comparing body image and injury rate. The purpose of this study is to look further into body image and see if there is a correlation between body image and injury rate. **Methods:** Participants will be pulled from a midwestern Division III university and will have participated in either men's ice hockey, women's ice hockey, men's basketball, women's basketball, men's and women's swim and dive, wrestling and gymnastics. They will be asked to fill out the Multidimensional Body-Self Relations Questionnaire, which is a 69-question questionnaire measuring body image. Along with this the participants will fill out a self-report on injuries. **Results:** We found that the higher the overweight preoccupation score, the more likely the person will sustain at least one upper or lower body injury per year. Along with this we also found that the lower the score of the appearance evaluation, the more likely the person will sustain at least one lower body injury per year. **Conclusions:** Athletes preoccupied with the perception of their weight are predisposed to suffering an athletic injury.

INTRODUCTION

- Participating in sports can have many benefits, but it can also have negative effects like a decreased body image and increased injury rate (Robinson, 2015).
- Body image is a multidimensional psychological concept and can differ by an athlete's gender, sport type, and age.
- There is a gap in research when evaluating how a negative body image can affect injury rate in athletes.
- Further research is needed to see if there is a correlation between body image and injury rate.

PURPOSE

The purpose of this study was to explore the association of body image and injury rate in Division III collegiate athletes.



METHODS

PARTICIPANTS

Table 1. Demographic Characteristics of Participants

	Mean	SD
Age	20.03	1.54
Sport	%	n=106
Wrestling	16.98	18
Gymnastics	14.15	15
Men's Ice Hockey	17.92	19
Women's Ice Hockey	15.09	16
Men's Basketball	11.32	12
Women's Basketball	11.32	12
Men's Swim/Dive	7.55	8
Women's Swim/Dive	5.66	6

STUDY DESIGN

- Cross-sectional, 45-minute session survey
- Participants were responsible for completing two forms:
 - MBSRQ & Self-Report Injury Form
- SportsWare Injury Documentation Software was utilized to cross-check the accuracy of the Self-Report Injury Form
- All analyses were computed using SPSS Statistical Software

PROCEDURE

- An E-Mail was sent to team coaches to organize a 45-minute session for the athletes to participate in the study
- Participants were given a packet and asked to complete all items within the packet:
 - Cover letter, informed consent form, Self-Report Injury Form and the MBSRQ
- Items were placed back within the packet and returned to study leaders
- SportsWare Injury Documentation Software was utilized to cross-check the Self-Report Injury Form to ensure injuries were correctly reported

DATA ANALYSIS

- We calculated all ten subscales, appearance evaluation, appearance orientation, fitness evaluation, fitness orientation, health evaluation, health orientation, illness orientation, body areas satisfaction, overweight preoccupation, and self-classified weight, by taking the corresponding questions from the questionnaire and dividing by the total questions used in the equation.
- We ran a binomial logistic regression analysis on the data

RESULTS

Table 2. Subscale Score Correlation with Upper Body Injury

	B	Sig.
APPEVAL	-1.020	0.041
HLTHELVAL	0.478	0.306
BASS	0.116	0.104
OWPREOC	0.831	0.013
WTCLASS	-0.200	0.626
Constant	-3.420	0.214

- The higher the overweight preoccupation score, which assesses a construct reflecting, fat anxiety, weight vigilance, dieting and eating restraint, the more likely the person will sustain at least one upper or lower body injury per year.
- The other subscales are not significant predictors.
- Overall the model for upper body injury rate correctly classified 68% of individuals

Table 3. Subscale Score Correlation with Lower Body Injury

	B	Sig.
APPOR	-0.798	0.070
HLTHOR	-0.886	0.123
HLTHEVAL	-0.535	0.274
ILLOR	0.494	0.184
OWPREOC	0.661	0.050
WTCLASS	-0.468	0.231
Constant	5.799	0.031

- The lower the score of the appearance evaluation, which looks at the feelings of physical attractiveness or unattractiveness, the more likely the person will sustain at least one lower body injury per year.
- Overall the model for lower body injury rate correctly classified 66% of individual.

CONCLUSION

- The data obtained by conducting this study put into evidence that an individual preoccupied with weight vigilance, dieting, and eating restraint is predisposed to suffering at least one upper or lower body injury throughout their sport's season.
- The data also showed that individuals that have a general unhappiness with their physical appearance is predisposed to suffering at least one lower body injury throughout their sport's season.
- By recognizing an athlete's overweight preoccupation, actions and thoughts that predispose the athlete to suffering an injury can be addressed and corrected before an injury is sustained.
- Athletes who struggle with body image may push themselves harder physically, in their sports participation to alter their physical appearance.