

# Athletes and Problematic Eating: A meta-analysis

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## Abstract

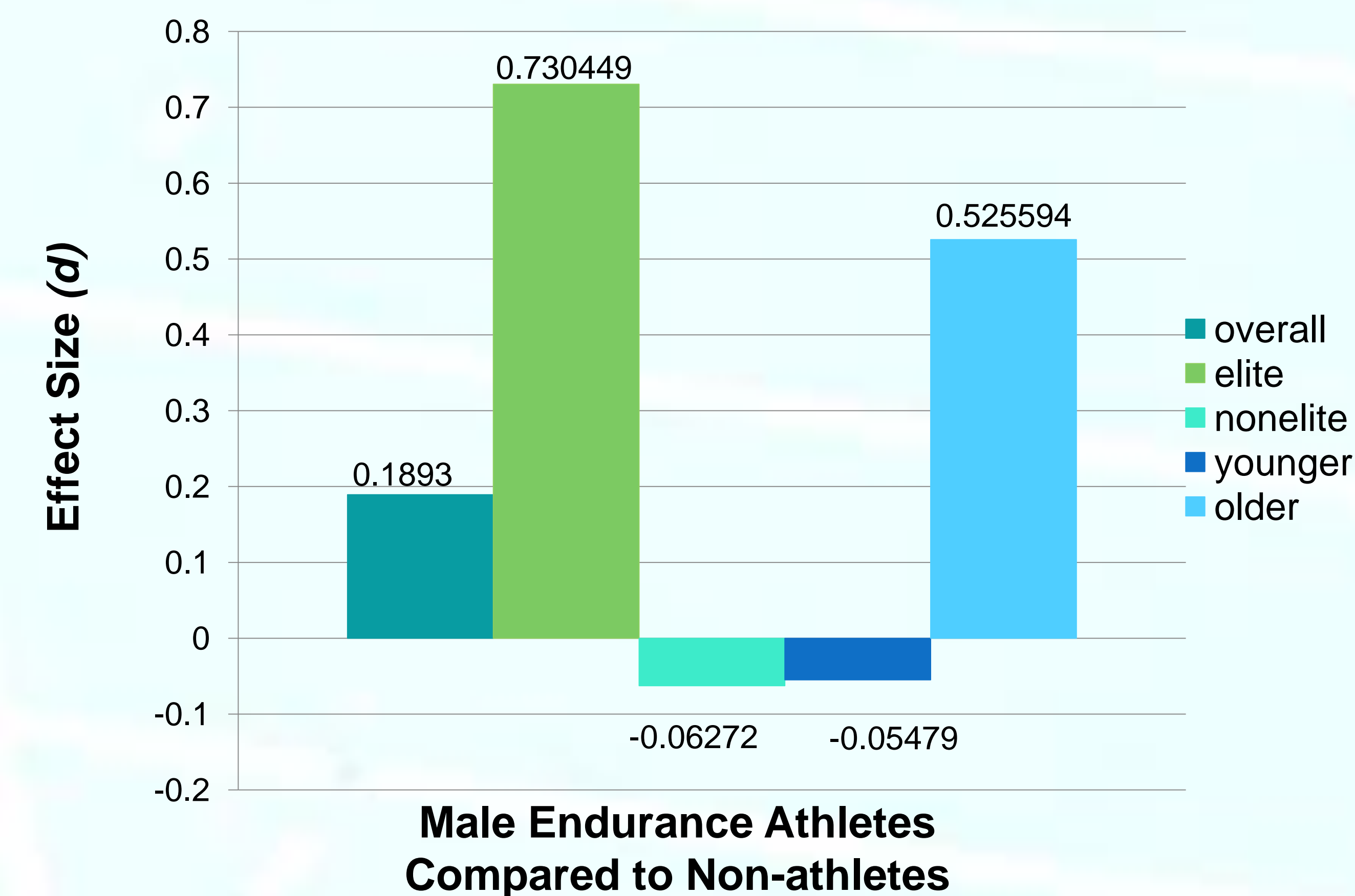
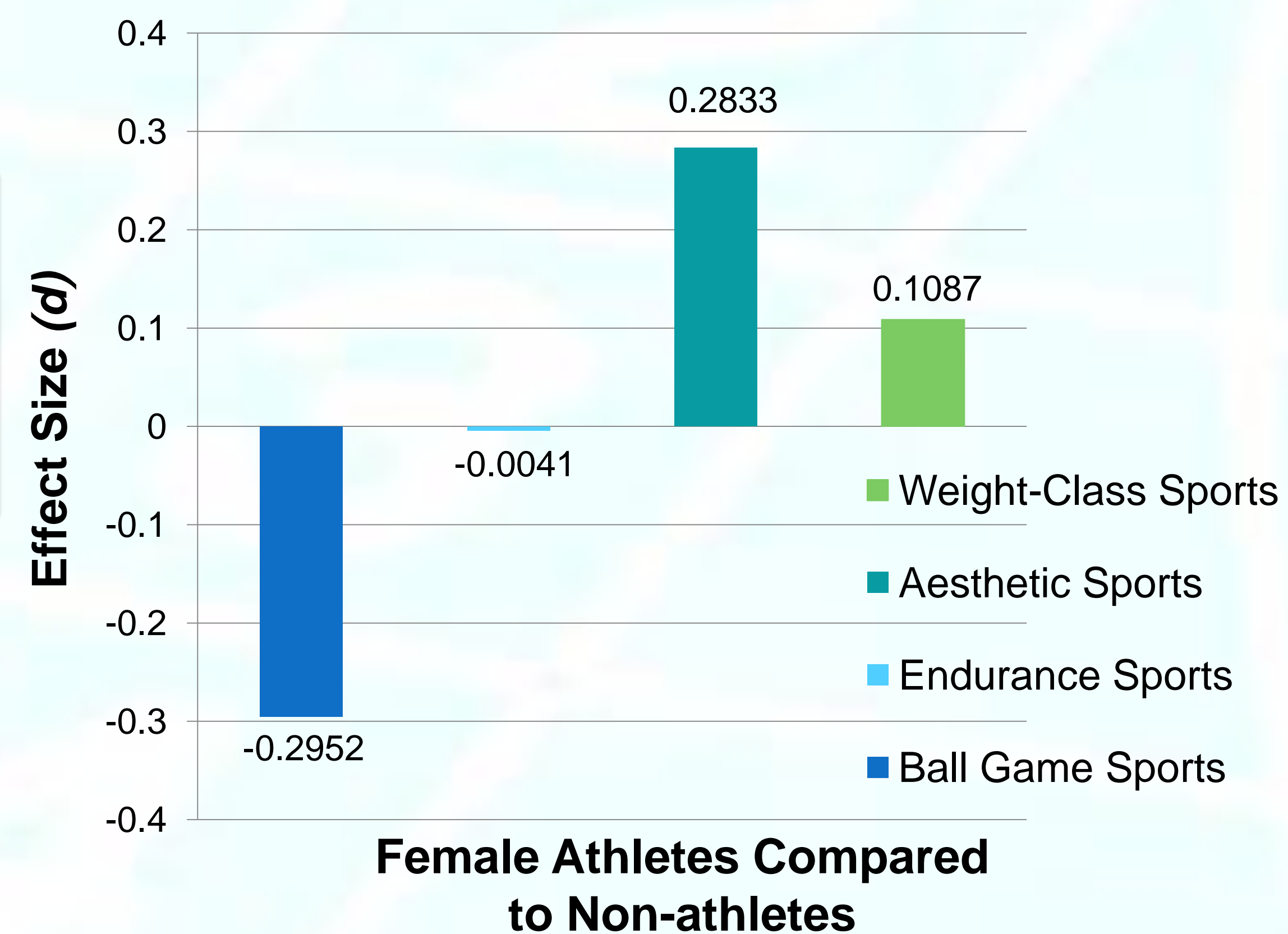
The relationship between athletic participation and eating disordered attitudes was examined using meta-analysis in studies with female and male athletes from a variety of sports. Smolak, Murnen, & Ruble (2000) found in their meta-analysis that female athletes appeared to be slightly more at risk for eating problems than female non-athletes. With the growing amount of research in the area of athletes and eating disorders, the current study looked to reexamine and update the previous meta-analysis and also include data found on male athletes. Relationships for elite athletes, various age groups, and nationality were examined. Overall, female aesthetic sport athletes were found to have the greatest risk for eating disorders compared to non-athletes, while female ball-game athletes were shown to have the least risk.

## d value calculation

$$d = \frac{\text{athlete mean} - \text{nonathlete mean}}{\text{within group standard deviation}}$$

Positive *d* value = athletes higher risk

## Results



## Introduction

Eating disorders, including anorexia nervosa and bulimia nervosa, are very disabling and life threatening

- Prevalence rate in general population:
  - Anorexia nervosa = .5% (APA, 2000)
  - Bulimia nervosa = 1-3% (APA, 2000)
  - ED-NOS = most common diagnosis (Fairburn & Bohn, 2005)

Many people who have eating disorders also experience body image dissatisfaction. A majority of American women experience body dissatisfaction (Levine & Smolak, 2006; Rodin, Silberstein, & Striegel-Moore, 1986).

**Objectification Theory:** society's objectification of women leads to self-objectification among women, which is associated with body shame and eating disorders (Fredrickson & Roberts, 1997)

Athletes might be protected from body dissatisfaction and eating disorders if they experience their bodies as powerful entities rather than decorative objects

On the other hand, athletes who participate in sports that require minimum body weight for optimal performance may experience increased risk for disordered eating

Similarly, sports that are judged on aesthetic qualities may put athletes at greater risk

Smolak, Murnen, & Ruble (2000) found female athletes compared to non-athletes were at a small but significant increased risk for disordered eating,  $d = .07$

- Elite, lean sport athletes showed significantly more risk,  $d = .52$

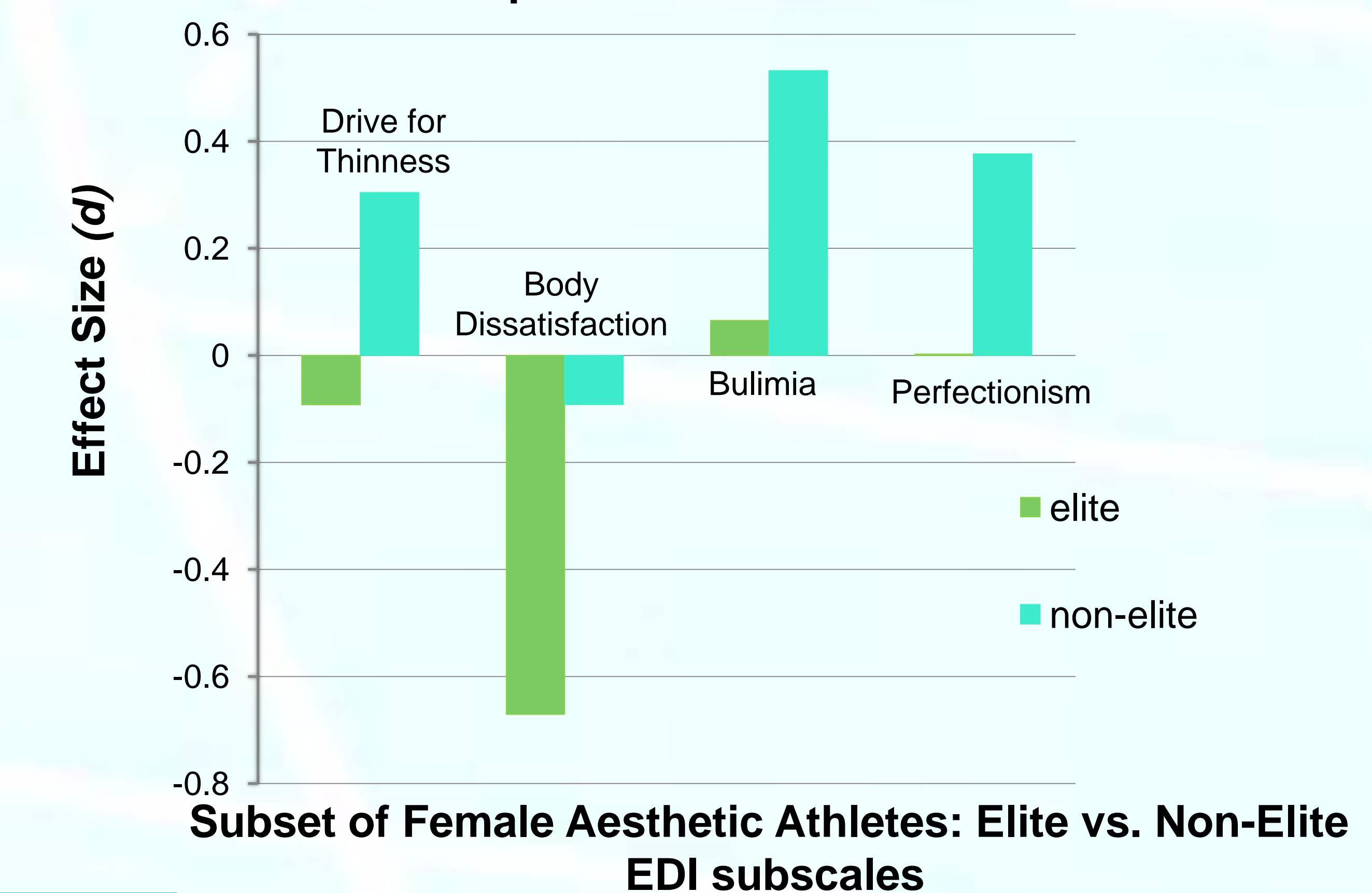
Type of Sport: Female	# Studies	# Effect Sizes	N	d	Z
Aesthetic	29	36	10,825	.2833	12.05
Endurance	16	19	6,167	-.0041	-.129
Weight-Class	11	12	3,263	.1087	1.20
Ball Game	6	6	3,491	-.2952	-8.24
Type of Sport: Male	# Studies	# Effect Sizes	N	d	z
Weight-Class	15	16	9,776	.2001	9.19
Endurance	10	12	4,424	.1893	4.69
Aesthetic	4	4	1,236	.0975	1.153
Ball Game	3	3	2,692	.2156	5.194

## Methods

- Literature search for all studies pertaining to athletes and eating disorders (published and unpublished)
- Studies that had missing data or information were excluded, normative scores were found for studies that did not use a control group
- Sports were classified as aesthetic, endurance, ball game, and weight-class, based on the criteria presented in Torstveit (2005).
- For each study an effect size was calculated
- Effect sizes were combined across studies, weighting studies by sample size and test statistical significance of combined *d* value
- Variability in the effect size across studies was examined; if heterogeneous, the influence of various study characteristics on the size of *d* was examined
- Elite was defined as those competing successfully at the national or international level or are professional competitors or in a school setting that prepares them for professional level

## Discussion

- It appears that athletics is not protective for all female athletes, especially those who are involved in aesthetic and weight-class sports
- Aesthetic females athletes may be feeling more pressure to try and fit society's unrealistic, ideal view of the female body, leading to more self-objectification
  - However, it does appear that a lower desire for this thin-ideal is associated with lower levels of body dissatisfaction
  - Non-elite females in the EDI subset may only be participating for weight loss purposes and not functional, achievement reasons
- Males and females participating in weight-class sports appear to also be at an increased risk and this is probably due to the explicit importance put on meeting a weight cutoff
- Elite status appeared to be more of a consistent risk factor for males. Elite female endurance and weight-class athletes did not appear to be at a greater risk
  - this differs from Smolak, Murnen, & Ruble (2000) findings concerning elite, lean sport athletes



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