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## Body Dissatisfaction and Weight Bias in Children

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# **Body Dissatisfaction and Weight Bias in Children**

by

**Megan Janette Jensen**

**Capstone submitted in partial fulfillment of  
the requirements for graduation with**

**UNIVERSITY HONORS**

**with a major in**

**Dietetics**

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**UTAH STATE UNIVERSITY**

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## **Abstract**

This article reviews the rate of body dissatisfaction and weight bias among young children. It was initially hypothesized that body-image begins much earlier than adolescence, where most interventions take place. Out of fifty articles read on the subject, forty-five peer reviewed articles were included in this review. The findings of these articles were synthesized for a comprehensive review on the topic. Results suggested that weight bias begins around three years of age, while body dissatisfaction begins around age five for girls, and seven for boys. Rates of body dissatisfaction among children were similar to the rate among adolescents, averaging out to be 50%. Results were also similar between males and females, concluding that body dissatisfaction is similar regardless of gender. However, protective factors, such as race and ethnicity, and the absence of weight bias and misclassification in parents, often decreased the rates of body dissatisfaction. Interventions have been implemented as a means to increase body satisfaction in children and adolescents, but none have been successful. Most interventions provided an increase in knowledge for participants, but changes in behavior were not seen long term. The conclusions reached in this study include an optimal age for intervention, between three and seven, and provide information on where this dissatisfaction could stem from.

*For the Bakes' Girls*

### **Acknowledgments**

I wish to thank the members of my committee for their continued support and guidance through this process. None of this would have been possible without them. Their expertise and experience provided me with the tools I needed to not only write this paper, but also to have confidence as my research moves forward. My committee members were as follows:

**Rebecca Charlton, RDN, MPH**

**Mateja R Savoie-Roskos, RDN, PhD, MPH**

**Heidi Wengreen, RDN, PHD**

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# Body Dissatisfaction and Weight Bias Among Children

Word Count: 2810

## Introduction

Although body dissatisfaction (BD) is a well-documented issue among adolescents, emerging research has found the rate of BD may be just as common in young children.<sup>1,2,3,4,5</sup> Some studies indicate that children as young as three years of age have thought about dieting and losing weight, and most children have dieted by the age of fourteen.<sup>6,7,8,9</sup> With this occurring at such a young age, the approach to promoting a positive body-image is significant to a child's development and must be age appropriate to be effective.

Current research also suggests that BD is consistent regardless of gender.<sup>5,10,11,12,13,14,15</sup> In fact, boys experience similar rates of BD and dieting to change weight as compared to girls.<sup>5,11,13,15,16</sup> However, while the rate of boys with a desire to lose weight is similar to that of girls, boys also face a double standard: they must not only be thin, but they must also be extremely muscular.<sup>10,17,18,20</sup> Boys tend to focus on bodybuilding and weight gain, while girls tend to focus on weight loss.<sup>10,17,18,19</sup>

Although BD is consistent across genders, it is not consistent across racial and ethnic groups. Some studies indicate that black persons are much more likely to be satisfied with their bodies than their white counterparts, regardless of age. Blacks tend to receive more praise for their bodies from their black peers, allowing a healthier body-image to thrive. On the other hand, white persons of all ages, particularly women, do not receive as much praise for their bodies from their white peers.<sup>7,14,15</sup> Some studies conclude that BD is consistent across *all* races and ethnicities--such as Bangladeshis, Britons, Americans, and Indians--but most studies on this topic are concluding that blacks have the highest rates of body satisfaction across ethnic groups.<sup>15</sup>



Not only are children presenting BD early on, but children as young as three are showing a negative bias against overweight peers.<sup>16</sup> In fact, overweight children are more likely to receive negative comments and descriptions by slimmer children their age.<sup>2,21,22,23,24,25</sup> This is perhaps one of the reasons BD increases rapidly from kindergarten through high school. Children often enter school already with some degree of BD and weight bias, and this tends to worsen over time. Research is finding that parents' comments, habits, and offhand remarks are internalized by their children, potentially leading to BD and weight bias by age three.<sup>12,26,27,28</sup>

Another contributing factor to this is the rate of misclassification of weight by parents. Most parents do not know whether their child is underweight, normal weight, or overweight, which can lead to parents using unnecessary dietary restrictions and compensatory actions to control their child's weight.<sup>26,29,30,31</sup> As children tend to reflect their parents' thoughts about weight, the importance of modeling cannot be underestimated.<sup>12,26,27,28,32</sup>

The purpose of this review is to discuss current knowledge on the subject of weight concern and bias in young children.

### **Body Dissatisfaction and Adolescents**

Although the primary focus of this review is BD in young children, adolescents must also be considered to fully address the topics. Ninety-eight percent of high school teachers interviewed in 2017 said that some of their students were affected by a poor self image, while 38% claimed that nearly all of their students were affected by it.<sup>33</sup> The results of this study support a similar study conducted 20 years ago which found that 52% of girls (n=191) had dieted before age 14.<sup>9</sup> In fact, adolescents' desire to be physically attractive is only outnumbered

by the desire to be successful.<sup>34</sup> Physical attractiveness was rated more important than socialization, sports success, and relationships.<sup>34</sup>

Studies consistently demonstrate that no matter the BMI weight category of the individual, the pursuit of thinness is common.<sup>7,10,18,19,21,34,35,36</sup> The vast majority of adolescent females who have a desire to lose weight are either of normal weight or even underweight.<sup>16,18,35,36,37</sup> Up to 90% of adolescent males and females are unhappy with their bodies.<sup>26,37</sup> Unfortunately, this trend also continues into adulthood: 39% of adult females feel they are overweight, and similar rates are found in adult male populations.<sup>26,37</sup> However, BD in males typically stems from perceived a lack of muscle, not the presence of unwanted weight.

A 1986 study found that on average, teenage girls want to lose 5.6 kg of fat, and teenage boys want to gain 1 kg of muscle. In this select group of participants, 17% of the girls met the cut-off criteria for being high risk of anorexia, which matches the number of underweight girls who want to lose weight in other studies.<sup>16,18,35</sup> Surprisingly, 35% of boys and 55% of girls had symptoms of disordered eating, with boys more likely showing signs of binge eating disorder and girls more likely showing signs of anorexia and bulimia.<sup>37</sup>

Similarly, over 50% of girls and 20% of boys have a desire to control their weight. This is done through compensatory behaviors such as vomiting, fasting, dieting, and excessive exercise.<sup>10,18,37,38</sup> At any given point in time, 30-60% of girls and 5-30% of boys are dieting with the intent to lose weight.<sup>18,37</sup> If young teenagers are already dieting, then BD starts much earlier than these years.

### **Body Dissatisfaction and Males**

As early as 1972, the knowledge and study of the bodybuilding stereotype in males has been practiced.<sup>13,16,17,19,38,39</sup> In one study, 5, 14, and 20 year old males were asked the same questions

about positive and negative characteristics in men. For the majority of the questions, 80% of the subjects labeled the characteristics in the same way, leading the researchers to conclude that males deal with a different, but equally pervasive, form of BD than seen in women.<sup>39</sup>

Though many past studies show that rates of BD in men are less than those in women, more recent studies are finding little to no differences.<sup>5,10,11,12,13,20,35,36</sup> One reason for this is the emergence of the diagnosis known as Eating Disorder Not Otherwise Specified (EDNOS). Eighty-three percent of diagnosed eating disorders in males are classified as EDNOS, suggesting that new diagnoses may need to be studied and created. This could potentially provide resources to help males who struggle with BD.<sup>13,36</sup>

Despite their similarities, the primary between male and female BD is the age the desire to look different begins. Pre-pubertal boys are not expected to meet body-build stereotypes, but pre-pubertal girls are expected to meet weight stereotypes.<sup>11</sup> Once these weight concerns begin, boys tend to control their weight by decreasing their sugar intake, which is considered dieting.<sup>13,15,16,17,18</sup> Some boys diet to lose weight, while others diet to help aid muscle building. Unlike girls, where the majority want a thinner body, 36% of normal weight boys, and 71% of underweight boys want to gain weight.<sup>17,18</sup> One study found that the pressure to increase muscle in boys is much larger than the pressure to decrease weight. Despite this, 47% of boys still have a desire to be thinner, although research is lacking on whether an overlap exists between those who want to be thinner and those who want to gain muscle. But the number of boys who want to lose weight, around 33%, is consistent.<sup>5,16,17</sup>

### **Body Dissatisfaction and Race**

In general, BD is consistent across races and ethnicities. However, white children of all ethnicities tend to have higher rates of BD, particularly compared to their black counterparts,

starting as early as 4th grade.<sup>7,14,15</sup> In studies using pictorial scales depicting increasingly larger body sizes, blacks tend to choose larger body sizes for their ideal figures than whites.<sup>7,14,15</sup> One study found that black females are seven times more likely to report they are not overweight than white females. Though there are many possible reasons for this discrepancy, black females receive much more praise for their bodies from black males than white females receive from white males.<sup>14</sup> Coupled with the cultural lack of distress about weight, black persons tend to have lower rates of BD compared to white persons.<sup>15</sup>

A 2006 study (n=2252) looked at body-image among children of a variety of different races and ethnicities: white UK, white non-UK, black African, black British, black Caribbean, Bangladeshi, Pakistani, Asian Indian, and mixed ethnicity. The proportion of boys and girls trying to lose weight did not vary significantly across racial and ethnic lines. However, as individual results for each race were calculated, it was found that blacks of all ethnicities had the lowest desire for weight loss. This result was consistent across genders. Bangladeshi women had the highest rate of BD out of the ethnicities represented (n=307) with nine percent of underweight and 33% of normal weight Bangladeshi women currently trying to lose weight-- these results were 5% higher than the next highest racial and ethnic group, white British women.<sup>15</sup>

When it came to self-esteem, black ethnicities had the highest ratings, particularly in the obese category. Most obese blacks had higher self-esteems than those in lower weight categories. The only ethnicity that had a significantly lower self-esteem when obese was Bangladeshi women. BD was fairly consistent across all races and all genders, and Bangladeshi women were the only individuals who had a significant increase in BD when weight increased. It is important to note that BD was not only consistent in all groups, but was also high in all groups;

Bangladeshi women happened to be the only individuals that saw a significant change as weight increased.<sup>15</sup>

### **Body Dissatisfaction and Children**

BD in adolescents has been documented for decades, but emerging research focuses on BD in children. Recent studies are finding that BD begins around age 5 for girls and age 7 for boys.<sup>2,3,6,10</sup> Girls tend to focus on thinness and weight loss, but boys focus on thinness and muscularity. Though their BD is presented in unique ways, there is no significant difference between the rates of BD in males and females.<sup>5,7,10,11,12,19,20</sup>

An Australian study conducted in 2003 found that over 50% of 5-7 year old boys and girls indicated that weight was important to them. Forty-seven percent of girls, and 38% of boys desired to have a thinner body, and 14% of the study participants met the criteria for having an eating disorder.<sup>10</sup> Although girls are statistically more likely to engage in compensatory behaviors, the desire for a different body remains stable in both genders.<sup>11,12,19,26</sup> These percentages are very similar to the rates of BD seen in adolescents.<sup>1,3,7,8,9,24</sup>

By age six, girls are aware of and use dieting as a tool to lose weight; however, when asked, most of them are unable to define the word 'diet'.<sup>16</sup> By age nine, 14-21% of girls have dieted.<sup>1,8,9,26</sup> By age twelve that number rises to 33% and increases to over 50% by age fourteen.<sup>8,9,26</sup> One-third of elementary school girls engage in purging and restricting as compensatory methods, and 24% of girls in the lowest BMI range have a strong desire to be thinner.<sup>7</sup> But this problem is not just seen in girls; 30-45% of boys have a desire to be thinner, and 32% feel that they are slightly or really overweight.<sup>5,7,14,26</sup> All of these numbers are comparable to the rates of BD in girls. BD increases as children get older, with one study finding a near perfect correlation between BD

at age 5 and BD at age 9.<sup>8</sup> Not only is BD constant as children age, but it increases many times over.<sup>8,24</sup>

### **Weight Bias and Children**

Although BD begins as early as age five in young children, weight bias begins earlier, around age three.<sup>2,6,21,22,23,40</sup> In 2006, Dohnt and Tiggemann measured weight bias by telling young girls, ages 5-8, a story about an overweight doll named Anne. The girls were asked whether Anne would have friends, and whether Anne should be concerned and change her weight. Thirty-nine percent of the girls believed Anne would get teased, 65% percent believed Anne was overweight because of her diet, and 47% said Anne should restrain herself and lose weight.<sup>1,6</sup> Being overweight was seen as a weakness and something a person had control over.<sup>21</sup>

In other studies, heavier figures were chosen as the 'mean' ones and were given more negative comments than the thinner figures.<sup>1,2,6,21,23,24,25,40</sup> Thin figures were 68% more likely to be kind to others, 65% more likely to be pretty, and significantly more likely to be popular.<sup>1,6,21,25,40</sup> Over half of participants, when asked, were not willing to play with a heavier person when asked to switch from a thinner one.<sup>6,23</sup> Heavier people were described as being: lazy, sloppy, naughty, stupid, mean, and nasty.<sup>2,22,40</sup> No sex differences were seen in the way both boys and girls treated their overweight peers.<sup>25</sup>

### **Misclassification of Children's Weight and Weight Bias in Adults**

The exact rate of the weight misclassification of child is unclear, but 50-98% of adults are unable to correctly classify their child in the proper category. Over 50% of underweight children are classified as normal or even overweight. However, most misclassification occurs with

overweight children, with rates reaching 80%.<sup>29,30,31</sup> Despite these numbers, 86% of children with a normal weight are classified correctly by parents.<sup>31</sup>

Whether a child's weight is classified correctly or not, BD still occurs. Children who grow up witnessing parental BD experience high rates of BD as well.<sup>12,26,27,28,31,32</sup> Parents are vital in the development of body satisfaction, which is formed through modeling, verbal messages, physiological factors, and personal experiences. Of all these factors, mothers' verbal messages have the highest correlation with BD in children.<sup>12,27</sup>

One study found that girls are twice as likely to diet and experience disordered eating if their mothers did. Mothers also indicated that they utilized exercise and restrictive eating as a way to help control their child's weight.<sup>26</sup> A different study concluded that parental pressure to lose weight was associated with a lower adult body weight and parental restrictive eating was associated with a higher adult body weight.<sup>32</sup> Parental concern and misunderstanding of the health status of their child can cause BD to develop.<sup>12,26,27,28,30,31,32</sup> Children of parents who are misclassified as obese tend to end up being obese when they reach adulthood.<sup>31,35</sup>

### **Previous Interventions and Directions for Research**

Interventions have been implemented in an attempt to change the adverse effects of BD. Although researchers have quantified the rates of BD among children, their ability to resolve the issue has proven much harder, with no studies resulting in any prolonged positive effects.<sup>41,42,43</sup> Though interventions typically lead to an increase in knowledge for the children, they do not lead to a change in behavior or thought.<sup>38,42,43</sup>

One contributing factor to this ongoing issue is the lack of body-image and weight instruction for younger children.<sup>38,42,44</sup> Dohnt and Tiggemann suggest that the absence of body-image instruction is unethical, as children are not given the necessary tools against such a

pervasive issue.<sup>42</sup> In the United Kingdom, where much of the current research on body-image is conducted, children are not taught about body-image, but rather about nutrition and cooking. In the United States, on the other hand, most of the K-12 population goes without any nutrition instruction.<sup>38,44</sup>

This lack of education is an ideal place to start for combatant efforts in BD.<sup>11</sup> The lack of success seen in interventions could be due to educators' inadequate knowledge on the subject of body-image.<sup>40</sup> It is also likely that interventions need to be repeated multiple times for them to be effective.<sup>11,41</sup> However, it is also possible that education alone will not help solve the problem.<sup>43</sup> More research needs to be done on the effectiveness of long-term interventions and education.<sup>41,43</sup> It also needs to be noted that most research on BD is conducted in the United Kingdom and Australia.<sup>3,4,5,6,10,15,17,19,20,21,23,26,27,28,30,31,34,35,39,41,43</sup> As some research suggests, the rate of BD among children is potentially worse in developed countries, specifically in the United States.<sup>4,8,34,45</sup> For future interventions to be successful, it is imperative that other world leaders, such as the United States, researches their individual population and draws their own conclusions. Since no interventions in the UK and Australia have been beneficial long-term, collaboration on this topic is key to future success.<sup>39,40,41,43</sup> Researchers so far have determined the rates of BD among children in various age and demographic groups, but not much is known about why children feel such high rates of BD in the first place.<sup>11,23,37</sup> As research moves forward, interventions will be more successful as the reasons behind BD are determined.<sup>11,23,37</sup> As interventions for children become more successful, the involvement of parents and adults is crucial to continue to foster a healthy body-image in the children they interact with. This way children will enter adolescence with the tools and support necessary for a healthy body-image.<sup>26,27,28,29,30,31,32,33</sup>

## **Conclusion**



BD is much more common among young children than originally predicted. Many young children experience BD and show negative biases towards overweight individuals. Although some of these biases come from interactions with peers, much of it begins with parents and their influence. Perhaps the most significant finding in this review is that the rate of BD is similar, regardless of gender, but the rate between races and ethnicities is remarkably different. As research moves forward, it should focus more on what a successful intervention might look like for such a young and diverse population.

## Reflection

**Word Count: 1,491**

My capstone was a great experience! It was one of the most challenging things I've completed in my college career, but I am glad I did it. Since my academic program is one of the most challenging and time consuming on campus, I decided to start my capstone project much earlier than everybody else—I knew by my sophomore year what I wanted to do, and research began the summer before my junior year. One challenge I experienced during this time was finding a mentor who was willing to help me on my project. I started my freshman year researching with a professor who studies obesity in the sociology department, but since my project focused on dieting, I thought that he probably wouldn't be the right person. I then tried to get in contact with the dietitian on campus who counsels students with eating disorders, but after meeting with her once or twice she stopped replying to my emails. This was very frustrating to me because she seemed so excited but then did nothing to show for it.

After weeks of debating, I finally contacted a professor in my department to see what advice she would have for me. She pointed me to two different professors, and though one of them ended up being my main mentor for the capstone, I worked very closely with both and built meaningful relationships with each. My main mentor helped guide my project, and the other spent a lot of time with me working on the paper.

At the beginning of all of this, I wasn't exactly sure of the specific of my project. I knew I wanted to study body-image in children and youth, but my original proposal was much too broad. I wanted to interview students from every other grade K-12 and measure their body dissatisfaction. Then I would compare and analyze the data I saw in each grade. My overall thought was that body dissatisfaction started around first or second grade, but I wanted to see the

data to prove that. Upon reflection, I decided to focus solely on young children—there was no point in putting all of the work into finding rates of body dissatisfaction with people ages 7-18 when I hypothesized the issue began at 7.

In retrospect, though the data from all ages would have been fascinating to look at, I am extremely grateful that I decided last minute to focus on children. Both of my mentors have young children, and they were interested in seeing where my research led—it was very real and applicable to them. Because of my research, I found my passion. I never would have thought at the start of my college career that I would be researching body dissatisfaction among children, yet here I am.

What I love most about this research is that it applies to everyone. Everybody interacts with little children at some point in their lives, whether they work around children, have young siblings, or have children of their own. I have had countless parents ask me questions about what they can do to foster a healthy body-image in their children. Camp leaders have asked me to speak at all-female camps about the topic. A PhD candidate in my department is even using my research to further hers. The importance of understanding the relationship between your own words and actions and the thoughts that children have is highlighted in my paper. Children are molded and shaped by their environment, and this is why we are seeing 33% of children dieting by age nine. I hope my paper will get the attention of parents and other adults to spark a change in how we talk about ourselves and our children.

Another positive aspect of my project is that it spans across a number of different disciplines. In fact, you could even argue that my paper has more in common with other disciplines than it does with nutrition. Research on body dissatisfaction among children incorporates psychology, sociology, K-12 education, and even politics, to an extent. Body-image really delves into the

thought process of an individual and how that thought process began. Most often, societal influences such as media, advertising, and schooling contribute to its development. My research gave me a deeper understanding of these 21<sup>st</sup> century issues and gave me ideas on how to combat them in my own life.

Perhaps the most compelling aspect of my research was how it made me aware of other issues in nutrition and how they could potentially affect body dissatisfaction. In my medical nutrition therapy class, we had a debate on whether healthcare providers should weigh their patients or not when they come into the clinic. After thinking about this, keeping body dissatisfaction in mind, I felt like I consciously couldn't support weighing patients due to the potential mental health effects.

In a different class, we were discussing motivational interviewing and how this area can seem particularly weight-focused at times. Patients tend to want to lose weight and get upset if they don't, no matter any other positive consequences to their lifestyle changes. It was interesting to share my point of view about not focusing on weight during weight loss—I never would have thought that my research on body dissatisfaction would come up in an interviewing class. It amazes me how the way I see the world has changed dramatically just within the last year. My opinions have changed, my viewpoints have changed, and my perspective has changed. I am much more careful with how I compliment others, making sure to not compliment somebody based on their weight, and I try to foster a healthy body-image in those I come in contact with.

Not only has my perspective of others changed throughout this experience, but I see myself differently. A lot of times nutrition majors are very strict with their diet and weight, giving themselves little wiggle room, and I have changed that. I am not very strict with what I eat anymore, but instead eat what I feel like eating. When I do this, it amazes me that I actually eat a

balanced diet. Sure, occasionally I'll have ice cream a few days in a row, but then I get back to eating normally. Everything balances out. And that is all because of my research!

Though all of the contributions of this capstone have been important, I think the most significant and impactful is the contribution it has made to my future career. I used to want to work in a disordered eating clinic and counsel patients struggling with eating disorders, but I've decided to work with disordered eating in a different way—prevention. Before my capstone, I wasn't sure about graduate school—I knew that I would probably eventually go, but I wasn't sure what I would study, nor whether I even needed the degree. But my research made me realize exactly what I want to do—education young children about the importance of body acceptance, nutrition, and being happy being who you are. This research will be aided by the PhD in nutrition science I plan on pursuing after I graduate, and I am very excited about where this goes. I envision the creation of a curriculum designed for K-6 grade children, giving them the tools they need to combat the issues of body dissatisfaction they will encounter as they age.

Because of my experiences in my capstone, my mentor professors will be my mentors for my PhD. I was very nervous to meet and talk with my professors at the beginning of my research, but over time I came to truly admire their opinions, advice, and mentorship through this whole process. I have learned a lot about myself, my writing, and though not every minute of it has been 'fun,' everything I learned has value and will apply to different experiences throughout my life.

When it comes to advice for other students, I have some I hope will be helpful. Firstly, find your passion and make that your capstone. You will not enjoy doing research for something you truly do not care about. It takes a lot of time, effort, and planning, and you will always get out of it what you put in.

Secondly, start early and get it done. If you start early, there is no cramming at the end. You will have time to focus on your other responsibilities and also get this done. Honor's students are very busy by nature—don't make it worse for yourself by procrastinating this project.

And lastly, enjoy the process. It will be hard. You will at times want to throw your laptop across the room. Or eat a half gallon of ice cream. But at the end of the day, you can look at your project and know that you did that. You put in the work. You enjoyed the journey. And your life will never be the same.

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### **Author Biography**

Megan Jensen was born in Hillsboro, Oregon, but grew up in Boise, Idaho. Both of her older brothers attended Utah State University for their undergraduate degrees, and Megan decided to follow in their footsteps. Megan graduates in Spring 2019 with a bachelor's degree in nutrition and dietetics and a minor in psychology. During her undergraduate degree, Megan's English 2010 essay on dieting was published in the *Voices of USU* textbook, and a factsheet about parental influence on body-image was published through USU Extension. She is currently working on publications for a literature review on body dissatisfaction and weight bias in young children, and a factsheet about mental health. After graduating, Megan will do a one-year internship and get licensed to practice as a registered dietitian before coming back to USU to complete a PhD in nutrition science. Her PhD will continue to focus on body dissatisfaction in children by creating a curriculum to be implemented into elementary schools. She would also love to visit the United Kingdom, where most body-image research takes place, and discuss future interventions with experts in the field.