An Experimental Assessment of Physical Educators’ Expectations and Attitudes: The Importance of Student Weight and Gender

JAMIE LEE PETERSON, MAa REBECCA M. PUHL, PhDb JOERG LUEDICKE, MSc

ABSTRACT

BACKGROUND: At school, physical education (PE) teachers and coaches may be key supports for physical activity. Unfortunately, PE teachers may endorse negative stereotypes and attitudes toward overweight youth. These biases may influence the amount of instruction physical educators provide to students and their participation in PE or other physical activity.

METHODS: This study assessed physical educators’ (N = 162) ability and performance expectations, attributions, and attitudes toward overweight and non-overweight students.

RESULTS: Physical educators endorsed inferior ability expectations for overweight students compared to non-overweight students. Poorer performance expectations were limited to overweight female targets, but when controlling for participant characteristics, this effect became marginally significant for overweight male targets. There was a trend such that participants endorsed more external attributions for the abilities and performance of overweight female students, yet this effect was reduced to marginal significance when controlling for participant characteristics. Participants endorsed more negative attitudes for both overweight males and females compared to non-overweight youth.

CONCLUSIONS: Findings indicate that physical educators’ expectations, attributions, and attitudes regarding students may be negatively influenced by youth body weight, and differ by student gender. The potential effect of physical educators’ weight bias on adolescent participation in physical activity and its implications for students’ physical health, academic achievement, and social development are discussed.

Keywords: child and adolescent health; physical fitness and sport; weight stigma; physical education; teacher; weight bias.


Received on September 20, 2011
Accepted on March 15, 2012

Teachers’ perceptions and expectations of their students may be influenced by numerous factors including biologically based features such as race and gender,1 and appearance-related features such as physical attractiveness and facial expressions.2 Teachers’ perceptions and expectations of their students are also influenced by body weight.3 Unfortunately, overweight individuals are frequently the targets of weight bias in educational settings by their teachers and peers.4 With 34.7% of Americans youth currently overweight or obese,5 millions may be vulnerable to biased teacher expectations.

Within the school environment, physical education (PE) and activity settings are domains of particular importance as several common, negative stereotypes of overweight persons are relevant to the physical domain (eg, lazy, slow, inactive, weak, and no endurance).6 Some PE teachers endorse biased perceptions of obesity and hold low expectations for overweight youth in the domains of general ability (eg, reasoning, cooperation, and social interaction) and sports performance (eg, endurance, strength, flexibility, and coordination).7 Individuals training to become physical educators also endorse negative...
weight-related beliefs.\textsuperscript{8-11} Further, these individuals may display more negative weight-related beliefs compared to peers training in other fields,\textsuperscript{10} and weight bias may worsen with training.\textsuperscript{9}

Weight bias makes physical activity and PE environments challenging for overweight youth. Weight-related teasing and criticism may decrease youth involvement and enjoyment in physical activity, and increase their preferences for solitary or sedentary activities.\textsuperscript{12,13} Students who have been teased or bullied because of their weight may attempt to escape further victimization by avoiding PE or school.\textsuperscript{14} This bullying may exclude overweight youth from the health benefits of physical activity,\textsuperscript{15} while also perpetuating the academic disparities documented between overweight and non-overweight youth.\textsuperscript{3,16}

Complicating the issue of weight bias in physical activity settings are important gender differences. Girls may be more vulnerable to weight or body-related criticism and teasing\textsuperscript{14,17-19} compared to boys. These gender differences accumulate in addition to the existing gender stereotypes of physical abilities and PE.\textsuperscript{20} Thus, females may be especially at risk for PE teachers’ and sport coaches’ biased weight-related perceptions or expectations.

To date, evidence pertaining to perceptions of students’ weight among PE teachers has been primarily derived from studies using samples of general school teachers\textsuperscript{21} or individuals training to become physical educators,\textsuperscript{10,11} and have used non-experimental methodology such as surveys,\textsuperscript{7} or focus groups.\textsuperscript{14} To our knowledge, no studies have assessed attitudes, beliefs, and expectations of overweight youth among school sport coaches. Only 1 study examined experienced PE teachers,\textsuperscript{7} and although informative, this research did not assess participants’ expectations by student gender or age, which is important given gender and age effects in experiences and expressions of weight bias.\textsuperscript{22} Additionally, this study used a general measure of weight bias (ie, anti-fat attitudes scale)\textsuperscript{23} that contained some adult-oriented items not relevant to teachers’ perceptions of students (eg, sexual attractiveness), and used “fat” as a target weight label, which may invoke negative connotations.\textsuperscript{24}

**PURPOSE**

The present study aimed to improve upon existing research by experimentally assessing whether, and how, a student’s body weight and gender influence PE teachers’ and sport coaches’ expectations of students’ abilities and performance. Anti-fat attitudes toward overweight youth were also assessed, and as alternatives to textual descriptions, neutral photographs depicted target gender (male, female) and weight (overweight, non-overweight). To our knowledge, this study is the first to systematically assess perceptions and expectations of students with differing body weights and gender using a national sample of PE teachers and sport coaches.

**METHODS**

**Participants**

Participants were recruited during a 2-week period in February of 2011 through Market Data Retrieval (MDR),\textsuperscript{25} a provider of marketing information and services for US education markets. MDR emailed a recruitment flier to 3,000 middle, junior, and high school PE teachers, and 3,000 high school sport coaches from their database of 97,415 teachers and 20,362 coaches. Although the typical MDR click rate (ie, opening the email and clicking on the link) is between 2\% and 2.5\%, the current study was more than double (5.3\%). Gift certificates were provided as incentives.

**Instruments**

Photographs of a Caucasian male and female were selected from a database of youth images (Yale Rudd Center for Food Policy & Obesity, 2010).\textsuperscript{26} The body mass index (BMI) of both models was initially classified in the overweight range,\textsuperscript{27} thus, model body size was manipulated using photo editing software\textsuperscript{28} to depict a non-overweight body size as well (Figure 1). Twenty-four photographs (6 of each gender and body weight) were piloted with 124 adults (65\% female, mean age = 36.4 years) to ensure that target body weight was correctly identified and to match images according to perceived weight, age, typicality, and how flattering the youth were portrayed. Four comparable photographs were selected that participants rated accurately in terms of body weight and age, and neutral in terms of attractiveness and likelihood of being a school child from their area.

**Sample Characteristics.** Participants answered demographic questions (eg, sex, age, weight and height to calculate BMI, highest level of education completed, and current household income), and questions about their profession. Participants were also asked four dichotomous questions to assess whether they had ever been teased or treated unfairly because of their weight.

**Ability Expectations.**\textsuperscript{7} This measure assessed participants’ expectations of the target’s abilities: “These questions assess how people describe others physically. For the following questions, please think about [target] in relation to your other students and young people in general.” Participants rated their expectations for 9 items spanning the following categories: strength, flexibility, stamina/endurance,
fluency of movement, and athleticism. Responses were presented in a random order and scored on a 4-point Likert scale (“strongly disagree” to “strongly agree”).

**Performance Expectations.** This measure assessed participants’ expectations of the target’s performance: “How would you expect [target] to behave or perform during PE class or sports practice?” Participants rated their expectations pertaining to 4 items: “overall performance of physical skills,” “ability to reason,” “cooperative behavior during class,” and “social relations with [his/her] peers.” Responses were presented in a random order and scored on a 5-point Likert scale (“well below average” to “well above average”).

**Attributions for Ability/Performance.** This measure assessed participants’ internal and external attributions for the target’s abilities and performance: “How likely is it that [target’s] physical abilities or sports performance are influenced by the following factors?” Participants rated their attributions for 11 items: “personality traits,” “home environment,” “learning difficulties,” “emotional problems,” “social difficulties,” “lack of physical activity,” “motivational difficulties,” “neglect/lack of attention from others,” “poor eating habits,” “school environment,” and “medical problems.” Responses were presented in a random order and scored on a 5-point Likert scale (“very unlikely” to “very likely”).

**Attitudes Toward Targets.** Participants completed a modified version of the Fat Phobia Scale. The original semantic differential scale contained 14 pairs of adjectives (eg, “lazy” versus “industrious,” “no will power” versus “has will power”), and respondents were asked to indicate which adjective best describes their feelings and beliefs about obese or fat people. The current study assessed attitudes specifically about the target student, added several education-related adjectives (eg, “bad attitude” versus “good attitude,” and “doesn’t follow directions” versus “follows directions”), and removed adjectives that were less relevant to teachers’ perceptions of students (eg, “shapeless” versus “shapely,” and “unattractive” versus “attractive”). Higher scores indicate more negative attitudes (range: 1-5).

**Procedure**

Participants were randomly assigned to 1 of 2 conditions (non-overweight or overweight student) for both a male and female target. Thus, participants viewed 2 targets in total, but only 1 weight category for each gender. Participants were instructed to make an initial evaluation of a new student being transferred to their class, using a photo, brief description, and their best judgment as a teacher or coach. Then, participants were presented with a color photograph of the target (Michael/Jessica) and this information: “Michael/Jessica is an average 13-to-14-year-old student.” Target pictures accompanied all measures in the survey.

**Data Analysis**

In addition to descriptive statistics, analysis of variance (ANOVA) and linear regression models (OLS) were estimated, and both estimated coefficients and marginal means are presented. All analyses were conducted with Stata 11.1.

**RESULTS**

**Sample Characteristics**

The final sample included 162 PE teachers and sport coaches. Males comprised 59%, and the mean
age was 43.7 years (SD = 10.2). Most participants taught high school (71%) or middle school (28%) students. Most teachers (89%) taught at public schools and 8% taught at private schools. Most taught PE (73%), but 27% were sport coaches who taught other subjects (eg, history or geography), or did not teach classes (2%). Frequently coached sports included basketball (39%), baseball/softball (26%), soccer (21%), and football (21%). College degrees included basketball (39%), baseball/softball (26%), and other subjects (eg, history or geography), or did not teach classes (2%). Frequently coached sports included basketball (39%), baseball/softball (26%), soccer (21%), and football (21%). College degrees included basketball (39%), baseball/softball (26%), soccer (21%), and football (21%).

BMI values were stratified. The sample was 33% non-overweight and 67% overweight or obese, which is comparable to the national population. Sample characteristics did not significantly differ across experimental conditions.

### Attitudes Toward Target Students

Participants endorsed more negative attributes for overweight targets (M = 2.85, SD = .46) compared to non-overweight targets (M = 2.53, SD = .46), p < .001; however, ratings for males and females did not differ within the same weight group (p > .05). The most favorable attributes were endorsed for non-overweight females (M = 2.45, SD = .48), and the most negative attributes were endorsed for overweight males (M = 2.88, SD = .52) (see Table S2).

#### Analysis of Variance

To examine participants’ expectations, attributions, and attitudes regarding the targets, four different dependent variables were created by combining items within the abilities measure (female targets: M = 3.40, SD = .51, α = .81; male targets: M = 3.32, SD = .53, α = .80), the performance measure (female targets: M = 2.45, SD = .37 α = .87; male targets: M = 2.42, SD = .40, α = .89), the ability/performance attributions measure (female targets: M = 3.34, SD = .66, α = .91; male targets: M = 3.45, SD = .65, α = .91), and the attitudes measure (female targets: M = 2.64, SD = .47, α = .91; male targets: M = 2.75, SD = .49, α = .92). Dependent variables were z-standardized.

A series of ANOVAs were conducted to examine the effect of student body weight on participants’ expectations, attributions, and attitudes for male and female students (Table 1; corresponding means presented in Figure 2). Effect sizes for significant findings ranged from $\eta^2 = .031$ to $\eta^2 = .150$, reflecting small to medium effects. For female targets, participants endorsed higher ability expectations for non-overweight students compared to overweight students, $F_{1,156} = 15.47, p < .001, \eta^2 = .090$. Participants also expected non-overweight females to have better physical performance than overweight females, $F_{1,159} = 6.06, p = .02, \eta^2 = .037$. Participants rated external factors (eg, lack of physical activity, poor eating habits, and home environment) to more likely influence overweight females’ physical ability and performance compared to non-overweight females, $F_{1,157} = 4.97, p = .03, \eta^2 = .031$. Participants also assigned more positive adjectives to non-overweight females than overweight females, $F_{1,158} = 27.95, p < .001, \eta^2 = .150$.

Similarly, for male targets, participants expected non-overweight students to have better abilities than overweight students, $F_{1,157} = 25.67, p < .001, \eta^2 = .141$. However, there were no significant differences in physical performance expectations for non-overweight boys compared to overweight boys, $F_{1,159} = 1.90, p > .05, \eta^2 = .012$, although the effect was in the expected direction. Also in contrast to female targets, participants’ beliefs about the factors that influence physical ability and performance did not differ between non-overweight and overweight male targets, $F_{1,158} = 1.18, p > .05, \eta^2 = .007$. However, similar to female targets, participants assigned more positive adjectives to non-overweight males than overweight males, $F_{1,158} = 13.45, p < .001, \eta^2 = .078$.

### Regression Analyses

OLS regression analyses were conducted to examine the influence of the target’s body weight and participant characteristics on participants’ self-reported expectations of male and female targets’ abilities and physical performance (Table 2). Participants’ self-reported characteristics (eg, BMI, gender, area of living, age, years of teaching, and previous experience of weight-related discrimination) did not influence expectations of target students’ abilities. Participants expected that non-overweight youth would have significantly better abilities than overweight youth (p < .05). Participants also expected non-overweight students, $F_{1,156} = 15.47, p < .001, \eta^2 = .090$. Participants also expected non-overweight students, $F_{1,156} = 15.47, p < .001, \eta^2 = .090$. Participants also expected non-overweight students, $F_{1,156} = 15.47, p < .001, \eta^2 = .090$. Participants also expected non-overweight students, $F_{1,156} = 15.47, p < .001, \eta^2 = .090$.
females to have significantly better physical performance than overweight females (p < .05). Controlling for covariates (e.g., participant characteristics, work-related information, and history of weight stigma) altered one effect from the previously reported ANOVAs, indicating that non-overweight males were expected to have better performance compared to overweight males with marginal significance (p < .10).

No consistent patterns were observed across other demographic variables; however, a few significant findings emerged. Participants with postgraduate education rated male targets’ expected abilities and performance more negatively compared to participants with only college education. In addition, participants with male targets’ abilities and annual household income more than $50,000 rated female targets’ performance more positively compared to participants with annual household income less than $50,000. Finally, participants who reported greater teaching satisfaction rated male targets’ abilities more positively.

OLS regression analyses were also conducted to examine the influence of the target’s body weight and participant characteristics on participants’ self-reported attributions of ability and performance, and attitudes toward targets (Table 3). Participants’ self-reported characteristics generally did not influence their attributions or attitudes toward target students, and differences across the experimental conditions remained generally consistent with results from the previously reported ANOVAs. Participants expected that overweight females’ abilities were more likely influenced by external factors compared to non-overweight females with marginal significance (p < .10), but there were no significant differences in participants’ attributions for male targets’ performance (p > .05). Participants also assigned more positive adjectives to non-overweight male and female targets compared to overweight targets (p’s < .001). No consistent patterns were observed across other demographic variables, however, a few significant findings emerged. Participants with an annual household income between $50,000 and $75,000 reported more negative attitudes toward female targets compared to those earning less than $50,000. In addition, participants who reported greater teaching satisfaction reported more negative attitudes toward male student targets.

DISCUSSION

This study is the first to systematically assess expectations, attributions, and attitudes toward students of differing body weights and gender using a national sample of PE teachers and sport coaches. Participants expected overweight students to have inferior physical abilities compared to non-overweight students. Participants also expected overweight females to exhibit inferior physical performance, reasoning, cooperation, and social skills compared to non-overweight females. Although participants were more likely to attribute overweight females’ abilities and performance to external factors compared to non-overweight females, there was no difference between overweight and non-overweight males. Participants reported more negative attitudes toward overweight targets compared to non-overweight targets for both males and females. These findings generally remained unchanged.
Table 2. OLS Regression Models Predicting Participants’ Ability and Performance Expectations of Target Students†

<table>
<thead>
<tr>
<th></th>
<th>Expected Ability</th>
<th>Expected Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female Target</td>
<td>Male Target</td>
</tr>
<tr>
<td>Child weight status (reference category non-overweight)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>-.698a</td>
<td>-.709a</td>
</tr>
<tr>
<td>Teacher weight status (reference category non-overweight, BMI &lt; 25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight or obese (BMI ≥ 25)</td>
<td>-.063</td>
<td>-.092</td>
</tr>
<tr>
<td>Teacher gender (reference category male)</td>
<td>-.084</td>
<td>.061</td>
</tr>
<tr>
<td>Female</td>
<td>-.256</td>
<td>.191</td>
</tr>
<tr>
<td>Area of living (reference category urban)</td>
<td>-.203</td>
<td>.086</td>
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<td>Rural</td>
<td>-.205</td>
<td>.350f</td>
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<tr>
<td>Suburban</td>
<td></td>
<td></td>
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<tr>
<td>Highest educational degree (reference category college)</td>
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<td></td>
</tr>
<tr>
<td>Postgraduate degree or higher</td>
<td>-.205</td>
<td>-.350f</td>
</tr>
<tr>
<td>Annual household income (reference category $0-$50,000)</td>
<td>.158</td>
<td>-.058</td>
</tr>
<tr>
<td>&gt; $50,000-$75,000</td>
<td>.201</td>
<td>.468d</td>
</tr>
<tr>
<td>&gt; $75,000-$100,000</td>
<td>.308</td>
<td>.139</td>
</tr>
<tr>
<td>&gt; $100,000</td>
<td>-.018</td>
<td>.003</td>
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<tr>
<td>Age (in years)</td>
<td>.194</td>
<td>-.072</td>
</tr>
<tr>
<td>Yes</td>
<td>.005</td>
<td>.001</td>
</tr>
<tr>
<td>No</td>
<td>.101</td>
<td>.315b</td>
</tr>
<tr>
<td>Teaching PE</td>
<td>.647</td>
<td>1.577e</td>
</tr>
<tr>
<td>Yes</td>
<td>.313</td>
<td>-.069</td>
</tr>
<tr>
<td>No</td>
<td>154</td>
<td>155</td>
</tr>
</tbody>
</table>

†Significance levels: a p < .001, b p < .01, c p < .05, d p < .10.

After accounting for participant characteristics including gender, BMI, education, age, teaching experience, teaching satisfaction, and previous experience of weight discrimination. However, when controlling for demographic factors, participants’ superior performance expectations for non-overweight male targets increased from non-significant to marginally significant, and the effect of external attributions was reduced to trend level for female targets.

Findings indicate notable gender differences such that weight bias was more consistent across domains for female students than for male students. These findings are concerning for several reasons. First, females already report less participation in physical activity than boys. Second, females may be more susceptible to weight bias compared to their male counterparts in general. Thus, weight bias within and outside of the physical environment may intensify overweight females’ documented lack of enjoyment and participation in PE and sports activity, perhaps exacerbating the cycles of weight bias and overweight.

It is notable that participant demographics such as annual household income, education level, and teaching satisfaction were significantly related to participants’ expectations of targets’ abilities and performance, and their attitudes toward targets. Given that approximately 46% of health and PE teachers have postgraduate education, it is especially concerning that higher education was related to more negative ratings of male targets. Evidence linking education level and weight bias is mixed, thus, future research is needed to clarify these effects. Findings relating participant income and teaching satisfaction with targets’ expected abilities, performance, and participant attitudes are also somewhat puzzling, and warrant further research.

Participants generally expected overweight males and females to be in poorer physical condition and exhibit inferior physical performance compared to their non-overweight peers. Although there is a paucity of research on physical educators’ influence specifically on the development and outcomes of overweight students, PE teachers’ and coaches’ expectations may influence a range of student factors. For example, a prospective observational study examined the effect of PE teachers’ performance feedback and found small self-fulfilling effects of teacher expectations on student performance. Thus, physical educators’ negative expectations of their athletes may be detrimental for student-related factors ranging from internal self-perceptions to external physical performance, and overweight females may be more vulnerable to these outcomes. Future
The overall response approximated the national population of health and fitness goals. Although sample characteristics generally reflect the national population, several limitations should be noted. Despite a general tendency for people to underestimate self-reported weight and to overestimate height, these inaccuracies are often modest, and reported data are generally highly correlated. Although the nature of our study allowed for controlled experimental manipulation, it may not correspond to actual behavior. Future research should examine teachers’ and coaches’ interactions with students and athletes of varying body weight at school or in classroom settings. Finally, the current study examined participant reactions to Caucasian students. It is important for future research to examine PE teachers’ and coaches’ reactions to overweight and non-overweight students of diverse racial or ethnic groups.

### CONCLUSION

According to the National Association for Sport and Physical Education standards, physical educators must ensure that they “exhibit responsible personal and social behavior that respects self and others in physical activity settings” and “value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.” Overall, the present study indicates that physical educators may endorse more negative expectations, attributions, and attitudes for overweight students compared to non-overweight students. Weight-related biases may influence PE teachers’ and coaches’ interactions with overweight students or contribute to differential responses to student victimization. This may discourage youth participation in physical activity or sports and ultimately compromise overweight youths’ academic achievement, enjoyment of PE and activity, health, and social interaction. Although it is already established that females participate less in physical activity compared to males, the current study indicates that females may also be especially vulnerable to weight bias from physical educators. Increasing awareness of weight bias and its consequences in PE teachers and coaches could result in educational, physical, and social benefits for overweight youth.

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**Table 3. OLS Regression Models Predicting Participants’ Attributions and Attitudes of Target Students†**

<table>
<thead>
<tr>
<th>Target weight status (reference category non-overweight)</th>
<th>Ability and Performance Attributions</th>
<th>Attitudes Toward Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female Target</td>
<td>Male Target</td>
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<tr>
<td>Overweight</td>
<td>.316†</td>
<td>−.135</td>
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<tr>
<td>Teacher weight status (reference category Non-overweight, BMI &lt; 25)</td>
<td>.240</td>
<td>.216</td>
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<tr>
<td>Overweight or obese (BMI ≥ 25)</td>
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</tr>
<tr>
<td>Teacher gender (reference category male)</td>
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<td></td>
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<tr>
<td>Female</td>
<td>.174</td>
<td>.315</td>
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<tr>
<td>Area of living (reference category urban)</td>
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<td>.162</td>
<td>−.251</td>
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<td>Suburban</td>
<td>.156</td>
<td>.006</td>
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<td>Highest educational degree (reference category college)</td>
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<td>&gt; $50,000-$75,000</td>
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<td>.073</td>
</tr>
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<td>&gt; $75,000-$100,000</td>
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<td>−.230</td>
</tr>
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<td>&gt; $100,000</td>
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<td>−.239</td>
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<td>Teaches PE</td>
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<td>Yes</td>
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<td>Teaching experience (in years)</td>
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<td>Teaching satisfaction</td>
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<td>Discrimination experience (reference category No)</td>
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<td></td>
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<td>Yes</td>
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<td>.071</td>
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<td>Correctly recognized target weight?</td>
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<td></td>
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<tr>
<td>Yes</td>
<td>−.031</td>
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<tr>
<td>Constant</td>
<td>−.319</td>
<td>.545</td>
</tr>
<tr>
<td>N</td>
<td>155</td>
<td>156</td>
</tr>
</tbody>
</table>

†Significance levels: a p < .001, b p < .01, c p < .05, d p < .10.
IMPLICATIONS FOR SCHOOL HEALTH

Physical educators may be fundamentally important to youth during PE and activity. However, weight bias could compromise their ability to offer guidance and support. To remedy negative weight-related beliefs, measures should be taken to increase awareness of weight bias in educators with specialized training in obesity-related subjects (ie, weight bias, nutrition, eating disorders, obesity, weight-loss) in a manner that dispels negative attitudes and popular myths, and promotes understanding and transmission of accurate information to students. With this training, physical educators can be better equipped to approach their overweight students with increased compassion and understanding of the obstacles that these youth commonly face in the school setting, and avoid transmitting negative weight-related beliefs to students.

There are additional changes that PE teachers and coaches can make to improve the physical activity landscape for overweight students. Incorporating education about wellness into curriculum that emphasizes health behaviors rather than only body weight or thinness can help teachers avoid stigmatizing the very students they aim to help. Alternatively, educators can teach youth adaptive coping strategies (ie, problem-focused coping) to buffer them from the negative consequences of weight bias experienced during physical activity.12,40 With efforts to create a supportive and welcoming environment, participation in physical activity among overweight youth may be maintained, or even augmented.

Finally, it is noteworthy that over half of the physical educators who participated in our study also taught other subjects such as health courses. This implies that teachers charged with instructing youth about physical activity and health may endorse biases (even if unintentional) in domains that are particularly salient for a significant proportion of their students. This underscores the prevalence of weight bias in educators across multiple teaching disciplines, and highlights the need to inform all teachers about weight bias and its deleterious effects for overweight youth.

Human Subjects Approval Statement

Treatment of participants in the present study was reviewed and approved by the Yale University Institutional Review Board.

REFERENCES


14. Bauer KW, Yang YW, Austin SB. How can we stay healthy when you’re throwing all this in front of us? Findings from focus groups and interviews in middle schools on environmental influences on nutrition and physical activity. Health Educ Behav. 2004;31(1):34-46.


29. Stata [computer program]. Version 11.1. College Station, TX: StataCorp LP; 2009.

**SUPPORTING INFORMATION**

The following supporting information is available for this article:

**Table S1.** Sample characteristics.

**Table S2.** Percent endorsed negative attributes for targets by student gender and body weight.

Additional Supporting Information may be found in the online version of this article:

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- Center Corporation. 800 Rockwood Ventures, Kansas City, Missouri; www.centercor.com; www.teachersbuildingcolumbia.org
- Kansas Association of Health, Physical Education, Recreation and Dance, PO Box 116, Holton, Kansas 66747; http://www.kahperd.org/
- Kansas State Dept of Education, Safe and Drug Free Schools, 1201-10th Avenue, Topeka, Kansas 66612; www.kansassafeanddrugfree.org
- The SPARK Program, 410 Center Dr Hill Smith, San Diego, CA 92109; http://www.sparkpe.org/
- Wiwe Blackwood, 550 Main Street, Middlesboro, MA 01454; http://www.wiweblackwood.com

Silver Endowment Partners
- Department of Applied Health Science, Indiana University, 8157 E. 76th Street, Indianapolis, Indiana 46250; http://www.indiana.edu
- Kansas State Dept of Education, Special Education Services, 1201-10th Avenue, Topeka, Kansas 66612; www.kathletics.com

Sustaining Partners
- American Cancer Society. School Health Project National Home Office, 143 Elizabeth Street, Saginaw, Michigan 48637; www.canc.org
- Center for American Indian Community Health, University of Kansas Medical Center, Office of Preventive Medicine, Kansas City, Missouri; PO Box 309, Columbia, Missouri 65205; http://www.healthykidsmo.org/
- University of Florida, Department of Family, Housing & Retail, Gainesville, Florida; 20121; http://www.hhp.ufl.edu/heb.php/
- The University of Missouri Health Care, University of Missouri Health Care, School of Nursing Building, Columbia, Missouri 65211; www.missouri.edu
- Mississipi Coordinated School Health Coalition, PO Box 309, Columbia, Missouri 65205; http://www.mississippicoordinatedschoolhealthcoalition.com
- University of Kansas Medical Center, Office of Preventive Medicine, Kansas City, Missouri; 4705 Circle Drive, Columbia, South Carolina 29206; www.healthykidsmo.org

**CONTRIBUTOR INFORMATION**

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