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Assessing the Landscape: Body Image Values and Attitudes Among Middle School Boys and Girls

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Background: Body image refers to an individual's thoughts and feelings about his or her body and physical appearance. To date, several qualitative and quantitative findings implicate sociocultural influences, such as the media or parental pressure, in shaping female adolescents' body image perceptions. Overall, there is not much quantitative inventory of male attitudes toward elements of body image. **Purpose:** The present study investigated several attributes associated with body image among male and female middle school students in a diverse suburban middle school. Further, it briefly explored qualitative indicators to supplement the data set. **Methods:** A sample of 334 middle school students from Hopewell (OH) Junior School (approximately 50% male and 50% female) completed a 2-page survey assessing level of agreement toward various attributes associated with body image. Two open-ended responses regarding body health and body ideal were also captured. **Results:** The data indicate high levels of agreement (nearly 80%) among the total population that appearance is an important part of middle school children's personas. For many attributes, data for boys were parallel to the data for girls, setting a precedent for insight into boys' attitudes toward health and body image. For other attributes, girls had significantly higher levels of agreement (based on percentage of "strongly agree + agree" and mean response) for dieting (44%), depression over appearance (32%), and an inclination toward risky eating behaviors (10%) compared to their male counterparts. **Discussion:** Health and physical education professionals should not only maintain awareness of girls' desire to look their best physically and related influences and behaviors but acknowledge boys as having similar dispositions. **Translation to Health Education Practice:** Learning modules that review typical development of middle school children's bodies, how to become advertising savvy, types of dieting (e.g., binge eating), and how to recognize "at risk" groups should be developed to keep pace with the evolving societal definitions of body image and how students can take a defensive position in controlling their own definitions of a healthy body image.

BACKGROUND

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Body image definitions include a composite of attitude toward one's body (perception of physical self) and actions toward obtaining or maintaining that perception (level of

investment in service of the perception). Evaluation of the effects of investment can range from acutely conscious to dismissive/unconscious, depending upon the level of importance placed upon body image as part of one's overall persona or emerging persona. The aspects of body image comprise the way in which one views one's body (perceptual), the way one feels about one's appearance (affective), the thoughts and beliefs one holds about one's own body (cognitive), and the actions one takes due to dissatisfaction with one's body (behavioral).¹

Sociocultural factors are defined as tendencies and behaviors that arise from nongenetic causes; that is, the "nurture" element of nature vs nurture. Sociocultural components of body image are well established and have been on a trajectory toward "thin" and "perfection" for the past century. Many past, and certainly almost all current, icons of ideal present a warped and misleading "sense of possible" to adolescents, particularly girls. Imagery in fashion magazines, and nearly every outlet of print media, are digitally enhanced and modified to render a near-perfect photograph, which may be unknowingly assumed to be real. To the less media-savvy, these media tricks are a means to appeal to the psyche and convert naïve minds into believing that such a class of flawlessness is achievable.

A visual canvass of celebrity/fashion model representatives since the early 1900s portrays a progression of decreasing curves and overall weight/body mass index (with the exception of a brief period of voluptuousness in the 1950s, characterized by Marilyn Monroe and Catherine Deneuve). The media has fed these norms to the female citizens of their audience, who have internalized the notions of "thin is ideal," "thin is success," "thin is obtainable," and "thin is power."²

In parallel, men's health and sports magazines feature increasing physical prowess, with defined musculature and bulk, as a goal for adolescent boys and young men. The degree to which boys are affected by these images is still being explored; however, qualitative evidence would suggest that they are less fazed by media influences than girls.³

The drivers for body image are not just reserved for the media. There is evidence uncovering the role of parental, peer, and adult role model influences in affecting perceptions of body image.⁴ Mothers or maternal figures who themselves have adopted a slim body image mindset were more likely to present pressure on their daughters to do the same. Further, fathers are also perceived to have an influence on their daughters' attitudes toward body image.⁵ Mothers were seen to have a strong influence on their sons' body image, however, this may be more in the form of coaching for neatness and cleanliness as qualitatively assessed in focus group interviews of adolescent males aged 14 to 16.⁶

Consistent messages from media, family, and peers can create a subculture of middle school girls engaged in dieting and the pursuit of "thin." These influences spawn the irrational

fear of fat, glorification of a slender body shape, and unhealthy methods of dietary restraint. Study results have indicated that this subculture could be as high as 12.5% of the sampled population. Further, it remains undefined as to the lurking variables that may affect boys' engagement in attempts to achieve increased muscle tone and higher weight.

Using the current data repository on adolescent body image from the literature as a guide, we sought to augment the quantitative knowledge base for female adolescents and acquire a baseline quantitative understanding of male response to sociocultural influences on body image. To our knowledge, there is little to no quantitative evidence with a sizable base size that has evaluated male adolescent attitudes toward body image and its influences.

Fuel Up to Play 60

Hopewell (OH) Junior School was involved in Fuel Up to Play 60 during the course of this survey. Fuel Up to Play 60 (<http://www.fueluptoplay60.com>) is an in-school program that encourages the availability and consumption of nutrient-rich foods, along with at least 60 minutes of daily physical activity. The program was founded by the National Dairy Council and the National Football League and is based on a mutual commitment to the health of the next generation. Given Hopewell's involvement in Fuel Up to Play 60, the researchers of the present study took the opportunity to inventory students about the effectiveness of the program.

PURPOSE

As body image concerns may become an increasing focus among adolescents, it is imperative that health educators maintain awareness of the attitudinal landscape of adolescent males and females in order to assume an instructional posture and design curricula to meet these needs. Though evidence of a correlation between body image concerns and academic performance were not reviewed in this investigation, if, indeed, subcultures of extreme dieting and obsession with body image do exist, there would be a logical expectation of negative effect on academic standing. Health educators could be a positive intermediate in reshaping attitudes toward healthy choices in the overall student population.

The present study investigated a series of attitudes and behaviors identified from the body of literature research or extended attitudes and behaviors as associated with body image. More specifically, the following research questions were examined:

1. What is the extent of body image focus relative to other facets of adolescents' lives (e.g., getting good grades and having overall good health)?

2. What is the role of media as a source of information on health and fitness?
3. To what extent do adolescent students rely upon parents and siblings for health and fitness advice?
4. To what extent do adolescent students rely upon nonparental adult figures, such as teachers and coaches, for health and fitness advice?
5. What external forces/pressures do adolescent students identify as associated with dieting or unhealthy behaviors to manage body image?
6. Can students access healthy food choices or nutrition/exercise information from school sources?
7. How are all of these factors assessed for adolescent boys compared to adolescent girls?
8. Is there agreement among adolescents on the impact of eating and exercise habits regarding the Fuel Up to Play 60 program?

METHODS

Participants

A total of 334 middle school students (161 males, 173 females) from Hopewell Junior High School (Lakota Local School District, West Chester, OH) served as participants in this study. All students were informed that participation was strictly voluntary. The survey was confidential; no names or any identifying information was collected from any participant. The administration of Hopewell Junior High School was consulted and fully aligned to the design of the study. No students refused to participate.

Hopewell Junior High School (for the school year 2010–2011) was composed of a total of 612 students (49% seventh grade, 51% eighth grade; 56% female, 44% male). Additional demographic information includes the following: 74.3% white/non-Hispanic, 8.3% black/non-Hispanic, 5.5% Hispanic, 8.1% Asian/Pacific Islander, 3.7% multi-racial, 5.9% limited English proficient, 14.0% economically disadvantaged, and 7.7% students with disabilities. Race was specifically not captured from the participants in this study because it was advised that some students do not readily identify with a specific race. Therefore, a subset of results by race will not be reported nor will specific breakouts be provided on limited English-proficient students or economically disadvantaged students; these students are included in the total population sampled.

Materials

A 2-page, 20-item survey was developed to examine middle school students' attitudes and behaviors regarding body image. The survey was developed based on inspiration from literature reviews on adolescent body image and through consultation with the administration and health/physical education faculty at Hopewell Junior High School.

To establish content validity and meaningfulness to the intended sample at Hopewell Junior High School, the questionnaire was piloted among 12 randomly selected students in seventh and eighth grade (male and female). These students previewed the questionnaire for appropriate grade-level vernacular and body image statement expressions. No revisions were necessary as an outcome of the pilot.

The survey comprised 2 sections: (a) the first section (Figure 1) included 18 closed-ended questions using a bipolar 5-point agreement scale (+2 = *strongly agree*, +1 = *agree*, 0 = *neither agree nor disagree*, -1 = *disagree*, -2 = *strongly disagree*); (b) the second section (Figure 2) included 2 open-ended questions requiring verbatim responses to the questions: (a) "What does it mean to have a 'perfect' body?" and (b) "What does it mean to have a 'healthy' body?" The goal of the open-ended inquiries was to understand whether students distinguished between these 2 body descriptors and to what dimension.

Two brief follow-up focus groups (10 minutes each) were conducted between 2 groups of students, representing a subsample ($n = 14$) of the total population surveyed. A group of 7 girls and a group of 7 boys were convened to discuss some specific aspects of body image to add dimension to the existing data set obtained from the quantitative survey. Specific probes included (a) descriptions of body image, (b) time invested in body image, (c) behaviors involved in maintaining body image/health, (d) their experiences with on-campus food choices, and (e) the role of health educators in overall health/fitness.

Procedures

After obtaining approval from the Hopewell Junior High School administration, surveys were administered to all students currently enrolled in health education or physical education classes. Administration of a paper ballot occurred over the course of 3 days and was done during the month of April during either health education or physical education class.

At the beginning of class, all students were informed of the purpose of the study and the voluntary nature of the survey and were instructed not to include any unique identifying information on the survey to ensure confidentiality. The only demographic information collected on the surveys was the sex and grade of the participant.

The surveys were presented to students with questions in randomized order to prevent any order bias. Randomization was completed using a 5-set randomization sequence. This 5-set randomization sequence was created by an online programming tool (<http://www.randomizer.org>) that shuffled the order of questions to create 5 independent questionnaires. The 2 open-ended questions appeared in the same order each time and students were told to consider both questions and provide honest, specific responses.

In the table below, you will find a list of questions. For each question, put an "X" in the box that represents your answer to each of the questions. Please make sure when you are done that there is an "X" in each row for each question! ☺

A	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
My performance in school (getting good grades) is important					
I have been pressured by my family, friends, teachers, or coaches to lose or gain weight					
I feel like I can get healthy foods at school (from the cafeteria or vending machines)					
My appearance is an important part of who I am					
I believe that magazines (such as <i>Seventeen</i> or <i>Sports Illustrated</i>) contain honest and accurate information about health and fitness					
I believe I can/should look like the models and sports figures in magazines					
I am depressed/concerned about my appearance					
My teachers, coaches, school counselor, school nurse, and other adults outside of my family are a good source of support and advice on my health and appearance					

FIGURE 1 Questionnaire (quantitative with bipolar scale).

I have healthy eating habits (eat a good balance of dairy, grains, fruits/vegetables and protein, such as fish, eggs, meat, beans, etc)					
I exercise 30–60 minutes each day					
I enjoy physical education and health classes at school					
My family (mom/dad/brothers/sisters, etc) is a good source of support and advice on my health and appearance					
I have or have thought about “binging” my food (throwing it up) after eating in order to lose weight or stay thin					
My friends are a good source of support and advice on my health and appearance					
I have been on a diet or have thought about going on a diet to lose weight					
I enjoy looking at pictures of models and sports figures in magazines (such as <i>Seventeen</i> and <i>Sports Illustrated</i>)					
My overall health is an important focus of my life					
Fuel Up to Play 60 has changed my eating and exercise habits this year					

FIGURE 1 (Continued).

For the next two questions, we would like to have you write down what you think about different body types. Please read the question and write down what it means to you in the space provided. There are no right or wrong answers and your opinions are very important. Please use as much space as you need.

What does it mean to have a "perfect body"? (Please write as much as you would like to help describe the "perfect" body)

What does it mean to have a "healthy" body? (Please write as much as you would like to help describe a "healthy" body)

Please indicate your gender:

Male _____

Female _____

Please indicate your grade level:

Seventh grade _____

Eighth grade _____

Please write your age in the space below:

FIGURE 2 Questionnaire—qualitative (verbatim responses).

Data Analysis

Students answered the questions on a paper questionnaire, and the answers were then entered by data entry staff at CDPS, Inc. (Milford, OH) into a double data entry system called Unibase. Answers were entered by one operator and reentered by another operator in verification mode to double-check for accuracy. Data were then tabulated using the statistical software Quantum (IBM-SPSS Statistics), supplied by CDPS, Inc. (Milford, OH), and then tables and statistical results were generated using IBM-SPSS Statistics Dimensions Desktop Reporter software, supplied by CDPS,

Inc. (Milford, OH). Frequency distributions, means, and standard deviations were calculated by using *t* tests with a level of significance set at 0.10. Tables provided include general overall results, grade 7 versus grade 8, male versus female overall, and male versus female within each grade level.

RESULTS

A total of 334 students completed the surveys (100% participation rate). Just over half (51.8%) were

female. Nearly two thirds (64.7%) were seventh graders and the balance was eighth graders (35.3%). The dominance of seventh graders in this study is due to required curricula of health and physical education at that grade level, with a majority of eighth graders having completed, or in the process of concluding, the necessary requirements by April.

For all results reported, levels of agreement are reported as the combined percentage of strongly agree+agree. In addition, means and standard deviations are provided that reflect results using the bipolar scale (+2 = *strongly agree* to -2 = *strongly disagree*).

Body Image Focus

Among the total population, the highest level of agreement (94%) was received for "My performance in school (getting good grades) is important," followed by "I exercise 30-60 minutes each day" (86%) and "My overall health is an important focus of my life" (84%). The statement designed as a surrogate for body image, "My appearance is an important part of who I am," had substantial levels of agreement (77%) overall (Table 1).

Role of Media

Surprisingly, this sample of students had relatively (intrastudy) low levels of agreement for aspects of media

influence on body image: "Belief in magazines to contain honest and accurate information about health and fitness" (36% agreement); "I enjoy looking at pictures of models and sports figures in magazines" (23% agreement); and "I believe I can/should look like the models and sports figures in magazines" (22% agreement).

Reliance Upon Parents, Friends, and Adult Figures

Conversely, more students had higher levels of agreement for reliance upon family, teachers, other adult figures in their life, and friends for support and advice on matters of health and appearance. Among the total population, 79% indicated that family (mom/dad/brother/sister) was a good source of support and advice on health and appearance; 69% and 68%, respectively, indicated that friends and other adults, such as teachers, coaches, school counselors, school nurses, and other adults outside of family were a good source of support and advice on health and appearance.

Pressure to Diet or Engage in Unhealthy Behaviors

Despite the focus on academics and a strong sense of support on health and appearance, 33% of the population claimed to have been on a diet or have thought about going on a diet to lose weight. Additionally, 24% were depressed/concerned about their appearance, and 20% indicated that they have been pressured by family, friends, teachers, or

TABLE 1
Total Population

Attribute	Strongly Agree + Agree (%) (N = 334)	Mean (SD) (N = 334)
Academics		
Performance in school/getting good grades is important	94	1.7 (0.71)
Exercise/health		
Exercise 30-60 minutes/day is important	86	1.4 (0.91)
Overall health is an important focus of my life	84	1.3 (0.88)
Enjoy physical education/health at school	77	1.2 (1.07)
Have healthy eating habits	72	0.9 (1.02)
Appearance		
Family is a good source of advice on health/appearance	79	1.1 (0.94)
My appearance is an important part of who I am	77	0.9 (1.10)
Friends are a good source of advice on health/appearance	69	0.9 (1.12)
Teachers and other adults are a good source of advice	68	-0.6 (1.32)
Depressed/concerned about appearance	24	-0.4 (1.48)
Dietary behaviors		
Have been on a diet or thought about going on a diet	33	-0.5 (1.23)
Can get healthy foods from school cafeteria/vending	27	-1.7 (0.95)
Have or have thought of bingeing food after eating	7	0.026 (1.19)
Influences		
Believe that magazines contain accurate info on health/fitness	36	-0.4 (1.31)
Enjoy looking at models/sport figures in magazines	23	-0.6 (1.29)
Believe I can look like models/sports figures in magazines	22	-0.8 (1.37)
Have been pressured by family, friends, teachers, or coaches to lose/gain weight	20	
Fuel Up to Play 60		
Has changed my eating and exercise habits this year	23	-0.4 (1.26)

Note. 90% Confidence interval for statistical analysis of percent agreement and mean agreement.

coaches to lose or gain weight. A small, but significant, number of girls (10%) indicated they have, or have thought about, binge eating in order to lose weight or stay thin.

Access to Healthy Food Choices From School Sources

Unfortunately, low levels of agreement (27%) were obtained for students "feeling like they can get healthy foods at school (from the cafeteria or vending machines)." Specific comments from focus group interviews of a subset of the sample population ($n = 14$) revealed that students define the food as "nasty," consistently "greasy," and "expensive" (especially for healthier choices), which were all deterrents to dining off of the café menu. The majority of students interviewed (4 out of 7) packed their lunch as a result of the poor quality of the café offerings.

Males vs. Females

Not unexpectedly, girls had significantly higher levels of agreement (82%; $M = 1.2$, $SD = 0.86$) vs. boys (71%; $M = 0.9$, $SD = 0.98$) for "My appearance is an important part of who I am." Additionally, girls (75%; $M = 1.1$, $SD = 1.07$) relied significantly more upon friends as a source

of information on health and fitness compared to boys (63%; $M = 0.7$, $SD = 1.08$). Girls also indicated that they had been on a diet (42%; $M = -0.1$, $SD = 1.54$) or were depressed or concerned about their appearance (32%; $M = -0.4$, $SD = 1.38$) significantly more than boys (22%; $M = -0.7$, $SD = 1.35$ and 16%; $M = -0.9$, $SD = 1.21$, respectively). However, even with these differences, it is a worthwhile finding that boys had comparable levels of agreement for many of the attributes inventoried and had parity engagement in the responses of this survey (Table 2).

Impact of Fuel Up to Play 60

Fuel Up to Play 60 had lower levels of agreement from the overall population (23%) for effecting "change on my eating and exercise habits this year." Agreement was slightly higher for seventh graders (27%) relative to the total population and significantly higher compared to eighth graders (14%). This discrepancy in agreement between the grade levels may be an effect of the implementation of the program in the seventh grade, which could have generated higher levels of awareness and application compared to eighth graders, who were concluding required courses in health and physical education when the concept of Fuel Up to Play 60 was

TABLE 2
Males vs. Females

Attribute	Strongly Agree + Agree (%)		Mean (SD)	
	Males ($N = 161$)	Females ($N = 173$)	Males ($N = 161$)	Females ($N = 173$)
Academics				
Performance in school/getting good grades is important	93	95	1.6 (0.75)	1.7 (0.67)
Exercise/health				
Exercise 30–60 minutes/day is important	85	86	1.4 (0.89)	1.3 (0.93)
Overall health is an important focus of my life	83	84	1.2 (0.82)	1.3 (0.94)
Enjoy physical education/health at school	80	73	1.3 (1.00)	1.0 (1.11)
Have healthy eating habits	72	73	0.9 (1.02)	0.9 (1.03)
Appearance				
Family is a good source of advice on health/appearance health/appearance	63	82	1.1 (1.08)	1.4 (0.98)
My appearance is an important part of who I am	71	82	0.9 (0.98)	1.2 (0.86)
Friends are a good source of advice on health/appearance	63	76	0.7 (1.08)	1.1 (1.07)
Teachers and other adults are a good source of advice	64	71	0.8 (1.12)	0.9 (1.12)
Depressed/concerned about appearance	16	32	-0.9 (1.21)	-0.4 (1.38)
Dietary behaviors				
Have been on a diet or thought about going on a diet	22	44	-0.7 (1.35)	-0.1 (1.54)
Can get healthy foods from school cafeteria/vending	31	23	-0.3 (1.18)	-0.7 (1.25)
Have or have thought of bingeing food after eating	4	10	-1.8 (0.78)	-1.6 (1.08)
Influences				
Believe that magazines contain accurate info on health/fitness	38	34	0.1 (1.16)	0.0 (1.22)
Enjoy looking at models/sport figures in magazines	19	27	-0.5 (1.28)	-0.2 (1.32)
Believe I can look like models/sports figures in magazines	24	21	-0.5 (1.27)	-0.7 (1.30)
Have been pressured by family, friends, teachers, or coaches to lose/gain weight	22	19	-0.7 (1.36)	-0.9 (1.36)
Fuel Up to Play 60				
Has changed my eating and exercise habits this year	22	23	-0.3 (1.19)	-0.5 (1.31)

Note. 90% Confidence interval for statistical analysis of percent agreement and mean agreement.

TABLE 3
Seventh Grade vs. Eighth Grade

Attribute	Strongly Agree + Agree (%)		Mean (SD)	
	Seventh Grade (N = 216)	Eighth Grade (N = 118)	Seventh Grade (N = 216)	Eighth Grade (N = 118)
Academics				
Performance in school/getting good grades is important	93	96	1.7 (0.74)	1.8 (0.65)
Exercise/health				
Exercise 30–60 minutes/day is important	84	89	1.3 (0.99)	1.4 (0.76)
Overall health is an important focus of my life	82	86	1.2 (0.93)	1.4 (0.79)
Enjoy physical education/health at school	80	70	1.3 (1.03)	1.0 (1.11)
Have healthy eating habits	71	75	0.8 (1.08)	1.0 (0.91)
Appearance				
Family is a good source of advice on health/appearance	80	78	1.3 (1.01)	1.2 (1.06)
My appearance is an important part of who I am	74	81	1.0 (0.98)	1.2 (0.85)
Friends are a good source of advice on health/appearance	67	74	0.9 (1.11)	1.0 (1.09)
Teachers and other adults are a good source of advice	69	65	0.9 (1.14)	0.8 (1.08)
Depressed/concerned about appearance	23	26	–0.7 (1.34)	–0.5 (1.27)
Dietary behaviors				
Have been on a diet or thought about going on a diet	35	31	–0.3 (1.49)	–0.4 (1.46)
Can get healthy foods from school cafeteria/vending	29	22	–0.5 (1.29)	–0.5 (1.13)
Have or have thought of bingeing food after eating	6	8	–1.7 (0.90)	–1.6 (1.02)
Influences				
Believe that magazines contain accurate info on health/fitness	35	37	0.0 (1.23)	0.1 (1.12)
Enjoy looking at models/sport figures in magazines	19	30	–0.5 (1.28)	–0.1 (1.33)
Believe I can look like models/sports figures in magazines	20	26	–0.6 (1.26)	–0.6 (1.34)
Have been pressured by family, friends, teachers, or coaches to lose/gain weight	22	18	–0.8 (1.36)	–0.8 (1.38)
Fuel Up to Play 60				
Has changed my eating and exercise habits this year	27	14	–0.4 (1.31)	–0.6 (1.15)

Note. 90% Confidence interval for statistical analysis of percent agreement and mean agreement.

introduced (i.e., eighth graders may have received less exposure to the Fuel Up to Play 60 program; Table 3).

"Perfect" Body vs. "Healthy" Body (Verbatim Analysis of Open-Ended Questions)

Themes that emerged from voluntary comments describing a perfect body vs. a healthy body revealed that a perfect body does not equal a healthy body and is typically one that the individual judges from the exterior. A perfect body was not overwhelmingly viewed as being in existence but was described as being free of blemishes, with beautiful facial features, strong, not prone to be ill, and perfectly shaped.

In contrast, a healthy body was less tangible than a perfect body and was characterized by qualities emerging from within, such as sound functioning, being well-nourished, physically fit, not weak or tired, and not subjected to risky habits (such as smoking, drinking, or drugs; Table 4).

Qualitative Remarks (Postsurvey)

Interviews of girls and boys in separate postsurvey interviews highlighted the differences in the importance of body image. Girls had a calculated approach to body image, with precision

of attire and time spent on their hair in the morning while getting ready for school. Boys, on the other hand, were quick to define body image as strictly "what you see" and provided many labels such as "fat/skinny," "ugly/pretty," and "acne/wrinkles." For boys, body image was opposed, but also related, to a person's overall image. Personal image is connected to dress, hair, and personality, which are all associated with personal style. Thus, body image and personality blend together to make up an overall presentation.

Girls are much more vested in the acute process of creating their daily image and contemplate the anticipated preparation before it occurs (such as laying out clothes the night before and helping to purchase the clothing themselves). In stark contrast, boys confessed that they spent a matter of seconds getting ready by "taking a shower so I don't stink and then just throwing on some clothes." How they achieve confidence with such a rapid assembly of "self" in the morning is to have their mothers' involvement in matching clothing items and/or ensuring they are wearing a clean garment. Maternal involvement governs boys to a much greater degree than that of girls.

When questioned as to what students do to stay healthy or maintain their body image, all remarked that they were involved in extracurricular forms of exercise, both

TABLE 4
Coded Verbatims from Open-Ended Questions

<i>Define the Perfect Body</i>	<i>Define a Healthy Body</i>
One that the individual is satisfied with/one that you are happy with	Not easily sick/not catch illness easily
Not too fat/thin/proportionate to frame	Not grow tired/weak when physically active
Curvy, but not overweight/big chest/curves	Healthy body is the same as a perfect body
Thin, not too muscular	Eat nutritiously
Physically fit/healthy/able to be active	Get regular exercise/be physically fit
Tall	Weight appropriate for body frame/build
Strong	Not overweight/obese
One that looks good/you think looks good	Skinny/good shape
Does not get sick easily	Strong/athletic
Other people think you look good	Thin legs/long legs/thin thighs/rear
Muscular	Muscular
Skinny/thin	Has right amount of all it needs/nutrients
Thin legs/thighs/hips/rear	Not lazy
Tan	Heart healthy/internally healthy
Perfectly shaped	Low body mass index/low body fat
Eating healthy	No risky habits (smoking/drinking/drugs)
There's no such thing as a perfect body	Good hygiene
No blemishes/scars/marks	Every part works properly and at healthy levels
Beautiful facial features/pretty face	Clear skin/no scars
Internally healthy	
Strong bones	
Good hygiene	
Clean teeth/nice smile	
Perfect body does not equal a healthy body	
Makes healthy choices	
Healthy hair	

recreational and sports centered. These activities involved 1 to 2 hours of exercise multiple times per week via practice or performances/games.

The students' cafeteria experience was probed to ascertain whether students felt that they had access to healthy choices while on campus (either through the cafeteria offerings or the vending machines). Unanimously, students remarked that they found the cafeteria menu to be less than ideal, describing it as "gross" and "disgusting"—overall an ill-prepared selection. Fried foods, pizza with "grease puddles," and soggy and "not fresh" vegetable medleys, created distaste for the school cafeteria foods. When students did find a healthy selection that was palatable, such as the chicken sandwich, they indicated that it was "good, but expensive" and readily compared the price of the school chicken sandwich to that of a chicken sandwich sold by McDonald's. They were aware of competing choices and did not feel that the school cafeteria measured up to "even places like McDonald's," hinting that McDonald's is not necessarily a gold standard and that the café food was not equivalent.

The role that health educators play in body image/health was explored during the interviews and all had a positive reflection of their relationship with their health educator. Specific remarks included, "My health educator helps me make healthy food choices," "My health educator gives me

tips on how to be healthy," and "Having health class has really helped me a lot this year."

DISCUSSION

The present study found that though academics is of paramount importance to middle school adolescents, body image and health are also on the forefront of consideration. These tendencies manifest and are sustained in adolescents/young adults as evidenced by the biannual national Youth Risk Behavior Survey (YRBS) conducted by the US Department of Health, Centers For Disease Control.⁷ This study monitors priority health risk behaviors among students in grades 9 to 12 that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. These behaviors, often established during childhood and early adolescence, include unhealthy dietary behaviors. In the 2009 YRBS results, 44.4% of the over 16 000 students surveyed indicated that they were trying to lose weight. Mechanisms for weight loss included exercise (61.5%), eating less food or fewer calories (39.5%), fasting for 24 hours (10.6%), consumption of diet pills without a doctor's advice (5.0%), or vomiting/taking laxatives (4.0%). Of this same population, girls (14.5%) had significantly higher rates of response for fasting compared to boys (6.9%) and use of vomiting/laxatives (5.4% vs 2.6%)

compared to boys. Considering of the subculture of extreme dieting, these values correspond very strongly to the figures obtained from the present study (10%) and that of previous research (12.5%). Therefore, the data from the present study may be generalized to students in a national sample.

Undereating, manipulation with exercise, and the misuse of over-the-counter products to control weight are factors that need to remain in the view of all educators. The warning signs of such drastic measures should be known, including, but not limited to, frequent verbal complaints of "being fat," repeated requests to use the bathroom, mood changes, weight fluctuations, dry skin, hair loss, bad breath, lethargy, dizzy spells, or lack of concentration.⁸

The levels of agreement for boys are indicative of their interest and awareness for topics related to body image and health. The findings are compelling with regard to understanding the culture of adolescent males and what may have previously been reserved as unspoken opinions of boys toward this subject matter. With 71% of the total population of boys sampled indicating high levels of agreement for "my appearance is an important part of who I am," there is evidence of a majority of boys being vested in their outward impression. In parallel to referenced qualitative findings, the subset of boys interviewed postsurvey in this study defined the importance of appearance to be localized around overall persona and projection of an image through clothing and features of style. Completing the survey allowed boys to express their opinions privately, without fear of social taboo. Further, when interviewing boys in small groups, they were comfortably forthcoming with their thoughts and opinions regarding body image. To continue to make discoveries about boys' motivations and habits and practices with regard to body image, research designs that consider the best means to extract this knowledge should be employed. Interestingly, from the 2009 YRBS, males (15.3%) were significantly more likely to be obese, defined as $\geq 95\%$ percentile for body mass index, compared to females (8.3%). The YRBS study also found that significantly more males use steroid pills/shots without a doctor's prescription (4.3%) compared to females (2.2%). Therefore, it is possible, if not evident, that males are engaging in methods to enhance/modify their appearance that are distinct from females and toward a different endpoint (larger body mass). Warning signs of steroid use should be captured by all educators and include depression, rapid increase in muscle mass, acne, changes in behavior, and mood swings involving rage and volatile temper.

With respect to dietary behaviors and food selection and its access, the 2009 YRBS found that only 20.6% of those surveyed indicated that they ate fruit 4 to 6 times during a week and only 11.8% consumed green salad 4 to 6 times during a week. Drinking fruit juices, such as orange juice, apple juice, or grape juice, 4 to 6 times in a week was slightly higher (17.9%). These data, combined with the attitudes toward cafeteria food, could help shape rationale for routine food choices. The data from the present study

indicate a low level of agreement (27% of total population) for being able to obtain healthy choices from the school cafeteria. Further, the qualitative interviews from this study revealed that food preparation may play a role in students' acknowledgement of what is deemed a healthy food choice. Foodservice staff and health educators should confer with students on the type of food choices of interest and how they define healthy selections. It is possible that there is a disparity between what students think is healthy, what is truly healthy, and what cafeteria personnel believe students want and how they would like it prepared. Having these insights may certainly aid in constructing cafeteria menus that are nutritionally satisfying to the student body.

TRANSLATION TO HEALTH EDUCATION PRACTICE

Informing Students of Faulty Media Messages

The findings from this study offer several implications and instructional concepts for health educators to consider. Because health will always be of primary importance and body image obsession continues to prevail, health educators can get "ahead of the curve" with respect to media trends and messaging, arming their students with the know-how to navigate through manipulative messaging and implicit pressure. Health educators can add valuable segments to their existing repertoire of modules on commercial advertising to teach students to be media savvy and how to navigate through the messages, being able to identify fake or doctored images and aware of the persuasion of special effects.

Developing New Modules Regarding Body Image for Females and Males

Health educators can develop new modules to address boys' evolving interest in body image and to coach them on variations in individual development and what to expect as their bodies go through puberty and into adulthood. In previously noted research, it was discovered that boys have a more relaxed perception of self as they come into adolescence, knowing that "this isn't it and there is more to come" (future possible self). These attitudes are founded on the realization that genetics and family body types are a factor in determining their ultimate physique. In stark contrast, girls, as they enter into adolescence and their bodies start to change and acquire more adipose tissue for reproduction, feel that "this is it and this is the way I am going to stay" (feared permanent self). Therefore, girls have more of a fear of a new self and are not conditioned to allow nature to conform their developing bodies into an ultimate state. Health educators can harness these dispositions by helping students manage their current physical status and forecast a holistic body image, including internal and external attributes.

Exploring Dietary Concerns Relevant to Healthy Development

As aforementioned, being aware of the warning signs of dietary or diet-related drug abuse and exposing these practices as part of the curriculum could be beneficial in promoting awareness and/or prevention. Health educators may develop curricula that are explicit toward helping school staff and student population recognize the signs of bingeing or restrictive dietary measures. Cafeteria workers may be trained to be a source of encouragement for healthy food choices and for adequate intake if they suspect that a student is engaging in bingeing or extreme dieting behavior.

Including Healthy Food Selections at School

It is recommended that further qualitative research be conducted between students, school administration, and cafeteria managers to gather insights as to the food choices that are most desirable to students. Health educators could spearhead these research efforts when they would have the most impact in cafeteria planning for the school year. Menu offerings designed for appeal and affordability could help enhance healthy food choices while on campus.

Empowering Students to Track Their Progress and Involving Parents in the Process

Programs such as Fuel Up to Play 60, which serve to augment and incentivize time spent exercising and making sound food selections, should be introduced early in the school year. Exposure to programs that track daily fitness and food inventories should initially be instructor led and gradually allow students to independently map their progress. To optimize the effectiveness of these programs, health educators could embed a contest within their classroom curricula to

maintain awareness and engagement throughout the school year. Such contests would be motivated for the intrinsic value of exercising and nutrition, with an optional nominal prize incentive. Additionally, health educators could provide notice to parents of their children's involvement in the program to encourage habits to extend to the home environment and to maintain holistic parental involvement.

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