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Exposure to Teasing on Popular Television Shows and Associations with Adolescent Body Satisfaction

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Abstract

Objective—This study uses a novel mixed methods design to examine the relationship between incidents of teasing in popular television shows and body satisfaction of adolescent viewers.

Methods—Survey data were used to identify 25 favorite television shows in a large population-based sample of Minnesota adolescents (N=2793, age=14.4 years). Data from content analysis of teasing incidents in popular shows were linked to adolescent survey data. Linear regression models examined associations between exposure to on-screen teasing in adolescents' own favorite shows and their body satisfaction. Effect modification by adolescent weight status was tested using interaction terms.

Results—Teasing on TV was common, with 3.3 incidents per episode; over one-quarter of teasing was weight/shape-related. Exposure to weight/shape-related teasing ($\beta = -.43, p=.008$) and teasing with overweight targets ($\beta = -.03, p=.02$) was inversely associated with girls' body satisfaction; no associations were found for boys. Findings were similar regardless of the adolescent viewer's weight status.

Conclusions—Families, health care providers, media literacy programs and the entertainment industry are encouraged to consider the negative effects exposure to weight stigmatization can have on adolescent girls.

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Conflicts of Interest Statement

The authors have no competing interests to report.

Keywords

body satisfaction; media; social influence; weight stigma

Body image concerns can have a significant impact on the emotional development and well-being of adolescents. Factors such as self-esteem, depression, eating disorders and future weight gain all have been found to be associated with poorer body satisfaction (1–5). Existing research indicates that many adolescents have low levels of body satisfaction, particularly those who are overweight or obese (3,4,6). Theorists have proposed a sociocultural model whereby societal ideals of physical attractiveness are transmitted through the population by various channels; these ideals can then be internalized by individuals and result in body satisfaction or dissatisfaction, depending on the extent to which the individual meets those cultural ideals (7,8) and their propensity for comparing themselves to media figures (9,10). Adolescents are particularly susceptible to social influences (11), highlighting the importance of understanding the social messages to which adolescents are exposed and their role in the development of body satisfaction.

Media messages about weight

Media is a key channel through which ideals of physical attractiveness are conveyed (8). According to a 2015 report, adolescents spend an average of 17 hours per week watching television (TV) (12), making this format stand out even in a field of new media options. Numerous studies have reported on portrayals of body weight and stigma in media content, finding that overweight individuals are underrepresented on TV shows, are often subject to teasing, are frequently shown eating, and are less likely than thin characters to be considered attractive and popular (13–19). Our previous study found that among 30 episodes of ten shows identified as favorites by adolescents, half contained at least one weight-stigmatizing incident (with greater prevalence in shows for a youth audience), and these incidents were often used for humorous effect (18).

Research also demonstrates that weight stigma in print and TV advertising is prevalent (20), and its detrimental effect on body satisfaction of viewing idealized figures in advertising is well-established (21–23). In addition to advertising, studies have also begun to identify an association between viewing media content in televised and print sources and distorted body image and disordered eating behaviors, using a variety of observational and experimental research designs (21,24–28). In particular, recent research examining exposure to reality TV programming focused on weight loss has shown that overweight viewers were more likely to experience lower body satisfaction than their non-overweight counterparts after watching the weight-loss reality show (29). Cosmetic surgery reality TV viewing similarly contributes to body dissatisfaction and disordered eating attitudes and behaviors (30,31).

Much of the existing research examining media influences on body satisfaction has focused on young women. However, some studies have focused on young men, with a greater focus on muscularity, and have yielded mixed results (10,32–34). For example, boys who viewed music video clips featuring muscular performers reported lower body satisfaction and more depressive feelings than boys who viewed clips featuring singers of average appearance (32).

In contrast, van den Berg et al (2007) found that media body comparison was a key predictor of body satisfaction in females but not in males (10).

The extant body of work on media and body satisfaction, while informative, is limited in three important ways. First, in spite of their scientific strength, experimental designs in this domain are often artificial; research subjects are shown images out of context that they might not be exposed to in their daily lives. We are not aware of any research that examines more realistic exposure to media content that young people themselves select, where weight-related messages may be incidentally delivered along with plot, characters, and other features that are the primary focus for the viewer (as in a TV show). Second, many studies rely on an individual's recollection of exposure to weight-stigmatizing content, and recall may be strongly confounded with body image (*i.e.*, weight stigmatizing content may be more salient among those with poor body image). Third, research has typically focused narrowly on a single show or specific genres rather than the broad range of TV programming actually consumed by youth.

Weight teasing and body satisfaction

Weight teasing is common among youth, particularly among those who are overweight; almost 60% of youth classified as having obesity reported weight-based harassment, compared to approximately one-quarter of those who were not overweight (35). Experiencing weight teasing from family members or peers has been associated with body dissatisfaction, disordered eating behaviors, low self-esteem, depressive symptoms, and suicide involvement in both cross-sectional and longitudinal studies (36–41), with stronger effects found for girls (42). In addition to interpersonal exchanges, high levels of weight-related teasing in the school environment have been associated with poorer body satisfaction among girls, even after accounting for their own experience of being teased about weight (43); these findings suggest that socio-environmental messages about weight and shape may be internalized even when they are not directed at the individual.

The theory of Parasocial Interaction posits that children and adolescents may form “pseudo-friendships” with TV characters, look to them as behavioral role models, and be influenced by them as they would by real-life peer interactions (44). Research has begun to show that this type of one-sided relationship with a media figure is an important mediator between media exposure and body image perceptions in adolescents (45). Viewing characters' on-screen experiences, such as weight teasing, may therefore be detrimental to the body satisfaction of young people, similar to weight stigma observed in the real world (*e.g.*, in school (43)). Furthermore, research has consistently noted poorer body satisfaction among women and girls and those who are overweight or obese (7); the strength of media influence may further depend on characteristics of on-screen role models, as young people are more likely to identify with characters who are similar to themselves in terms of gender or other characteristics (46). For example, the effects of weight stigma in media may be most pronounced for those who are overweight and most easily able to identify with overweight characters.

The present study builds on prior research about media content and weight-related teasing among adolescents by examining the extent to which exposure to weight-related teasing on favorite TV shows is associated with body satisfaction among viewers. We use a novel design in which adolescents named their favorite TV shows, a sample of these shows was content analyzed for weight teasing and stigmatizing incidents, and unique teasing exposure variables were derived based on each participant's selection of favored shows. This study tests the following hypotheses:

H1: Watching TV shows with more weight teasing will be associated with greater body dissatisfaction among adolescent viewers;

H2: These associations will be stronger for female than male viewers (based on research showing stronger effects among girls), and stronger for overweight viewers than non-overweight (based on theory suggesting overweight viewers will identify more strongly with overweight characters who are often teased).

Methods

EAT 2010: Design, Survey and Measures

EAT 2010 is a cross-sectional, population-based study that examines the eating, physical activity, and weight-related behaviors of adolescents (47). As part of EAT 2010, 2,793 adolescents from 20 middle schools (grades 6–8, mean age = 12.6 years, SD = 0.83) and high schools (grades 9–12, mean age = 15.9, SD = 1.29) in Minneapolis and St. Paul, MN, were surveyed during the 2009–2010 school year. A subsample of 129 students completed the survey on two occasions, one week apart to obtain test-retest reliability statistics. All study procedures were approved by the University of Minnesota's Institutional Review Board and by the research boards of the participating school districts.

Adolescent participants completed the EAT 2010 survey, which included a write-in item asking them to list their three favorite television shows; 2,130 participants listed at least one show. The 653 unique titles were ranked by popularity, excluding general topic areas (*e.g.*, sports), networks (*e.g.*, MTV) or shows that did not use a scripted format. The content of the 25 most popular shows was analyzed as described below. Analysis was restricted to 1,531 participants who listed at least one show that was among the top 25 most popular (71.9% of those who listed any shows, 54.8% of the total EAT sample). Slightly more than half were female (52.7%), 20.7% were white, and approximately 40% were overweight or obese. Additional characteristics of the sample are shown in Table 1.

The EAT 2010 survey also included items assessing satisfaction with thirteen different body parts and attributes (height, weight, body shape, waist, hips, thighs, stomach, face, body build, shoulders, muscles, chest, overall body fat), modified from an existing scale (48). Five response options ranged from “very dissatisfied” to “very satisfied,” and responses were summed to create a single scale (Cronbach's alpha=.95; test-retest $r = .65$).

Trained research staff measured adolescents' height and weight using standardized procedures (49); approximately 2% of participants were missing measured height and weight data, and values were imputed from self-reported survey items. Body mass index

(BMI) values were calculated and sex- and age-specific cutoff points used to classify respondents as overweight/obese (85th percentile) were based on reference data from the Centers for Disease Control and Prevention growth tables (50). Participants self-reported their gender, birthdate (used with survey administration date to calculate age), and ethnicity/race (“Do you think of yourself as 1) white, 2) black or African-American, 3) Hispanic or Latino, 4) Asian-American, 5) Hawaiian or Pacific Islander, or 6) American Indian or Native American”; respondents were asked to check all that apply). Those with multiple ethnicity/race responses and a small number of Hawaiian/Pacific Islander participants were coded as “mixed/other” for analyses. Weekly hours of TV viewing were assessed with two items asking about hours spent watching TV/DVDs/videos on an average weekday and average weekend day (7 response options ranged from 0 to 5+ hours); items were combined into a single variable.

Content Analysis: Design, Coding and Data Collection

The content of the most popular 25 shows named by EAT 2010 students, listed in Table 2, was analyzed for the present study, using three randomly selected episodes from the year of data collection. A coding instrument and detailed codebook were developed by the research team, based on existing content analysis research (13,16,19,51), to capture incidents of weight-based teasing and stigmatizing behaviors and the characteristics of characters involved in these incidents. Development of the instrument is described in detail elsewhere (18,52–54). Five graduate student coders applied the instrument to the sample of shows (three coders for the top 10 shows and two coders for the remaining 15 shows, with the lead coder from the first round training the two new coders to ensure consistency across batches). Training for all coders included multiple rounds of practice coding using older seasons of chosen shows, and group meetings to review coding decisions, discuss common issues and resolve any discrepancies with the investigators (Eisenberg and Gollust). Inter-rater reliability was calculated using Cohen’s kappa (55) on the final practice round of independent coding; kappas were very high on all items used in the present analysis (κ 0.80).

A general teasing incident was identified and coded when a negative remark was made about a character in the show. The coder noted the content of the teasing incident, *e.g.*, “looks like a horse stepped on her face,” and then made note of the circumstances in which the incident occurred. All teasing incidents were further categorized as either (a) weight/shape related, (b) appearance (but not weight/shape related), or (c) other. If an incident was weight or shape related, the coder recorded additional details including the character name, gender and weight status of both the commenter and the target of the teasing incident. Gender was recorded as male or female. Weight status included four categories: “thin/underweight”, “average/normal weight”, “heavier than normal/overweight”, or “very overweight” (plus an “undeterminable” category for characters that were referenced but never shown). The default category for all characters was “average weight.” A character was categorized as “thin/underweight” only if bones (*e.g.*, rib cage, cheekbones) were obviously protruding and the character would have a BMI that falls below 18.5 kg/m². Characters in the “heavier than normal/overweight” category had obvious excess body fat (*e.g.*, an obvious pot belly). A

character in the “very overweight” category would have an excessive amount of weight such that BMI would fall much above 30 kg/m².

Each episode was coded using a 3-step process. First, coders viewed the episode and identified all incidents of weight-based teasing and stigma and noted characters involved in each relevant scene. Second, coders viewed the episode again and entered all relevant information into the coding instrument. A third and final viewing ensured that all information was captured and appropriately coded.

Variable creation, data linking, data analysis

Using the teasing and character items described above, four variables were created to characterize shows with regards to their teasing and stigma depictions: 1) the number of total teasing incidents per show, 2) the number of total weight/shape-related teasing incidents per show, 3) the percent of teasing incidents that were about weight or shape, and 4) the percent of weight/shape-related teasing incidents that involved an overweight target.

To link this media content data with the EAT 2010 survey data, each participant in the analytic sample was assigned four types of potential “teasing exposure” scores based on his or her specific list of favorite shows. Teasing exposure variables were created by aggregating the show-level teasing variables for the shows that they identified as favorites. For example, if Participant A listed *Family Guy* (11 teasing incidents), *South Park* (14 teasing incidents) and *Scrubs* (20 teasing incidents) as favorites, they would be assigned a potential teasing exposure score of 45 total teasing incidents. In contrast, if Participant B listed *iCarly* (3 teasing incidents), *That 70s Show* (5 teasing incidents) and *Everybody Hates Chris* (4 teasing incidents), they would be assigned a potential teasing exposure score of 12.

Multiple linear regression was used to test the associations between the four teasing exposure variables (entered separately) and body satisfaction, adjusting for overweight status, weekly hours of TV viewing, and the number of the participant’s favorite shows that were part of the content analysis (range=1–3). Participant ethnicity/race and age were further controlled in regression models, due to evidence that body satisfaction (56,57) and preferred programming (58) differ by these characteristics. All models were stratified by gender a priori, based on existing evidence that body satisfaction and social influences operate differently for male and female adolescents. In order to test whether associations between teasing exposure and body satisfaction varied according to the overweight status of the viewer, interaction terms (overweight by teasing exposure) were added to each model. An alpha level of .05 was used to determine statistical significance.

Results

Teasing in Coded Shows

Table 2 presents details about the teasing incidents in each of the 25 coded shows. A total of 249 teasing incidents occurred in the 75 episodes coded – an average of 3.3 teasing incidents per episode. The number of teasing incidents ranged from 0 to 45 per show (across all three episodes; mean=10.0/show), and on average 27.6% of teasing incidents were related to

weight or shape. In shows with any weight or shape-related teasing incidents, 29.0% targeted overweight characters.

Teasing Exposure and Body Satisfaction

Among adolescents in the student sample, body satisfaction scores ranged from 13–65 with higher scores indicating greater satisfaction (Table 1). The mean score for girls was 43.1 and for boys was 44.9. Based on each participant's unique list of favorite shows, boys had an average total teasing exposure score of 15.7 incidents across their favorite shows, and girls had an average score of 13.5 incidents across their favorite shows. Weight or shape-related teasing exposure scores were 4.9 incidents in their favorite show among boys and 4.6 incidents among girls. Over one-third of teasing incidents to which participants were exposed focused on weight or shape and approximately half of weight or shape-related teasing incidents to which participants were exposed had overweight targets.

Associations between potential teasing exposure and body satisfaction are shown in Table 3. Among girls, exposure to 1) total weight or shape-related teasing and 2) the proportion of weight or shape-related teasing that had an overweight target were each inversely associated with body satisfaction. In addition, exposure to total teasing incidents was marginally ($p = .060$) related to body satisfaction. For example, each additional exposure to a weight or shape-related teasing incident in up to three favorite shows was associated with almost half a point lower body satisfaction score, after adjusting for race, age, overweight status, and number of favorite shows in the coded sample ($\beta = .43$, $p = .008$). No associations were significant for boys. Interaction terms (teasing exposure by weight status) were not significant in any model, indicating that associations did not differ according to the viewer's BMI.

Discussion

This study investigated whether potential exposure to weight- and shape-related teasing on favorite TV shows was associated with body satisfaction among adolescent viewers. Based on comprehensive coding of a large number of episodes, findings indicate that teasing is commonplace on popular TV, with an average of over three incidents per episode. While the likelihood of exposure to teasing incidents was similar for both boys and girls, body satisfaction was lower, on average, among girls who were exposed to more weight- and shape-related teasing through this medium than girls who were exposed to less, as hypothesized. However, this relationship was not observed for boys, and the nature of the relationship did not vary according to weight status for either boys or girls. This study adds to a body of research demonstrating the influence of media messages on body satisfaction, particularly among young women (21,24,27,28), although the study advances the literature with its naturalistic exposure measure created by coding each participant's own reported favorite TV shows.

The gender differences in the associations between social characteristics and emotional well-being are similar to previous findings (9,43), and may be attributable to differences in the ways in which girls and boys are socialized to respond to peers, social norms and related influences generally. Prior research regarding media influences in particular has shown that

social comparison with media figures – a possible pathway in the relationship between media exposure and body image – is stronger for girls than boys (9), which may also explain the present findings. Alternately, the ways in which adolescent boys process weight-related teasing on TV may be affected by the amount of teasing being shown. In one study, male characters were shown to be three times as likely as female characters to be the perpetrator of a weight-related teasing incident (15). In our previous research with the top 10 shows described here, not only were male characters more likely to be the perpetrator of a weight-related teasing incident, they were almost twice as likely to be the target of weight-related teasing (18). It is possible that boys may be desensitized to weight-related teasing on TV due to overuse of these situations. In contrast, in our research on real-life weight-related teasing by peers and family members, associations with body satisfaction and disordered eating behaviors were significant for adolescent boys and girls (36–39), suggesting that distinct mechanisms may underlie associations with more distal social influences (i.e. media). Differences in the ways in which boys and girls perceive, process and respond to weight-teasing in different contexts should be addressed in future research.

The lack of significant interaction findings indicates that associations between potential teasing exposure and body satisfaction are similar regardless of the weight status of the viewer. Although this is contrary to overweight viewers' theoretically higher level of identification with overweight characters on screen, this result may reflect our previous finding of no difference in the amount of weight teasing directed at non-overweight females compared to overweight females (18). The teasing of non-overweight characters might function through the same mechanism as overweight characters (i.e., identification with characters with similar traits) or through a more general creation of a hostile social climate regarding weight, as has been seen in the school environment (43).

Limitations and Strengths

This study is subject to certain limitations. Most notably, the results are limited by the single media type examined, i.e., television. Adolescents are inundated with messages from many media sources including video games, print material, social media and other online sites. It is not possible in this study to determine the extent to which favorite TV shows represent adolescents' overall media diet with regards to weight- and shape-related teasing. Even within the TV format, certain types of programming could not be meaningfully coded, such as sports shows or music videos. This type of programming likely includes weight- and shape-related content which would have been missed in the present study (32,59). Similarly, this research was unable to capture the frequency with which participants viewed each of the shows they named as favorites (or other shows in the sample) or if they were indeed exposed to the specific episodes and teasing incidents in our sample of coded shows. The self-reported measures of potential teasing exposure used here are therefore best understood as a proxy for true exposure (i.e., objectively measured). Less popular shows, nominated as favorites by almost half the student sample, were also not included in this analysis. Findings may therefore not apply to all shows that youth favor. In addition, shows examined in this study were identified as popular among youth in 2010, and the portrayal of weight and stigmatizing incidents may have changed in recent years. However, three features of this sample of shows suggest their continued relevance. First, new episodes of eight of the shows

analyzed in this study are still being produced (in the 2016–2017 season) due to their ongoing popularity. Second, six shows ended their network run in recent years (*i.e.*, since 2013), and have therefore been available for regular TV viewing by today's adolescents. Third, four additional shows had already concluded at the time they were nominated (*i.e.*, prior to 2010), indicating that youth view shows in syndication or through online sources such as Netflix. All of the concluded shows continue to be available through these alternate sources. Finally, the cross-sectional nature of this study precludes drawing conclusions regarding causality. In addition to media content influencing body image, it may be that girls choose TV shows that reinforce weight-related stigma based on their body image or another related factor.

Several strengths enhance the contribution of this work. First, the media analyzed came from the favorite programs listed by a diverse sample of adolescents, in contrast to previous research which has selected shows that targeted a youth audience, had a specific focus (*e.g.*, weight loss reality TV) or were on during a specific time slot (*e.g.*, prime time). The multi-level design permitted the creation of unique teasing exposure scores based on teasing incidents in each adolescent's favored shows, a novel methodological contribution. Additionally, coding three episodes of 25 shows identified a large number of teasing incidents, which allowed for more nuanced examination of specific types of teasing (*i.e.*, weight- and shape-related incidents and teasing incidents with an overweight target).

Conclusion

Adolescence is an important time for growth, and body satisfaction can play a large part in an individual's sense of self. Because television plays such a significant role in the daily life of adolescents, weight- and shape-related teasing in television shows has the potential to influence their reality. Adolescents may view weight-related teasing through the lens of the show and construe that being overweight is cause for shame. We theorize that this could, in turn, lead to anxiety about body image and decreased body satisfaction.

Families and care providers should be aware of these issues and discuss body satisfaction with adolescents. Monitoring television viewing could also help to decrease the amount of weight-related teasing that adolescents view, and media literacy programs can be expanded to further address the use of weight- and shape-teasing in televised programming. The entertainment industry is strongly encouraged to consider the negative effects television content could have on adolescent viewers and eliminate comedic elements that are based on weight and other body issues.

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Highlights

- Teasing is common in TV shows popular with adolescents.
- Over one-quarter of teasing incidents focus on weight or shape.
- Exposure to on-screen teasing was associated with lower body satisfaction in girls.
- Weight status did not modify the association between teasing and body satisfaction.

Table 1

Characteristics of the sample (N = 1531)

	Males n=724	Females n=807
	%	%
Race		
White	23.0	18.7
African American	27.1	29.0
Hispanic	15.5	15.4
Asian	21.6	19.7
Native American	4.3	3.9
Mixed/other race	8.6	13.3
BMI		
Non-overweight weight (<85 th percentile)	58.0	62.2
Overweight (≥ 85 th percentile)	42.0	37.8
Number of favorite shows in top 25		
1	47.7	55.3
2	35.8	34.0
3	16.6	10.8
	Mean (SD)	Mean (SD)
Age (range=11–20)	14.3 (2.0)	14.2 (1.9)
Body Satisfaction (range=13–65)	44.9 (12.6)	43.1 (12.9)
Teasing exposure		
Total teasing incidents (range=0–65)	15.7 (13.4)	13.5 (10.5)
Total weight-teasing incidents (range=0–15)	4.9 (3.7)	4.6 (3.3)
Percent of total teasing incidents that are weight-related (range=0–75)	34.3 (20.2)	34.9 (20.9)
Percent of weight-related incidents with overweight targets (range=0–100)	49.3 (31.8)	51.0 (32.1)

Table 2
Top 25 television shows nominated by EAT 2010 participants, with teasing incidents

Rank	Show	Total teasing incidents	Total weight/shape-related teasing	% of total teasing related to weight/shape	% of weight/shape teasing with overweight targets
1	Family Guy	11	6	54.5	66.7
2	The Simpsons	7	2	28.6	100
3	SpongeBob Square Pants	6	3	50.0	66.7
4	CSI	0	0	–	–
5	iCarly	3	2	66.7	50
6	South Park	14	1	7.1	0
7	Two and a Half Men	4	3	75.0	0
8	That 70's Show	5	2	40.0	0
9	The Game	7	0	0.0	–
10	George Lopez	5	1	20.0	100
11	Everybody Hates Chris	4	3	75.0	0
12	House	4	2	50.0	0
13	The Vampire Diaries	7	0	0.0	–
14	My Name is Earl	45	7	15.6	71.4
15	Gossip Girl	4	0	0.0	–
16	The Office	9	3	33.3	66.7
17	Degrassi	14	0	0.0	–
18	Hannah Montana	7	4	57.1	0
19	Wizards of Waverly Place	8	1	12.5	0
20	Suite Life on Deck	3	1	33.3	0
21	Secret Life of the American Teenager	2	0	0.0	–
22	Supernatural	31	4	12.9	0
23	NCIS	25	5	20.0	0
24	Bones	4	0	0.0	–
25	Scrubs	20	2	10.0	0
	Mean	10.0	2.1	27.6 ^a	29.0 ^a

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Rank	Show Range	Total teasing incidents	Total weight/shape-related teasing	% of total teasing related to weight/shape	% of weight/shape teasing with overweight targets
		0-45	0-7	0-75.0	0-100.0

^a Shows with none of the relevant incidents were excluded from the calculation.

Table 3

Associations between teasing exposure and body satisfaction score^a

	Teasing exposure											
	Total teasing incidents			Total weight/shape-related teasing			% of total teasing related to weight/shape			% of weight/shape-related teasing with overweight targets		
	β^b	SE	P	β^b	SE	P	β^c	SE	P	β^c	SE	P
Males	-0.03	0.04	0.455	-0.15	0.16	0.336	-0.02	0.02	0.448	0.02	0.01	0.292
Females	-0.09	0.05	0.060	-0.43	0.16	0.008	-0.03	0.02	0.102	-0.03	0.01	0.021

Boldface type indicates statistical significance

^aModels adjusted for race, age, overweight status, weekly hours of TV viewing and number of favorite TV shows in the coded sample

^bEstimates are associated with each additional total teasing incident (0–45) or weight/shape-related teasing incident (0–7).

^cEstimates are associated with each additional percentage point (0–100).