Published in final edited form as:

J Adolesc Health. 2014 June ; 54(6): 724–729. doi:10.1016/j.jadohealth.2013.10.205.

Multiple Types of Harassment: Associations with Emotional Well-being and Unhealthy Behaviors in Adolescents

Michaela M. Bucchianeri, PhD¹, Marla E. Eisenberg, ScD, MPH^{1,2}, Melanie M. Wall, PhD³, Niva Piran, PhD⁴, and Dianne Neumark-Sztainer, PhD, MPH, RD¹

¹Division of Epidemiology and Community Health, School of Public Health, University of Minnesota

²Division of General Pediatrics and Adolescent Health, Department of Pediatrics, Medical School, University of Minnesota

³Departments of Biostatistics and Psychiatry, Columbia University

⁴Department of Applied Psychology and Human Development, Ontario Institute for Studies in Education, University of Toronto

Abstract

Purpose—To explore relationships between harassment (i.e., race-, weight-, SES-based, sexual) and health-related outcomes, including self-esteem, depressive symptoms, body satisfaction, substance use, and self-harm behavior, among diverse adolescents.

Method—Cross-sectional analysis using data from a population-based study with socioeconomically and racially/ethnically diverse sample (81% racial/ethnic minority; 54% low or low-middle income) of adolescents participating in Eating and Activity in Teens 2010 (EAT 2010) ($n = 2,793$; mean age = 14.4 years).

Results—Harassment experiences were significantly associated with negative health behaviors and well-being. After mutually adjusting for other types of harassment, weight-based harassment was consistently associated with lower self-esteem and lower body satisfaction in both genders (standardized β s ranged in magnitude from 0.39 to 0.48); sexual harassment was significantly associated with self-harm and substance use in both genders (ORs: 1.64 to 2.92); and both weight-based and sexual harassment were significantly associated with depressive symptoms among girls (standardized β s = 0.34 and 0.37). Increases in the number of harassment types reported by adolescents were associated with elevated risk for all outcomes regarding substance use/self-harm (ORs: 1.22 to 1.42) and emotional well-being (standardized β s: 0.13 to 0.26).

© 2013 Society for Adolescent Medicine. Published by Elsevier Inc. All rights reserved.

Correspondence concerning this article should be addressed to Michaela M. Bucchianeri, Division of Epidemiology and Community Health, School of Public Health, 1300 South Second Street, Suite 300, University of Minnesota, Minneapolis, MN, 55454, United States. Tel.: +1 612 626 8372; fax: +1 612 624 0315. mbucchia@umn.edu (M. M. Bucchianeri).

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Conclusions—Harassment—particularly weight-based and sexual harassment—is associated with a variety of negative health and well-being outcomes among adolescents, and risk for these outcomes increases with the number of harassment types an adolescent experiences. Early detection and intervention to decrease harassment experiences may be particularly important in mitigating psychological and behavioral harm among adolescents.

Keywords

adolescents; harassment; bullying; teasing; weight; socioeconomic status; race/ethnicity; gender; self-esteem; depression; self-harm; substance use; body satisfaction

Teasing, bullying, and harassment are prevalent among youth and are of public health concern.^{1–11} Past research has emphasized that youth who are bullied in general are at increased risk of developing psychosocial and psychosomatic problems,^{2,8} and also has examined risks associated with individual types of harassment. For instance, results of cross-sectional and prospective studies highlight strong associations between weight-related teasing and emotional problems (e.g., low self-esteem, depressive symptoms) and unhealthy weight control behaviors (e.g., fasting, skipping meals) among adolescents.^{3–7} In addition, there is evidence that sexual harassment is associated with poor mental and physical health in middle and high school students.¹¹ Furthermore, sexual and race/ethnicity-based harassment each have been associated with negative health outcomes, although this work has focused primarily on adult populations.^{e.g.,9} Thus, a gap exists in our understanding of these forms of mistreatment—and their associated risks—among adolescents.

Important questions remain regarding the role of harassment experiences in the emotional and behavioral health of adolescents. For example, although the links between weight-related teasing and harmful outcomes are well-documented,^{3–10} less is known about the risks associated with other forms of harassment. It remains unclear how various harassment types may be associated with emotional well-being and harmful behaviors in adolescents. This is especially important to explore, given the high prevalences of weight-, race-, SES-based, and sexual harassment previously found in the same large dataset being used in the current study¹, as well as evidence that harassment, without intervention, tends to escalate over time.¹² In addition, while past studies have examined the influence of isolated forms of harassment, we are not aware of any studies that have assessed associations with various forms of harassment together in a sample of adolescents. It is important to determine if particular types of harassment may be worse than others in terms of adolescents' risk for certain negative health outcomes, as this information can be used to tailor interventions, inform policy decisions, and guide providers' discussions with youth and their families. Finally, despite evidence that some youth are at significantly elevated risk for multiple types of harassment,¹ the relationship between the cumulative experience of different types of harassment an adolescent experiences and poor emotional and behavioral health has not yet been investigated. Investigating whether those adolescents who experience the greatest number of harassment types also are at greatest risk for health problems is a critical step toward preventing harm among adolescents.

Building upon previous work documenting the high prevalence of harassment experiences among diverse youth in this sample,¹ the aims of this study are threefold. First, this study will investigate the cross-sectional relationships between harassment (race-, weight-, SES-based, and sexual) and an array of girls' and boys' health-related variables previously shown to be associated with individual types of harassment,^{2–9} including self-esteem, depressive symptoms, body satisfaction, substance use, and self-harm behavior. Given gender differences in the prevalence patterns of these harassment types observed in previous work with this sample,¹ separate analyses will be run for girls and boys. Second, this study will identify those types of harassment that are most strongly associated with emotional well-being and unhealthy behaviors among adolescents. Finally, this study will test associations between cumulative experience of different harassment types and risk for psychological and behavioral harm. Drawing from a large, socio-demographically diverse sample of middle- and high-school girls and boys, this study represents the most comprehensive examination to date of harassment experiences and their associations with emotional well-being and unhealthy behaviors among adolescents.

Method

Sample and Study Design

Data for this analysis were drawn from EAT 2010 (Eating and Activity in Teens), a large population-based study on 2,793 adolescents from diverse ethnic/racial and socio-economic backgrounds. The EAT 2010 survey is a 235-item self-report instrument assessing a range of factors of potential relevance to weight status and weight-related behaviors among adolescents. The survey development process is described elsewhere.¹³ Surveys and anthropometric measures were completed by adolescents from 20 public middle and high schools in the Minneapolis/St. Paul metropolitan area of Minnesota, during the 2009–2010 academic year. The mean age was 14.4 years (SD=2.0); 46.1% were in middle school (6th–8th grades) and 53.9% were in high school (9th–12th grades). Adolescents were approximately equally divided by gender (46.8% boys, 53.2% girls). The racial/ethnic backgrounds of the participants were as follows: 18.9% White, 29.0% African American or Black, 19.9% Asian American, 16.9% Hispanic, 3.7% Native American, and 11.6% mixed or other race. The SES of participants included: 29.4% low SES, 24.3% low-middle SES, 33.3% middle SES, 6.4% upper-middle SES, and 2.8% high SES. Approximately one-third of participants were overweight (≥ 85th percentile, as defined below); the rest were non-overweight. All study procedures were approved by the University of Minnesota's Institutional Review Board Human Subjects Committee.

Measures

Harassment—Perceived harassment was measured using a series of items developed for EAT 2010. Four types of perceived harassment were assessed with the questions: “How often do any of the following things happen?” (a) “You are teased or harassed about your race,” (b) “You are teased or harassed about your weight,” (c) “You are teased or harassed about your family’s financial situation,” or (d) “You are teased or harassed in a sexual way (e.g., grabbing/pinching, sexual comments, unwanted touching, etc.)” Participants responded to each item using a 5-point scale, ranging from “never” to “at least once a week.” The four

items have demonstrated acceptable test-retest reliability (Pearson correlations ranging from .69 to .73). For the present study, due to restricted range of responses (i.e., more than half of the sample provided responses of “never” to each harassment type), responses were dichotomized to a score of “never” or “ever”.

Substance use—Substance use was assessed with the question, “How often have you used the following during the past year (12 months)?: cigarettes, liquor (beer, wine, hard liquor), or marijuana?” Participants responded with “never,” “a few times,” “monthly,” “weekly,” or “daily.” Test-retest correlations for these three substance use items have ranged from .77 to .81 in prior testing. For the present study, responses were dichotomized to a score of “never” or “ever”.

Self-harm behavior—Self-harm behavior was measured using the following item, which was adapted from previously-tested items:^{14,15} “Have you ever deliberately hurt yourself, such as by cutting, scratching or burning, but not with the goal of ending your life?” Participants indicated their response by selecting one of three options: “Yes, during the past year,” “Yes, more than a year ago,” or “No.” Both “yes” responses were combined for the present study.

Self-esteem—Self-esteem was assessed with a shortened version of the Rosenberg Self-Esteem Inventory,¹⁶ which consists of 6 items such as, “I feel that I have a number of good qualities.” Items are rated on a 4-point response scale ranging from 1 (“strongly disagree”) to 4 (“strongly agree”). This scale has shown good internal reliability (Cronbach’s alpha = .82). Scores are summed, with higher scores indicating higher self-esteem.

Depression—Symptoms of depression were assessed with the six-item Depressive Mood Scale.¹⁷ Items such as “During the past 12 months, how often have you been bothered or troubled by feeling unhappy, sad, or depressed?” were rated on a 3-point scale from 1 (“not at all”) to 3 (“very much”). This scale has shown good internal reliability (Cronbach’s alpha = .80 to .81). Item responses were summed, with higher scores indicating greater depressed mood.

Body satisfaction—Body satisfaction was assessed using the Body Shape Satisfaction Scale.¹⁸ Participants indicated their degree of satisfaction with 10 body parts or attributes (i.e., height, weight, body shape, waist, hips, thighs, stomach, face, body build, shoulders) via a 5-point response scale ranging from 1 (“very dissatisfied”) to 5 (“very satisfied”). This scale has shown good internal reliability (Cronbach’s alpha = .92 to .93). Scores ranged from 10 to 50, with high scores indicating greater satisfaction.

Body mass index (BMI)—Participants’ heights and weights were measured at school by trained research staff in a private area with standardized equipment and procedures. Adolescent BMI was calculated using the following formula: weight (kg)/height (meters)². Sex- and age-specific cut points for underweight, normal weight, overweight, and obesity were based on data from the Centers for Disease Control and Prevention.¹⁹

Sociodemographic characteristics—Race/ethnicity was assessed with the item, “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,” and participants were invited to check all that applied. Those who checked “White” and another option were included in the “other” category. Those who checked two non-white options were categorized as “mixed/other race.” Additionally, those checking “Hawaiian/Pacific Islander” or “American Indian/Native American” were categorized as “mixed/other race” due to their small numbers in this dataset. Five levels of socioeconomic status (SES; low to high) were based on parent education level, parent employment status, eligibility for public assistance, and eligibility for free or reduced-cost school meals.²⁰

Statistical Analyses

Descriptive proportions of each type of harassment and proportions and means of outcome were calculated stratified by gender. Logistic regression was used to assess the association (odds ratios and 95% confidence intervals) between each type of harassment separately and then mutually on the outcomes, substance use (cigarette, alcohol, marijuana) and self-harm. Linear regression with sample standardized outcomes (mean = 0, standard deviation = 1) for depression, self-esteem and body satisfaction were used to assess associations (standardized beta coefficients and 95% confidence intervals) with each type of harassment separately and then mutually, in order to facilitate comparisons across emotional well-being variables. All regressions controlled for age, race/ethnicity, SES, and BMI z-score. Additional models examined the association between outcomes and the count of the different number of harassment types experienced. To avoid dropping participants from the analytical sample due to the small number of missing data, multiple imputation for all missing variables was implemented. SAS 9.2 was used for all analyses.

Results

All four types of harassment were common in this population (see Table 1). Race-based harassment was significantly higher in boys compared to girls, while every other type of harassment (weight-based, SES-based, sexual, or any) was significantly higher in girls. Overall, weight- and race-based harassment were most common, followed by sexual and SES-based harassment. A majority had experienced some type of harassment, and almost one in three reported multiple types of harassment.

Associations between Harassment Type and Substance Use/Self-harm

Overall, adolescents who reported some form of harassment had odds of substance use or self-harm behavior that were significantly greater than the odds for those who had not been harassed, controlling for age, race/ethnicity, SES and BMI (ORs range from 1.45–2.98; Table 2). Race-based harassment was associated with self-harm and use of cigarettes, alcohol, and marijuana among boys, and with self-harm and cigarette use among girls. Weight- and SES-based harassment were associated with self-harm and all forms of substance use for all adolescents, with girls’ marijuana use the only exception. Sexual harassment was associated with all types of substance use and with self-harm for all adolescents. In fact, sexual harassment had the largest odds ratios of all measured

associations, with girls who reported sexual harassment having odds of using alcohol 2.98 times greater than the odds of those girls who were not sexually harassed, and boys who reported sexual harassment having odds of engaging in self-harm behavior 2.71 times greater than the odds of those boys not reporting sexual harassment.

To identify the independent effects of each harassment type, regressions were run again, this time mutually adjusting for all harassment types simultaneously (plus demographic covariates). Sexual harassment emerged as the only harassment type that was significantly associated with cigarette use (OR = 1.87, CI = 1.16, 3.00) and self-harm (OR = 2.07, CI = 1.36, 3.14) among boys. Also in boys, no particular type of harassment was independently associated with alcohol or marijuana use. For girls, sexual harassment was independently associated with every substance use/self-harm outcome: cigarette use (OR = 1.64, CI = 1.11, 2.42), alcohol use (OR = 2.92, CI = 2.16, 3.94), marijuana use (OR = 2.27, CI = 1.57, 3.29), and self-harm behavior (OR = 2.12, CI = 1.60, 2.80).

Cumulative Harassment and Substance Use/Self-harm

To assess the degree to which the number of reported harassment types was associated with each of the outcome variables, an additional regression analysis was conducted, with a count variable (i.e., number of harassment types reported) positioned as the independent variable. Results indicate that each additional type of harassment was associated with significantly greater odds of substance use and self-harm behavior. For example, the odds of girls' cigarette use associated with experiencing any two types of harassment compared to only one type were 1.38 (and likewise, the OR was 1.38 for those reporting any three types vs. two, or four types vs. three).

Associations between Harassment Type and Emotional Well-being

Results indicate that adolescents who reported some form of harassment had lower self-esteem and body satisfaction and greater symptoms of depression than did those who had not been harassed, after adjusting for demographic characteristics (standardized β s ranged in magnitude from 0.16 to 0.61; see Table 3).

To identify the independent effects of each harassment type, each regression was run again, this time mutually adjusting for all types of harassment simultaneously. Among all adolescents, weight-based harassment was significantly associated with lower self-esteem (girls: standardized β = -0.45, CI = -0.57, -0.34; boys: standardized β = -0.39, CI = -0.51, -0.26) and lower body satisfaction (girls: standardized β = -0.46, CI = -0.57, -0.36; boys: standardized β = -0.48, CI = -0.61, -0.35). Among girls, depressive symptoms were associated with sexual (standardized β = 0.37, CI = 0.26, 0.49) and weight-based (standardized β = 0.34, CI = 0.22, 0.45) harassment. Among boys, depressive symptoms were associated with harassment based on race (standardized β = 0.23, CI = 0.11, 0.34), weight (standardized β = 0.23, CI = 0.11, 0.36), and SES (standardized β = 0.27, CI = 0.11, 0.42).

Cumulative Harassment and Emotional Well-being

As with substance use and self-harm behaviors, the number of types of harassment was significantly associated with each emotional well-being variable in the expected direction. For example, each additional type of harassment was inversely associated with approximately one-quarter of a point on the self-esteem scale for both girls ($t = -11.88, p < .001$) and boys ($t = -11.94, p < .001$).

Discussion

Among a large, socio-demographically diverse sample of adolescents, harassment experiences (full prevalence data described elsewhere¹), were both common and closely connected to health and well-being in several important ways. First, harassment experiences were associated with a broad range of negative behaviors and conditions; in general, adolescents who reported some form of harassment had lower self-esteem and body satisfaction, greater symptoms of depression, and greater odds of substance use and self-harm behavior than did those who had not been harassed. Second, all types of harassment examined in this study were significantly associated with problems of health and well-being. Third, when adjusting for all other types of harassment, weight-based and sexual harassment emerged as particularly potent correlates of negative outcomes among adolescents; weight-based harassment was significantly associated with lower self-esteem, lower body satisfaction, and—among girls—greater depression, and sexual harassment was significantly associated with self-harm, substance use, and—among girls—greater depression. Finally, increases in the number of different types of harassment were associated with elevated risk for all negative health and well-being measures.

Findings from the present study complement and extend those of past work which has focused primarily either on individual dimensions of harassment among youth,^{3–8} or on multiple dimensions of harassment within adult populations.^{13,21} For instance, in this study, weight-related harassment was strongly associated with low self-esteem, low body dissatisfaction, and (among girls) depressive symptoms, which is consistent with the growing body of work emphasizing the harmful role of weight teasing among youth.^{3–7} In addition, results of this study address a key gap in the adolescent harassment literature by evaluating multiple, specific forms of harassment and their associated risks to health and well-being during middle and high school, together in one sample. This approach reveals the important findings that all types of harassment examined had associations with poor health and well-being among adolescents, and that weight-based and sexual harassment in particular were associated with a range of negative consequences for girls' and boys' mental and physical health.

Results of this study also highlight the interconnectedness of various harassment types among adolescents. For example, when simultaneously adjusting for all other types of harassment, sexual harassment emerged as independently associated with substance use and self-harm behaviors as compared to other types of harassment—a finding which may reflect the relatively strong correlations between other forms of harassment (e.g., SES-based and weight-based harassment) in this population. This is consistent with past research revealing certain (e.g., overweight and obese) adolescents' disproportionately greater exposure to

multiple types of harassment as compared to other adolescents.¹ Furthermore, in the present study, adolescents' vulnerability to poor emotional well-being and unhealthy behaviors increased in association with the number of harassment types they experienced. This emphasizes the critical importance of attending to harassment experiences among adolescents, and underscores the need for development of systemic interventions which address the spectrum of identity-based mistreatment,²¹ as well as the implementation of anti-bullying policies in schools and other youth organizations.

Strengths and Limitations

This study has a number of strengths, including use of a large, diverse, population-based sample. Additionally, assessment of multiple harassment types allowed for a more comprehensive examination of these experiences than has previously been conducted in this population. Further, a wide range of outcomes were measured, including variables capturing both emotional well-being and harmful behaviors, which enabled us to test an unusually broad range of potential associations. These findings must be interpreted in light of certain limitations, however. First, participation in this study was voluntary and so it is possible that participants differed in some way from those who chose not to participate. Second, these data were collected cross-sectionally; therefore, we cannot infer the temporality of relationships between harassment and well-being. It is possible, for example, that instances of teasing may be more salient to those with heightened emotional vulnerability, and that they may interpret such interactions differently than would adolescents with different past experiences. Future research also may help to identify causal mechanisms involved in the link between harassment and well-being. Third, because the harassment items did not specify the source of harassment, we are unable to distinguish between harassment perpetrated by peers, family members, non-relative adults, and so on. Finally, because the harassment items were worded to encompass a range of experiences, it is not possible to differentiate, for example, reports of teasing from reports of physical violence; future examinations utilizing more detailed measures may help delineate the unique risks associated with more specific harassment experiences.

Implications for Health Care Professionals

Results of this study have implications for pediatricians and other providers who have regular contact with adolescents and their parents. Given the many associations between harassment experiences and negative emotional and behavioral outcomes, providers should be attuned to any sign of adolescent victimization, and should regularly screen for even normative or seemingly innocuous experiences, such as verbal teasing. Results of the present study emphasize the potential harm associated with various types of mistreatment. In particular, weight-based and sexual harassment are significantly associated with a broad range of negative emotional consequences and harmful behaviors; thus, weight-related mistreatment and unwanted sexual comments or behaviors should be specifically addressed.

It is important to note that, although substance use and self-harm behavior were characterized as unhealthy behaviors in the present study, they also can be thought of as forms of coping. Research suggests, for example, that youth who experience negative emotion in response to weight-based harassment are more likely than others to binge eat and

avoid situations in which they might be teased.⁵ Therefore, professionals working with adolescents should be aware that seemingly maladaptive behaviors may in fact be a coping response to harassment experiences. At the most basic level, providers can convey to youth that even normative harassment is unacceptable, and can brainstorm with their young patients how best to address the problem, adopt healthy coping strategies, and seek additional support and resources. In addition, providers should involve other professionals (e.g., social workers, school officials) when appropriate. Finally, providers should involve parents in discussions of harassment experiences and their potential consequences, as awareness and support at the family level (e.g., fostering a home environment of respect and security, advocating to school officials, communicating with other parents) will help promote safety and well-being within an adolescent's immediate environment.

Acknowledgments

This study was supported by Grant Number R01HL084064 (PI: Dianne Neumark-Sztainer) from the National Heart, Lung, and Blood Institute. The first author's time was funded by Grant T32 MH082761-01 from the National Institute of Mental Health. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Heart, Lung, and Blood Institute or the National Institutes of Health.

References

1. Bucchianeri MM, Eisenberg ME, Neumark-Sztainer D. Weightism, racism, classism, and sexism: Shared forms of harassment in adolescents. *Journal of Adolescent Health*. 2013; 53:47–53. [PubMed: 23566562]
2. Turner MG, Exum ML, Brame R, Holt TJ. Bullying victimization and adolescent mental health: General and typological effects across sex. *Journal of Criminal Justice*. 2013; 41:53–59.
3. Madowitz J, Knatz S, Maginot T, Crow SJ, Boutelle KN. Teasing, depression and unhealthy weight control behavior in obese children. *Pediatric Obesity*. 2012; 7:446–452. [PubMed: 22991215]
4. Puhl RM, Latner JD. Stigma, obesity, and the health of the nation's children. *Psychol Bull*. 2007; 133:557–580. [PubMed: 17592956]
5. Puhl RM, Luedicke J. Weight-based victimization among adolescents in the school setting: Emotional reactions and coping behaviors. *Journal of Youth and Adolescence*. 2012; 41:27–40. [PubMed: 21918904]
6. Eisenberg ME, Neumark-Sztainer D, Story M. Associations of weight-based teasing and emotional well-being among adolescents. *Arch Pediatr Adolesc Med*. 2003; 157:733–738. [PubMed: 12912777]
7. Eisenberg ME, Neumark-Sztainer D, Haines J, Wall M. Weight-teasing and emotional well-being in adolescents: Longitudinal findings from Project EAT. *Journal of Adolescent Health*. 2006; 38:675–683. [PubMed: 16730595]
8. Gruber JE, Fineran S. Comparing the impact of bullying and sexual harassment victimization on the mental and physical health of adolescents. *Sex Roles*. 2008; 59:1–13.
9. Karlsen S, Nazroo JY. Relation between racial discrimination, social class, and health among ethnic minority groups. *Am J of Pub Health*. 2002; 92:624–631. [PubMed: 11919063]
10. Young R, Van Beinum M, Sweeting H, West P. Young people who self-harm. *The British Journal of Psychiatry*. 2007; 191:44–49. [PubMed: 17602124]
11. Nixon MK, Cloutier P, Jansson SK. Nonsuicidal self-harm in youth: A population-based survey. *CMAJ*. 2008; 178:306–312. [PubMed: 18227450]
12. Wessler SL, De Andrade LL. Slurs, stereotypes, and student interventions: Examining the dynamics, impact, and prevention of harassment in middle and high school. *J Social Issues*. 2006; 62:511–532.

13. Neumark-Sztainer D, Wall M, Larson N, et al. Secular trends in weight status and weight-related attitudes and behaviors in adolescents from 1999–2010. *Prev Med*. 2012; 54:77. [PubMed: 22024221]
14. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA*. 2006; 295:1549–1555. [PubMed: 16595758]
15. Fekkes M, Pijpers FI, Fredriks AM, Vogels T, Verloove-Vanhorick SP. *Pediatrics*. 2006; 117:1568–1574. [PubMed: 16651310]
16. Rosenberg, M. *Society and the adolescent self-image*. Princeton, N.J.: Princeton University Press; 1965.
17. Kandel DB, Davies M. Epidemiology of depressive mood in adolescents: An empirical study. *Arch Gen Psychiatry*. 1982; 39:1205–1212. [PubMed: 7125850]
18. Pingitore R, Spring B, Garfield D. Gender differences in body satisfaction. *Obesity Research*. 1997; 5:402–409. [PubMed: 9385613]
19. Kuczmarski RJ, Ogden CL, Guo SS, et al. 2000 CDC Growth Charts for the United States: Methods and development. *Vital Health Stat*. 2002; 11:1–190.
20. Neumark-Sztainer D, Story M, Hannan PJ, et al. Overweight status and eating patterns among adolescents: Where do youths stand in comparison with the Healthy People 2010 Objectives? *Am J Public Health*. 2002; 92:844–851. [PubMed: 11988458]
21. Piran N, Thompson S. A study of the Adverse Social Experiences model to the development of eating disorders. *Intl J Health Promotion and Education*. 2008; 46:65–71.

Implications and Contribution

This study examines diverse adolescents' harassment experiences and their associated health risks. Harassment experiences among adolescents are highly prevalent and are associated with poor self-esteem, depressive symptoms, body dissatisfaction, substance use, and self-harm behavior. Moreover, risk for these outcomes increases with the number of harassment types an adolescent experiences.

Table 1

Percentages of harassment experiences reported by EAT 2010 adolescents.

	Girls (n = 1,486)	Boys (n = 1,307)	p-value for gender difference
Race-based harassment, %	31.4	39.5	<.0001
Weight-based harassment, %	38.2	31.8	.0005
SES-based harassment, %	14.0	18.6	.0014
Sexual harassment, %	29.0	20.4	<.0001
Any type of harassment, %	57.8	52.6	.0059
Cumulative harassment (two or more types), %	33.5	30.7	0.1214

SES = socioeconomic status

Associations between perceived harassment and substance use and self-harm behavior.

[illegible]

All regressions control for age, race/ethnicity, SES, and BMI.

Table 3
Associations between perceived harassment and self-esteem, depression, and body satisfaction.

	Self-esteem				Depression				Body Satisfaction			
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Mean (SD)	17.5 (3.7)	18.3 (3.4)	18.1 (5.1)	15.8 (4.7)	43.0 (13.1)	44.7 (13.1)						
	β (SE)	t	β (SE)	t	β (SE)	t	β (SE)	t	β (SE)	t	β (SE)	t
Race-based harassment	-0.38(0.06)	-6.79***	-0.38(0.05)	-7.26***	0.39(0.06)	6.96***	0.45(0.05)	8.64***	-0.21(0.05)	-4.07***	-0.25(0.05)	-4.63***
Weight-based harassment	-0.58(0.05)	-10.95***	-0.59(0.06)	-10.75***	0.51(0.05)	9.61***	0.48(0.06)	8.56***	-0.48(0.05)	-9.73***	-0.48(0.06)	-8.50***
SES-based harassment	-0.50(0.08)	-6.68***	-0.61(0.07)	-9.36***	0.51(0.07)	6.82***	0.58(0.07)	8.85***	-0.27(0.07)	-3.83***	-0.25(0.07)	-3.60***
Sexual harassment	-0.42(0.06)	-7.31***	-0.52(0.06)	-8.36***	0.55(0.06)	9.90***	0.49(0.06)	7.78***	-0.17(0.05)	-3.17***	-0.16(0.07)	-2.44*
Number of harassment types	-0.25(0.02)	-11.88***	-0.23(0.02)	-11.94***	0.26(0.02)	12.50***	0.21(0.02)	11.36***	-0.16(0.02)	-7.84***	-0.13(0.02)	-6.44***

Note. Data are presented as standardized regression coefficients (β) and standard errors (SE).

* $p < .05$,

** $p < .01$,

*** $p < .001$ (statistically significant).

All regressions control for age, race/ethnicity, SES, and BMI.