

Family Weight Teasing, LGBTQ Attitudes, and Well-being Among LGBTQ Adolescents

Marla E. Eisenberg, ScD, MPH; Rebecca Puhl, PhD; Ryan J. Watson, PhD

This study explored weight-based victimization by family members, accepting lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) attitudes, and family connectedness, and how these experiences are associated with health, self-esteem, and depressive symptoms among LGBTQ adolescents. Data came from the LGBTQ National Teen Survey (N = 9261, mean age = 15.6 years). The 3 key variables were significantly associated with poorer self-rated health, self-esteem, and depressive symptoms. For example, weight-based victimization was associated with approximately 2 more points on the depressive symptoms scale ($\beta = 1.81, P < .001$), adjusting for covariates. Findings highlight the negative impact of weight-based victimization among LGBTQ youth, even in the context of other types of family support.

Key words: adolescents, depression, gender identity, sexual orientation, victimization

LESBIAN, gay, bisexual, transgender, and queer/questioning (LGBTQ) adolescents face numerous health disparities in contrast to their straight, cisgender counterparts, including emotional distress, substance use, high-risk sexual behavior, and poor weight-related health.¹⁻⁹ For example, in the Center for Disease Control and Prevention's national Youth Risk Behavior Surveillance survey of high school students, the rate of past-year suicide attempts was over 4 times higher among gay, lesbian, and bisexual students than among heterosexual students.⁴ Similarly, our previous work with the Minnesota Student Survey found rates of suicide attempts that were over 4 times higher for transgender and gender diverse youth compared with cisgender youth.¹

Health disparities affecting LGBTQ youth are driven by the contexts in which people live,^{10,11} particularly experiences of social stigma. According to Goffman,¹² personal characteristics (such as a minority sexual orientation or gender identity) can

be socially "discredited," leading others to classify a stigmatized individual as less desirable. This social attitude can play out as enacted stigma or discrimination against affected individuals or groups, in the form of withdrawal of social support, unfair treatment, harassment, and violence.¹³ Hatzenbuehler¹⁴ has developed a theoretical framework that links social stigma specifically to the well-being of sexual minorities. Building on Meyer's Minority Stress Model,^{15,16} Hatzenbuehler's framework posits that LGBTQ* people confront increased stress exposure due to stigmatizing experiences; stigma-related stress leads to poorer general emotional well-being, interpersonal problems, and suboptimal cognitive processes; and these conditions then contribute to psychopathology.¹⁴ Research with adolescents has supported these theorized associations.¹⁷⁻²⁴ This framework is also applicable to stigma and the well-being of gender minorities.

In addition to stigmatizing experiences that LGBTQ adolescents face because of their sexual orientation and/or gender identity, these youth may also be particularly vulnerable to weight-based stigma for several reasons. First, studies have identified disparities in body mass index (BMI) across sexual orientation and gender identity groups, finding that lesbian, bisexual, and transgender youth are more likely to be overweight or obese compared with heterosexual youth²⁵⁻²⁸; this places sexual and gender minority youth at heightened risk for weight-based stigma, given considerable evidence of higher rates of weight-based stigma among overweight or obese youth compared with thinner peers.^{29,30} Second, adolescents who experience one type of stigma often experience multiple types.^{31,32} For example, we previously found almost

Author Affiliations: Department of Pediatrics, University of Minnesota, Minneapolis (Dr Eisenberg); Department of Human Development and Family Sciences, University of Connecticut, Storrs (Drs Puhl and Watson); and Rudd Center for Food Policy and Obesity, University of Connecticut, Hartford (Dr Puhl).

This research uses data from the LGBTQ Teen Study, designed by Ryan J. Watson and Rebecca M. Puhl in collaboration with the Human Rights Campaign, and supported by the Office for Vice President of Research at the University of Connecticut. Dr Watson also acknowledges support from the National Institutes of Drug Abuse grant K01DA047918. The authors acknowledge the intensive efforts of Ellen Kahn, Gabe Murchison, and Liam Miranda in their support, conceptualization, and management related to the LGBTQ Teen Study.

The authors declare no conflicts of interest.

Correspondence: Marla E. Eisenberg, ScD, MPH, 717 Delaware St SE, Minneapolis, MN 55414 (eisen012@umn.edu).

Copyright © 2020 Wolters Kluwer Health, Inc. All rights reserved.

DOI: 10.1097/FCH.000000000000239

*Variation in the LGBTQ/LGBQ/LGBT/LGB acronyms reflect differences in the sample characteristics of studies cited.

30% of GBQ boys reported experiencing weight- or appearance-based harassment compared with approximately 20% of heterosexual boys (adjusting for weight status).³² Experiencing multiple types of stigma increases risk for substance use and emotional distress.³³ Third, GBQ males have been shown to have poorer body image than straight males,³⁴ making them vulnerable to the sequelae of body dissatisfaction, such as disordered eating and emotional distress.^{35,36} Similar research among transgender youth is sparse and inconclusive; however, body dysphoria related to gender (eg, dissatisfaction with secondary sex characteristics or other gendered features) may be compounded with dissatisfaction due to body weight, making the study of weight-based stigma in this population of heightened interest.

Our recent research shows that weight-based teasing or victimization, a particular type of enacted weight-based stigma, is common among LGBQ adolescents³⁷ and is associated with poor mental health and substance use in this population, independent of sociodemographic characteristics and weight.³⁸ This recent evidence aligns with a robust literature showing that weight-based victimization is common and detrimental to well-being in general (primarily heterosexual and cisgender) samples of youth, both cross-sectionally and longitudinally, having been linked to the onset of disordered eating behavior, emotional distress, and weight gain, even accounting for initial BMI.^{29,30,39-46} These findings collectively underscore the importance of increased attention to youth facing stigma for multiple reasons, including their body weight, sexual orientation, and gender identity—an area of study that has received little research attention.

Family is a primary social context for young people, and a recent review highlighted the need for research attention to family-based stigma facing LGBQ youth.⁴⁷ Studies have consistently found that general parental connectedness and support are critical protective factors for youth,⁴⁸⁻⁵⁰ but LGBQ adolescents report lower levels of this important asset.^{1,51,52} Where present, parental connectedness and support act as critical buffers against negative health behaviors and outcomes.^{51,53-55} Researchers have also begun to investigate family interactions specific to adolescents' LGBQ identity, such as attitudes of acceptance or rejection of this aspect of the adolescent's identity⁵⁶⁻⁵⁸ and positive or negative reactions to disclosure of a sexual minority identity.^{54,59,60} For example, LGB young adults reporting high levels of family rejection had odds of attempting suicide that were over 8 times higher than those with families reporting no or low levels of family rejection.⁵⁷ In contrast, family acceptance of LGBT status and identity predicts

greater self-esteem and better general health, and protects against depression, substance use, and suicide involvement.⁵⁸

THE PRESENT STUDY

Parent-child interactions around weight, LGBQ identity, and general family connectedness are distinct constructs, which may be related, yet may differentially impact the well-being of LGBQ youth. We are not aware of any research that has examined weight-based victimization in the context of these other family experiences. Understanding the ways in which these family behaviors work together and affect youth will inform efforts to improve family-based interventions that support LGBQ young people, offering a more comprehensive perspective on family interactions for stigmatized youth, and helping to better protect them from adverse health outcomes associated with these experiences. The present study therefore addresses the following research questions: (1) Are weight-based victimization by family members, accepting LGBQ attitudes and general family connectedness, correlated with each other? (2) Is weight-based victimization associated with the well-being of LGBQ youth (self-rated health, self-esteem, and depressive symptoms) after accounting for other family variables, BMI, and other potential confounders? (3) Does accepting LGBQ attitudes or general family connectedness moderate the association between weight-based victimization and well-being?

METHODS

Study design and sample

Data for this study come from the LGBQ National Teen Survey, an online questionnaire regarding health, victimization, family interactions, and other experiences of LGBQ adolescents in the United States ($N = 17\ 112$).^{37,38,61} In partnership with the Human Rights Campaign (HRC), adolescents (13-17 years old) who identified as LGBQ, English speaking, and living in the United States were invited to complete the anonymous survey (hosted by Qualtrics.com). Recruitment relied on social media (Twitter, Facebook, Instagram, Reddit, and Snapchat) and announcements through HRC's large network of community partners and social influencers. Informed assent was obtained using the Study Information page presented to all participants on the front page of the survey Web site—by reading the study information and accepting the conditions to begin the survey, participants provided their assent. The University of Connecticut's Institutional Review Board approved all study protocols, including waiving parental consent for this minimal risk study. Additional information

pertaining to study procedures and recruitment can be found elsewhere.⁶¹

Survey and measures

The online survey was designed by the study team (R.J.W. and R.P.) to capture a variety of attitudes and experiences related to being an LGBTQ adolescent. Several safeguards were used to prevent ineligible responders and automated responders (ie, “bots”) from completing the survey, including a multistep consent and sorting process, which diverted those who were ineligible due to age or non-US residence. After fielding, those who completed at least 10% of survey items but provided misleading or extreme responses on multiple questions were considered mischievous responders and were deleted ($n = 74$).⁶² Responses to open-ended survey questions were reviewed by team members for additional mischievous entries (eg, describing one’s gender identity as Donald Trump), resulting in 79 additional deletions. Finally, 22 duplicate surveys were also deleted.

Four items on sexual/gender identity disclosure (ie, *outness*) were used to define the analytic sample. Approximately 30% ($n = 5182$ of the 17 112 usable cases) were missing data on all 4 items, and an additional 22.4% ($n = 2669$) responded that none of their parents and/or siblings knew about their sexual orientation and/or gender identity. These cases were excluded from analysis to ensure the relevance of the family LGBTQ items described later. The analytic sample therefore included 9261 adolescents.

Key independent variables included weight-based victimization, accepting LGBTQ attitudes, and general family connectedness. Weight-based victimization was assessed with 1 item asking participants whether they had ever been *teased or made fun of by family members because of their weight* (yes/no).^{41,45}

Accepting LGBTQ attitudes was measured with an 8-item scale assessing 4 positive family behaviors (eg, “How often do any of your parents/caregivers tell you they are proud of you because you are LGBTQ?”) and 4 negative family behaviors (eg, “Do any of your parents/caregivers ridicule or make fun of you because of your sexual orientation, gender identity, or gender expression?”), adapted from an established scale.^{57,58} The scale was originally developed based on in-depth interviews with a diverse group of LGB adolescents and has high reliability.^{57,58} Five response options included “doesn’t apply to me,” “never,” “rarely,” “sometimes,” and “often,” and negative items were reverse scored. Items were averaged to create an overall scale ranging from 0 to 4 ($\alpha = 0.92$), with higher scores reflecting greater family acceptance.

General *family connectedness* was assessed with 3 items taken from widely used family belonging and family functioning scales: “How much do you feel that ... your family cares about your feelings? Your family has a lot of fun together? Your family pays attention to you?”^{51,63,64} Five response options ranged from “strongly disagree” to “strongly agree” and responses were combined to create a scale ranging from 0 to 4. This scale had high internal reliability ($\alpha = 0.84$), with higher scores indicating greater connectedness.

Three types of well-being were used as dependent variables in analysis: self-rated health, self-esteem, and depressive symptoms. One item from the 36-Item Short Form Health Survey questionnaire⁶⁵ measured *self-rated health*: “How would you describe your health?” Response options included “poor,” “fair,” “good,” and “excellent,” with higher scores indicating better health. This single-item measure has high validity and is widely used in population surveys.⁶⁶

Eighteen items from the Rosenberg Self-Esteem Scale were used to assess *self-esteem*.⁶⁷ Examples include “I feel that I am a person of worth, at least on an equal plane with others” and “All in all, I am inclined to feel that I am a failure,” and participants were asked to agree or disagree (4-point scale). Negative items were reverse scored and items were summed to create a score ranging from 0 to 54 ($\alpha = 0.88$), with higher scores indicating higher self-esteem.

Ten items from the Kutcher Adolescent Depression Scale were used to assess *depressive symptoms*.^{68,69} Questions asked about frequency of symptoms over the last week “on average” or “usually.” Examples include “low mood,” “sadness,” “feeling blah or down,” “depressed or just can’t be bothered,” and “irritable, losing your temper easily, feeling pissed off, losing it.” Four response options for each included hardly ever, much of the time, most of the time, and all of the time, and responses were summed to range from 0 to 30 ($\alpha = 0.90$).

Several additional variables were included in analysis. *Body mass index* was calculated based on adolescents’ self-reported height and weight, using the standard formula (kg/m^2). One survey item assessed *sexual orientation*: “How do you describe your sexual orientation?” with response options of “gay or lesbian,” “bisexual,” “straight,” or “something else,” which prompted additional categories of queer, pansexual, asexual, questioning, and other. Two items were used to assess *sex assigned at birth* (male/female) and *current gender identity*, in keeping with recommendations.⁷⁰ Six gender identities were included: cisgender male (ie, assigned male at birth and identifying as male), cisgender female,

transboy, transgirl, assigned female at birth nonbinary, and assigned male at birth nonbinary. Youth who selected multiple categories that did not fit into cisgender or transboy/transgirl categories (eg, assigned female sex at birth and transboy identity) were categorized as nonbinary. *Caregiver education* was assessed with 2 items measuring the highest education level achieved by each parent (6 levels), and the parent with the higher level was used. Participant *age* was calculated from reported birth date and the date on which the survey was completed. Participants were asked to check all that applied of 5 racial/ethnic groups (white, black, Native American, Asian American, and Hispanic/Latino); those who selected 2 or more categories were classified as multiracial and those who wrote in another race or ethnicity were grouped. For *location*, participants reported their US state of residence, which was coded as Northeast, Midwest, South, and West by the study team.

Data analysis

Pearson’s correlations and *t* tests were used to test associations among the 3 family variables. To test associations between family variables and 3 measures of adolescent well-being, 4 linear regression models were run for each dependent variable, shown in Table 1. In model 1, weight-based victimization was entered alone. Model 2 added accepting LGBTQ attitudes, and model 3 added general family connectedness to the previous model. Model 4 included all 3 family variables simultaneously and further adjusted for BMI, sexual orientation, gender identity, higher education of caregivers, age, race category, and location. Interaction terms of weight-based victimization and LGBTQ attitudes, and weight-based victimization and family connectedness were added to test for effect modification among these family variables. Finally, to identify any effect modification by demographic characteristics, interaction terms of weight-based victimization by assigned sex, sexual orientation, and gender identity were added (separately) to model 4. Interaction terms were not significant in any case, and findings for the full analytic sample are therefore presented.

RESULTS

Sample characteristics are shown in Table 2. Of the 9261 participants, 39.3% identified as gay or lesbian and 30.9% were bisexual; 59.5% identified as cisgender. Approximately two-thirds of the sample was white, non-Hispanic, and participants came from all regions of the United States. The mean age was 15.6 (SD = 1.3) and mean BMI was 24.4 (SD = 6.4).

TABLE 1. Associations Between Family Variables and Well-being Among LGBTQ Adolescents Who Are Out to at Least 1 Parent/Sibling (β Estimates)

	Self-rated Health				Self-esteem				Depressive Symptoms			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Weight-based victimization	-0.35 <i>P</i> < .001	-0.30 <i>P</i> < .001	-0.22 <i>P</i> < .001	-0.15 <i>P</i> < .001	-5.05 <i>P</i> < .001	-3.63 <i>P</i> < .001	-2.07 <i>P</i> < .001	-1.70 <i>P</i> < .001	4.28 <i>P</i> < .001	3.31 <i>P</i> < .001	2.26 <i>P</i> < .001	1.81 <i>P</i> < .001
Accepting LGBTQ attitudes	...	0.13 <i>P</i> < .001	0.00 <i>P</i> = .878	0.00 <i>P</i> = .929	...	3.49 <i>P</i> < .001	0.88 <i>P</i> < .001	0.95 <i>P</i> < .001	...	-2.30 <i>P</i> < .001	-0.54 <i>P</i> < .001	-0.53 <i>P</i> < .001
Family connectedness	...	...	0.20 <i>P</i> < .001	0.18 <i>P</i> < .001	...	...	4.15 <i>P</i> < .001	3.85 <i>P</i> < .001	...	...	-2.81 <i>P</i> < .001	-2.54 <i>P</i> < .001

Abbreviation: LGBTQ, lesbian, gay, bisexual, transgender, and queer/questioning.

TABLE 2. Characteristics of the Sample of LGBTQ Youth Who Are Out to at Least 1 Parent/Sibling (N = 9261)

Characteristics	n (%)
Sexual orientation	
Gay or lesbian	3637 (39.3)
Bisexual	2860 (30.9)
Straight	144 (1.6)
Queer	451 (4.9)
Pansexual	1381 (14.9)
Asexual	407 (4.4)
Questioning	171 (1.9)
Other	210 (2.3)
Gender identity	
Cisgender male	1932 (20.9)
Cisgender female	3572 (38.6)
Transboy	989 (10.7)
Transgirl	110 (1.2)
Assigned female at birth nonbinary	2389 (25.8)
Assigned male at birth nonbinary	269 (2.9)
Racial/ethnic category	
White	6107 (66.0)
Black	407 (4.4)
Native American	42 (0.5)
Asian American	275 (3.0)
Hispanic/Latino	951 (10.3)
Bi/multiracial	1308 (14.1)
Other	163 (1.8)
Location	
Northeast	1695 (18.3)
Midwest	2223 (24.0)
South	3294 (35.6)
West	2049 (22.1)
Weight-based victimization by family member(s)	4416 (54.6)
	Mean (SD)
Age (range: 13-17)	15.6 (1.3)
BMI (range: 12.6-67.1)	24.4 (6.4)
Family LGBTQ attitudes (range: 1-4)	2.4 (0.8)
Family connectedness (range: 1-5)	3.5 (1.0)
Self-rated health (range: 0-3)	1.4 (0.8)
Self-esteem scale (range: 0-54)	26.3 (10.1)
Depression scale (range: 0-30)	13.5 (7.6)

Abbreviations: BMI, body mass index; LGBTQ, lesbian, gay, bisexual, transgender, and queer/questioning; SD, standard deviation.

Family and well-being characteristics are also shown in Table 2. Over half (54.6%) of participants reported experiencing weight-based victimization from family members. On average, participants reported family LGBTQ attitude scores of 2.4, which were midrange. Average family connectedness scores were approximately 3.5, indicating moderately high connectedness. Self-rated health, self-esteem, and depressive symptoms were all approximately midrange.

Associations among family variables

All 3 family variables were associated with each other. Family LGBTQ attitudes and general family connectedness were lower among those who had experienced weight-based victimization. For example, the mean LGBTQ attitudes score was 2.3 among those who were victimized about weight, compared with 2.7 among those who were not victimized about weight ($t = 25.4, P < .001$). The correlation between accepting LGBTQ attitudes and family connectedness was positive, of moderate magnitude, and significant ($r = 0.53, P < .001$).

Associations between family weight-based victimization and adolescent well-being

As shown in Table 1, weight-based victimization and general family connectedness were significantly associated with self-rated health, self-esteem, and depressive symptoms in all models, even after adjusting for multiple covariates (model 4). For example, being victimized about weight was associated with approximately 2 more points on the depressive symptoms scale after adjusting for family variables and additional covariates ($\beta = 1.81, P < .001$). Accepting LGBTQ attitudes was significantly associated with self-esteem and depressive symptoms. For example, each unit of accepting attitudes was positively associated with approximately 1 point on the self-esteem scale, after adjusting for covariates ($\beta = 0.95, P < .001$). LGBTQ attitudes were not, however, associated with self-rated health after accounting for other family variables.

Effect modification of family variables

When interaction terms for weight-based victimization by LGBTQ attitudes and family connectedness were added to model 4, they were significant in 3 of 6 tests. Specifically, we found evidence of effect modification of weight-based victimization by LGBTQ attitudes for self-esteem ($P < .01$) and by family connectedness for self-rated health ($P < .05$) and self-esteem ($P < .001$). Associations are illustrated in the Figure. For example, among those reporting the lowest level of LGBTQ acceptance, average self-esteem scores were very similar for those

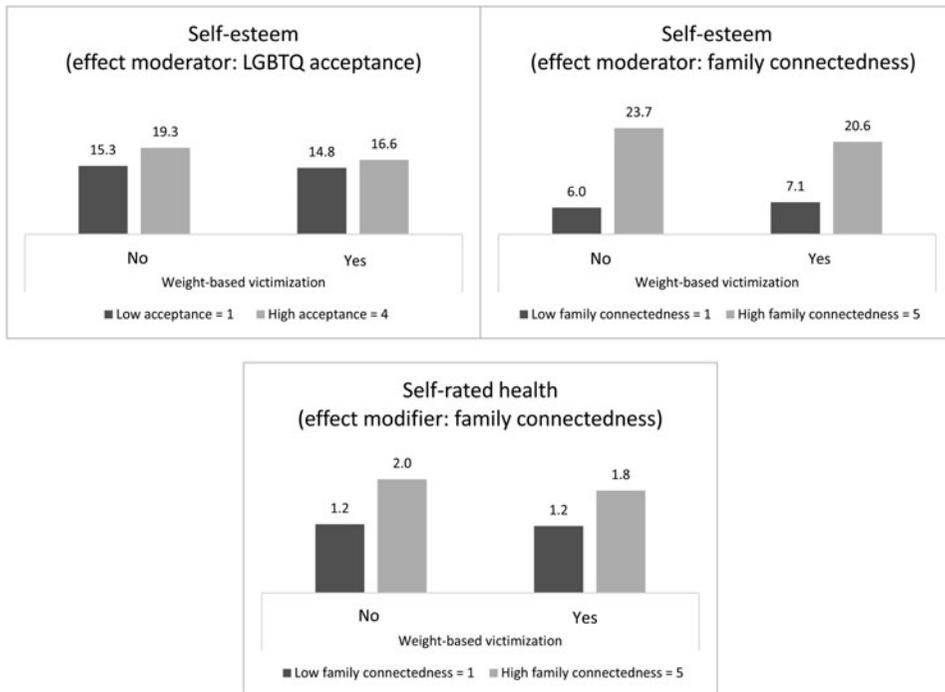


Figure. Effect modification of weight-based victimization and LGBTQ acceptance and family connectedness.

with and without weight-based victimization (15.3 vs 14.8); for those reporting the highest level of LGBTQ acceptance, average self-esteem scores were higher among those with no weight-based victimization (19.3) compared with those who experienced weight-based victimization (16.6).

DISCUSSION

The present study, guided by existing theoretical frameworks of stigma and its consequences for well-being,¹²⁻¹⁴ examined novel relationships between weight-based victimization from family members, parental LGBTQ attitudes, and general family connectedness reported by LGBTQ adolescents. Findings showed significant associations between these 3 family variables. Notably, accepting LGBTQ attitudes from parents and general family connectedness was lower among adolescents who experienced weight-based victimization from family members compared with those who had not experienced this victimization. Given that both body weight and sexual orientation have been stereotyped as characteristics that are within personal control,^{71,72} it may be that adolescents with both of these stigmatized identities are vulnerable to lower acceptance from family members. Previous evidence has documented positive correlations between expressions of

prejudiced weight-based attitudes and homophobic attitudes.^{73,74} As these issues have not been directly assessed in parents of LGBTQ youth, it will be informative for future work to identify and disentangle the nature of parental attitudes about their child's body weight, sexual orientation, and gender identity, and how these impact family relationships and adolescent well-being.

Findings additionally highlight important health implications of weight-based stigma for LGBTQ adolescents. Specifically, family weight-based victimization uniquely contributed to all 3 measures of poorer well-being (self-rated health, self-esteem, and depressive symptoms) in our sample, independent of BMI and demographic characteristics. Furthermore, associations between weight-based victimization and poorer well-being remained significant regardless of family LGBTQ attitudes. Thus, even for adolescents who perceive positive and supportive parental attitudes related to their sexual orientation or gender identity, being teased about their body weight from family members may be harmful to their health. Relatedly, our findings showed that even for adolescents who reported high levels of family connectedness, those who experienced weight-based victimization from family members had significantly poorer self-rated

health compared with adolescents who did not experience weight-based victimization.

Collectively, our findings indicate the need to better understand how parents of LGBTQ youth communicate with them about their body weight, and the implications this has for health of LGBTQ adolescents. While these issues have not yet been explicitly studied in sexual or gender minority populations, recent evidence from a general sample of adolescents with high BMI (ie, overweight and obesity) suggests that parents often talk about their child's weight in ways that make their child feel sad, embarrassed, and ashamed; this is especially apparent in girls.⁷⁵ In addition, emerging literature has demonstrated negative implications of parental "weight talk" (parental comments about their child's weight) for adolescent health, including unhealthy weight control behaviors, binge eating, and psychological distress.^{76,77} Given the findings of the present study, in addition to previous evidence that sexual and gender minority youth have increased vulnerability to maladaptive eating behaviors^{34,78} and high rates of overweight and obesity,^{26,28} it seems especially important for future research to examine weight talk and weight-based teasing from parents toward LGBTQ adolescents, and to educate parents on ways to engage in more supportive communication about weight with their adolescents.

Our study has several limitations. The cross-sectional nature of our data prevents causal conclusions; the significant associations observed in our study highlight the need for longitudinal examinations of family weight-based teasing, LGBTQ attitudes, and well-being among LGBTQ adolescents over time. Our sample was limited to those with access to the Internet and is not a nationally representative sample, thus limiting generalizability to other sexual and gender minority youth populations. Additionally, the key independent variable of family weight-based teasing did not include explanation or definition of the "ever" time frame, what family members should be considered (eg, immediate vs extended), or the degree and intensity of this victimization. Finally, the assessment of family variables examined in our study relied on adolescent self-reports; future research should include both parental and adolescent perspectives. Despite these limitations, our study has important strengths including a large and diverse sample of sexual and gender minority youth, multiple measures of family interactions, and offers novel insights about previously unstudied relationships between family factors and weight-based victimization in LGBTQ adolescents.

CONCLUSIONS

Our study observed lower levels of accepting LGBTQ attitudes from parents and general family connectedness among LGBTQ adolescents who experienced weight-based victimization from family members compared with those who had not. Further, weight-based victimization uniquely contributed to poorer adolescent well-being independent of demographic characteristics, BMI, and other family behaviors. These findings provide novel insights about the relationship between weight-based victimization and health of LGBTQ youth, and highlight the need for future studies to clarify the role of family factors in this relationship, including the ways that parents communicate about weight with LGBTQ youth. As very little research has examined experiences of stigma related to body weight and sexual orientation and gender identity in youth, our findings suggest new avenues for research and underscore the importance of identifying ways to support youth whose multiple stigmatized identities pose adverse consequences for their health.

REFERENCES

1. Eisenberg ME, Gower AL, McMorris BJ, Rider GN, Shea G, Coleman E. Risk and protective factors in the lives of transgender/gender non-conforming adolescents. *J Adolesc Heal*. 2017;61:521-526. doi:10.1016/j.jadohealth.2017.04.014.
2. Haas AP, Eliason M, Mays VM, et al. Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: review and recommendations. *J Homosex*. 2011;58(1):10-51. doi:10.1080/00918369.2011.534038.
3. Institute of Medicine. *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: Institute of Medicine; 2011.
4. Kann L, McManus T, Harris WA, et al. Youth risk behavior surveillance—United States, 2017. *MMWR Morb Mortal Wkly Rep*. 2018;67(8):1-114.
5. Katz-Wise SL, Blood EA, Milliren CE, et al. Sexual orientation disparities in BMI among US adolescents and young adults in three race/ethnicity groups. *J Obes*. 2014;2014:537242. doi:doi.org/10.1155/2014/537242.
6. Marshal MP, Friedman MS, Stall R, et al. Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*. 2008;103(4):546-556. doi:10.1111/j.1360-0443.2008.02149.x.
7. Marshal MP, Dietz LJ, Friedman MS, et al. Suicidality and depression disparities between sexual minority and heterosexual youth: a meta-analytic review. *J Adolesc Health*. 2011;49(2):115-123. doi:10.1016/j.jadohealth.2011.02.005.
8. Veale JF, Watson RJ, Peter T, Saewyc EM. Mental health disparities among Canadian transgender youth. *J Adolesc Heal*. 2017;60(1):44-49. doi:10.1016/j.jadohealth.2016.09.014.
9. Watson RJ, VanKim N, Rose H, Porta CM, Gahagan J, Eisenberg ME. Unhealthy weight control behaviors among youth: sex of sexual partner is linked to troubling differences in Minnesota. *Eat Disord*. 2018;26(5):448-463.

10. Viner RM, Ozer EM, Denny S, et al. Adolescence and the social determinants of health. *Lancet*. 2012;379(9826):1641-1652. doi:10.1016/S0140-6736(12)60149-4.
11. Braveman P, Gottlieb L. The social determinants of health: it's time to consider the causes of the causes. *Public Health Rep*. 2014;129(suppl 2):19-31. doi:10.1177/00333549141291S206.
12. Goffman E. *Stigma: Notes on the Management of Spoiled Identity*. London, England: Prentice Hall; 1963.
13. Scambler G. Stigma and disease: changing paradigms. *Lancet*. 1998;352(9133):1054-1055.
14. Hatzenbuehler ML. How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychol Bull*. 2009;135(5):707-730. doi:10.1037/a0016441.
15. Meyer I. Minority stress and mental health in gay men. *J Heal Soc Behav*. 1995;36(1):38-56.
16. Garnets L, Kimmel D, eds. *Psychological Perspectives on Lesbian, Gay, and Bisexual Experiences*. 2nd ed. New York, NY: Columbia University Press; 2003:699-731.
17. Espelage DL, Aragon SR, Birkett M, Koenig BW. Homophobic teasing, psychological outcomes, and sexual orientation among high school students: what influence do parents and schools have? *School Psych Rev*. 2008;37(2):202-216.
18. Jackson D, Sullivan R. Developmental implication of homophobia for lesbian and gay youth: issues in policy and practice. *J Gay Lesbian Soc Serv Pract Res*. 1994;1(3/4):111-130.
19. Rinehart S, Espelage D. A multilevel analysis of school climate, homophobic name-calling, and sexual harassment victimization/perpetration among middle school youth. *Psychol violence*. 2016;6(2):213-222. doi:10.1037/a0039095.
20. Tebbe EN, Moradi B. Anti-transgender prejudice: a structural equation model of associated constructs. *J Couns Psychol*. 2012;59(2):251-261. doi:10.1037/a0026990.
21. Poon C, Saewyc EM, Chen W. Enacted stigma, problem substance use, and protective factors among Asian sexual minority youth in British Columbia. *Can J Community Ment Heal*. 2011;30(2):47-64. <http://cjcmh.metapress.com/link.asp?id=u22060617875>.
22. Saewyc EM. Research on adolescent sexual orientation: development, health disparities, stigma and resilience. *J Res Adolesc*. 2011;21(1):256-272.
23. Meininger E, Saewyc EM, Clark T, et al. Enacted stigma and HIV risk behaviors in sexual minority youth of European heritage across three countries. *J Adolesc Heal*. 2007;40:S27.
24. Mongelli F, Perrone D, Balducci J, et al. Minority stress and mental health among LGBT populations: an update on the evidence. *Minerva Psichiatr*. 2019;60(1):27-50. doi:10.23736/S0391-1772.18.01995-7.
25. Laska MN, VanKim NA, Erickson DJ, Lust K, Eisenberg ME, Rosser BRS. Disparities in weight and weight behaviors by sexual orientation in college students. *Am J Public Health*. 2015;105(1):111-121. doi:10.2105/AJPH.2014.302094.
26. Austin SB, Nelson L, Birkett M, Calzo JP, Everett B. Eating disorder symptoms and obesity at the intersections of gender, ethnicity, and sexual orientation in US high school students. *Am J Public Health*. 2013;103(2):16-22.
27. VanKim NA, Erickson DJ, Eisenberg ME, Lust KD, Rosser BRS, Laska MN. Weight-related disparities for transgender college students. *Heal Behav Policy Rev*. 2015;1(2):161-171. doi:10.14485/HBPR.1.2.8.Weight-related.
28. Austin SB, Ziyadeh NJ, Corliss HL, et al. Sexual orientation disparities in weight status in adolescence: findings from a prospective study. *Obesity*. 2009;17(9):1776-1782. doi:10.1038/oby.2009.72.Sexual.
29. Puhl RM, Latner JD. Stigma, obesity, and the health of the nation's children. *Psychol Bull*. 2007;133(4):557-580. doi:10.1037/0033-2909.133.4.557.
30. Puhl RM, Heuer CA. The stigma of obesity: a review and update. *Obesity (Silver Spring)*. 2009;17(5):941-964. doi:10.1038/oby.2008.636.
31. Bucchianeri MM, Eisenberg ME, Neumark-Sztainer D. Weightism, racism, classism, and sexism: Shared forms of harassment in adolescents. *J Adolesc Heal*. 2013;53(1):47-53. doi:10.1016/j.jadohealth.2013.01.006.
32. Bucchianeri MM, Gower AL, McMorris BJ, Eisenberg ME. Youth experiences with multiple types of prejudice-based harassment. *J Adolesc*. 2016;51:68-75. doi:10.1016/j.adolescence.2016.05.012.
33. Bucchianeri MM, Eisenberg ME, Wall MM, Piran N, Neumark-Sztainer D. Multiple types of harassment: associations with emotional well-being and unhealthy behaviors in adolescents. *J Adolesc Health*. 2014;54(6):724-729. doi:10.1016/j.jadohealth.2013.10.205.
34. Miller JM, Luk JW. A systematic review of sexual orientation disparities in disordered eating and weight-related behaviors among adolescents and young adults: toward a developmental model [published online ahead of print January 18, 2018]. *Adolesc Res Rev*. doi:10.1007/s40894-018-0079-2.
35. Paxton SJ, Neumark-Sztainer D, Hannan PJ, Eisenberg ME. Body dissatisfaction prospectively predicts depressive mood and low self-esteem in adolescent girls and boys. *J Clin Child Adolesc Psychol*. 2006;35:539-549.
36. Neumark-Sztainer D, Paxton SJ, Hannan PJ, Haines J, Story M. Does body satisfaction matter? Five-year longitudinal associations between body satisfaction and health behaviors in adolescent females and males. *J Adolesc Health*. 2006;39(2):244-251. doi:10.1016/j.jadohealth.2005.12.001.
37. Puhl RM, Himmelstein MS, Watson RJ. Weight-based victimization among sexual and gender minority adolescents: findings from a diverse national sample. *Pediatr Obes*. 2019;14(7):e12514. doi:10.1111/jipo.12514.
38. Puhl RM, Himmelstein MS, Watson RJ. Weight-based victimization among sexual minority adolescents: implications for mental health and substance use. *Heal Psychol*. doi:10.1037/hea0000758.
39. Eisenberg ME, Berge JM, Fulkerson JA, Neumark-Sztainer D. Weight comments by family and significant others in young adulthood. *Body Image*. 2011;8(1):12-19. doi:10.1016/j.bodyim.2010.11.002.
40. Eisenberg ME, Neumark-Sztainer D, Haines J, Wall M. Weight-teasing and emotional well-being in adolescents: longitudinal findings from Project EAT. *J Adolesc Health*. 2006;38(6):675-683. doi:10.1016/j.jadohealth.2005.07.002.
41. Eisenberg ME, Neumark-Sztainer D, Story M. Associations of weight-based teasing and emotional well-being among adolescents. *Arch Pediatr Adolesc Med*. 2003;157(8):733-738. doi:10.1001/archpedi.157.8.733.
42. Haines J, Neumark-Sztainer D, Hannan PJ, Van Den Berg P, Eisenberg ME. Longitudinal and secular trends in weight-related teasing during adolescence. *Obesity*. 2008;16(suppl 2):S18-S23. doi:10.1038/oby.2008.447.
43. Haines J, Neumark-Sztainer D, Eisenberg ME, Hannan PJ. Weight teasing and disordered eating behaviors in adolescents: longitudinal findings from Project EAT (Eating Among Teens). *Pediatrics*. 2006;117(2):e209-e215. doi:10.1542/peds.2005-1242.

44. Neumark-Sztainer D, Falkner N, Story M, Perry C, Hannan PJ, Mulert S. Weight-teasing among adolescents: correlations with weight status and disordered eating behaviors. *Int J Obes Relat Metab Disord*. 2002;26(1):123-131. doi:10.1038/sj.ijo.0801853.
45. Puhl RM, Wall MM, Chen C, Bryn Austin S, Eisenberg ME, Neumark-Sztainer D. Experiences of weight teasing in adolescence and weight-related outcomes in adulthood: a 15-year longitudinal study. *Prev Med (Baltim)*. 2017;100:173-179. doi:10.1016/j.ypmed.2017.04.023.
46. Puhl RM, Luedicke J, Heuer C. Weight-based victimization toward overweight adolescents: observations and reactions of peers. *J Sch Health*. 2011;81(11):696-703. doi:10.1111/j.1746-1561.2011.00646.x.
47. Parker C, Hirsch J, Philbin M, Parker R. The urgent need for research and interventions to address family-based stigma and discrimination against lesbian, gay, bisexual, transgender, and queer youth. *J Adolesc Heal*. 2018;63(4):383-393. doi:10.1016/j.jadohealth.2018.05.018.
48. Resnick MD, Bearman PS, Blum RW, et al. Protecting Adolescents from harm: findings from the national longitudinal study on adolescent health. *JAMA*. 1997;278:823-832.
49. Resnick MD. Protective factors, resiliency, and healthy youth development. *Adolesc Med State Art Rev*. 2000; 11:157-164.
50. Sieving RE, McRee A, McMorris BJ, et al. Youth-adult connectedness: a key protective factor for adolescent health. *Am J Prev Med*. 2017;52(3S3):S275-S278. doi:10.1016/j.amepre.2016.07.037.
51. Eisenberg ME, Resnick MD. Suicidality among gay, lesbian and bisexual youth: the role of protective factors. *J Adolesc Health*. 2006;39(5):662-668. doi:10.1016/j.jadohealth.2006.04.024.
52. Saewyc EM, Homma Y, Skay CL, Bearinger LH, Resnick MD, Reis E. Protective factors in the lives of bisexual adolescents in North America. *Am J Public Health*. 2009;99(1):110-117. doi:10.2105/AJPH.2007.123109.
53. Needham BL, Austin EL. Sexual orientation, parental support, and health during the transition to young adulthood. *J Youth Adolesc*. 2010;39(10):1189-1198. doi:10.1007/s10964-010-9533-6.
54. Rothman EF, Sullivan M, Keyes S, Boehmer U. Parents' supportive reactions to sexual orientation disclosure associated with better health: results from a population-based survey of LGB adults in Massachusetts. *J Homosex*. 2012;59(2):186-200. doi:10.1080/00918369.2012.648878.
55. Gower AL, Rider GN, Brown C, et al. Supporting transgender and gender diverse youth: protection against emotional distress and substance use. *Am J Prev Med*. 2018;55(6):787-704. doi:10.1016/j.AMEPRE.2018.06.030.
56. Katz-Wise SL, Rosario M, Tsappis M. Lesbian, gay, bisexual, and transgender youth and family acceptance. *Pediatr Clin North Am*. 2018;63(6):1011-1025. doi:10.1016/j.pcl.2016.07.005.
57. Ryan C, Huebner D, Diaz RM, Sanchez J. Family rejection as a predictor of negative health outcomes in white and Latino lesbian, gay, and bisexual young adults. *Pediatrics*. 2009;123:346-352. doi:10.1542/peds.2007-3524.
58. Ryan C, Russell ST, Huebner D, Diaz R, Sanchez J. Family acceptance in adolescence and the health of LGBT young adults. *J Child Adolesc Psychiatr Nurs*. 2010;23(4):205-213. doi:10.1111/j.1744-6171.2010.00246.x.
59. Padilla Y, Crisp C, Rew D. Parental acceptance and illegal drug use among gay, lesbian, and bisexual adolescents: results from a national survey. *Soc Work*. 2010;55(3):265-275.
60. D'Augelli AR, Hershberger SL, Pilkington NW. Lesbian, gay, and bisexual youth and their families: disclosure of sexual orientation and its consequences. *Am J Orthopsychiatry*. 1998;68(3):361-371.
61. Watson RJ, Wheldon C, Puhl RM. Evidence of diverse identities in a large national sample of sexual and gender minority youth [published online ahead of print February 13, 2019]. *J Res Adolesc*. doi: 10.1111/jora.12488.
62. Robinson-Cimpian J. Inaccurate estimation of disparities due to mischievous responders: several suggestions to assess conclusions. *Educ Res*. 2014;43(4):171-185. doi:10.3102/0013189X14534297.
63. Mueller C. Protective factors as barriers to depression in gifted and nongifted adolescents. *Gift Child Q*. 2009;53(1):3-14.
64. King V, Boyd L. Factors associated with perceptions of family belonging among adolescents. *J Marriage Fam*. 2016;78(4):1114-1130. doi:10.1111/jomf.12322.
65. Rand Health Care. 36-Item Short Form Survey Instrument (SF-36). https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html.
66. Bowling A. Just one question: if one question works, why ask several? *J Epidemiol Community Health*. 2005; 59:342-345. doi:10.1136/jech.2004.021204.
67. Rosenberg M. *Society and the Adolescent Self Image*. Princeton, NJ: Princeton University Press; 1965.
68. Brooks S. The Kutcher Adolescent Depression Scale (11-Item). *J Child Adolesc Psychopharmacol News*. 2004;9(5).
69. Brooks S, Krulewicz S, Kutcher S. The Kutcher Adolescent Depression Scale: assessment of its evaluative properties over the course of an 8-week pediatric pharmacotherapy trial. *J Child Adolesc Psychopharmacol*. 2003;13(3):337-349.
70. Gender Identity in U.S. Surveillance (GenIUSS) Group. *Best Practices for Asking Questions to Identify Transgender and Other Gender Minority Respondents on Population-Based Surveys*. Los Angeles, CA: The Williams Institute; 2014.
71. Crandall C, Martinez R. Culture, ideology, and antifat attitudes. *Personal Soc Psychol Bull*. 1996;22:1165-1176.
72. Sakalli N. Application of the attribution—value model of prejudice to homosexuality. *J Soc Psychol*. 2002;142:264-271.
73. Latner JD, O'Brien KS, Durso L, Brinkman L, MacDonald T. Weighing obesity stigma: the relative strength of different forms of bias. *Int J Obes*. 2008;32:1145-1152.
74. Perez-Lopez M, Lewis R, Cash TF. The relationship of antifat attitudes to other prejudicial and gender related attitudes. *J Appl Soc Psychol*. 2001;31(4):683-697.
75. Puhl RM, Himmelstein MS. A word to the wise: adolescent reactions to parental communication about weight. *Child Obes*. 2018;14(5):291-301. doi:10.1089/chi.2018.0047.
76. Bauer KW, Bucchianeri MM, Neumark-Sztainer D. Mother-reported parental weight talk and adolescent girls' emotional health, weight control attempts, and disordered eating behaviors. *J Eat Disord*. 2013;1(1):2-9. doi:10.1186/2050-2974-1-45.
77. Neumark-Sztainer D, Bauer KW, Friend S, Hannan PJ, Story M, Berge JM. Family weight talk and dieting: how much do they matter for body dissatisfaction and disordered eating behaviors in adolescent girls? *J Adolesc Heal*. 2010;47(3):270-276. doi:10.1016/j.jadohealth.2010.02.001.
78. Watson RJ, Veale JF, Saewyc EM. Disordered eating among transgender youth: probability profiles from risk and protective factors. *Int J Eat Disord*. 2017;50:512-522. doi:10.1002/eat.22627.