

Gender Differences Regarding Parental Teasing of Korean Children's Weight and Anti-Fat Attitudes

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I. Introduction

Childhood is a significant period for the formation of attitudes and prejudices related to weight and body size (Holub, 2008). Children could develop anti-fat attitudes through the internalization of negative social attitudes toward obesity (Song, Yang, & Choi, 2018). In previous studies, children from 3 to 5 years old displayed negative attitudes toward people with obesity, including expressing perceptions of them as lazy, mean, weak, less smart, and more teased by others, and such negative attitudes were more severe than those toward people with other types of stigma (Penny & Haddock, 2007).

Negative attitudes toward others and selves who are obese might present themselves in the form of weight stigma (Ratcliffe & Ellison, 2015). In the same vein, anti-fat attitudes have been considered a predisposing factor in the rejection

of children with obesity and in the body dissatisfaction and low self-esteem of children with obesity themselves, which continues into adulthood (Eli, Howell, Fisher, & Nowicka, 2014). Thus, identification of major determinant factors in the development of anti-fat attitudes among children is essential for preventing social prejudice and discrimination toward individuals with obesity and for encouraging a healthy body image and associated psychosocial health in children with obesity.

According to social learning theory, parents are crucial in the development of attitudes and behaviors in children (Chavis, 2011). Indeed, parents can transmit their attitudes, opinions, and perceptions regarding the child's internal presentation of their own body as well as of others' bodies to their children (Davision & Birch, 2004). Teasing as social and cultural messaging can be considered the indirect

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• Received: 8 April 2020 • Revised: 24 April 2020 • Accepted: 19 June 2020

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transmission of parental attitudes and opinions, which leads to the internalization of negative evaluations of people who are overweight (Rich et al., 2008). In particular, parents of young children typically have more control over the cultural and social messages their children receive than do parents of older children (Davison & Birch, 2004). Thus, parents with children might directly transmit their weight-related attitudes to their children through comments or teasing (Phares, Steinberg, & Thompson, 2004). In the same vein, parental teasing and negative comments about children's body weight was found to have the most significant influence on the development of children's anti-fat attitudes (Eli et al., 2014).

In particular, parental comments about children's weight have been shown to be more associated with weight- and body-shape-related attitudes of girls than of boys (Chae & Ra, 2018). Regarding these connections, previous studies have reported that girls who have experienced severe teasing related to appearance might have more negative stereotypes about appearance than boys do (Davison & Birch, 2004; Jendryca & Warschburger, 2016). In addition, teasing about weight has mediated the relationship between weight status and restrained eating in girls but not in boys (Jendryca & Warschburger, 2016).

However, previous studies have not consistently found gender differences in the association between parental teasing about weight and anti-fat attitudes among children. Puhl and Himmelstein (2018) reported that there was no gender difference in association between parental negative comments about children's weight and negative attitude toward individuals with obesity in the children. On the other hand, Lunde, Frisen and Hwang (2007) reported that

teasing related to appearance impacted body dissatisfaction more severely in boys than in girls. The inconsistency in previous studies might be the result of different sociocultural backgrounds (Olvera, Suminski, & Power, 2005). In a similar vein, Olvera et al. (2005) have indicated a need to investigate gender difference in the association between parental teasing and weight stereotyping, including anti-fat attitudes, according to sociocultural background.

However, most previous studies on the influence of parental teasing about adolescents' weight on their body image, psychological health, and weight loss behaviors have focused on Western societies (Gillison, Lorenc, Sleddens, Williams, & Atkinson, 2016), so research on Korean children is lacking. Given this background, we predicted that parental teasing would more significantly influence the development of anti-fat attitudes in Korean girls than in boys. Thus, the aim of this study was to determine the level of parents' teasing about weight and anti-fat attitudes in boys and girls and to identify a gender difference in the association between parents' teasing about weight and anti-fat attitudes among Korean children from 5 to 7 years old.

II. Methods

1. Study design and sample

This study used a descriptive cross-sectional design. We advertised for participants on the Korean Association of Public Kindergarten Teachers website to recruit kindergartens with children aged 5 to 7 years. Four kindergartens (each with more than 100 children) located in Kyonggi-do were selected with a convenience sampling method. Participants from each

kindergarten were recruited by this convenience sampling, and we included all individuals who agreed to participate in the study and who were able to complete our questionnaire. The criteria for selecting the study participants were 1) healthy, 2) normally developed 3) children aged 5 to 7 who were living with their parents (mothers and/or fathers). Exclusion criteria were children 1) who have physical or emotional-social health problems that may affect weight satisfaction, or 2) who do not live with parents (mothers and/or fathers). Overall, 222 children (107 boys and 115 girls) participated in our study. Using G*Power 3.13 (Faul, Erdfelder, Buchner, & Lang, 2009), 115 participants were needed to meet the condition for small effect ($d = .15$) in effect size, power of .95, significance level of .05 (two-tailed), and three independent variables with multiple regression (parental teasing of children's weight, gender, and gender \times parental teasing). However, at least 105 participants per group were needed for the *t*-test to confirm the difference in anti-fat attitudes of children and parental teasing of children's weight.

2. Measurements

1) Anti-fat attitudes of children.

Anti-fat attitudes of children were assessed with the anti-fat attitude scale developed by Holub (2008). The instrument consists of five adjective pairs that describe people with obesity (e.g., nice/mean). Each item containing two bipolar adjectives is rated on a seven-point scale (e.g., 1 = mean, 7 = nice). Mean score is calculated (ranging from 1 to 7) with greater scores indicating a more positive attitude toward people with obesity. Cronbach's alpha coefficient was .67 in the study by Holub (2008) and .84 in

the present study.

2) Parental teasing of children's weight.

Parental teasing of children's weight was assessed with the revised parent weight-related criticism scale developed by Davison and Birch (2002). In our study, items were revised by replacing the words "my spouse" with "my parents" and "my daughter/she." with "me/I." The instrument comprised four items evaluating verbal criticism and teasing related to children's weight (e.g., "My father or mother disapproves of me because I eat too much."). The responses to each item were made on a four-point Likert scale (1 = never to 4 = always). The mean score of the items was calculated, and a higher mean score of items indicated a higher level of parental teasing of children's weight. Cronbach's alpha was .77-.89 in studies conducted with parents with children aged 5 to 7 years (Davison & Birch, 2002) and .67 in the present study.

3) Demographic characteristics.

Information regarding children's gender and date of birth was obtained from the parents along with the study participation consent. Adiposity of the children was evaluated using BMI. Children were weighed to the nearest 0.1 kg on a standard digital scale (Tanita Um-075, Tanita Corp, Japan) while wearing underwear. Height was measured to the nearest 0.1 cm using a stadiometer without shoes. Average values of weight and height after measuring twice were used for the BMI calculation. BMI is calculated as weight (in kilograms) divided by height (in meters squared), converted to a percentile, and classified into underweight ($< 5^{\text{th}}$ percentile), normal weight ($\geq 5^{\text{th}}$ and $< 85^{\text{th}}$ percentile), overweight ($\geq 85^{\text{th}}$ and $< 95^{\text{th}}$

percentile), or obese ($\geq 95^{\text{th}}$ percentile), using the gender- and age- specific growth chart for Korean children (The Korean Pediatric Society, 2007).

3. Data collection and ethical considerations

All research procedures were conducted after the ethical review of Institutional Review Board of the institution to which the researcher belongs. Data were collected from children in the kindergartens through questionnaire interviews from June to July 2016, which were individually conducted by two postgraduate nurse coordinators. As a first step, the researchers attended the kindergarten operators' association in a community to request cooperation with collecting data and then sent an official cooperation document to kindergartens that responded positively. Consent forms, which explained the research purpose and data collection method, were then sent to children's parents with the help of kindergarten teachers and collected individually by mail. Children whose parents did not respond by mail and did not sign the consent form were not included as participants.

The research assistants read aloud each item, after which they guided participants through the available responses to each item. After all questionnaire interviews were completed, the research assistants measured the students' height and weight. It took approximately 15-20 minutes to complete all data collection for each participant. We provided gifts such as colored pencils and crayons to all participants, as well as to children who refused to participate. Kindergarten teachers and staff were not involved in data collection.

4. Data analysis

We used SPSS (version 20.0 for Windows, IBM, Armonk, NY, USA) for data analysis. Descriptive statistics (frequencies, means, and standard deviations) were used to describe the data on parental teasing of children's weight and their anti-fat attitudes. A independent t-test was conducted to examine gender difference for parental teasing of children and children's anti-fat attitudes. Multiple regression analysis was performed to investigate effects of parental teasing on children's weight, gender, and the interaction between these variables on children's anti-fat attitudes. Finally, a simple slope analysis, using the Johnson-Neyman method PROCESS tool (Hayes, 2013), was conducted to verify gender difference in the association between parental teasing about children's weight and anti-fat attitudes of children.

III. Results

1. Demographic characteristics of participants, level of parental weight-related teasing, and anti-fat attitudes of children

In our study, 107 boys (48.2%) and 115 girls (51.8%) participated. Regarding their ages, 58 (26.1%) were 5-year-olds, 96 (43.2%) were 6-year-olds, and 68 (30.7%) were 7-year-olds. Regarding their weight, 63.9% of the children had normal weights, and 15.8% and 13.1% were overweight or obese, respectively. Underweight children made up 7.2% of the participants (Table 1).

2. Gender difference in parental teasing of children and anti-fat attitudes of children

Mean value of parental weight-related teasing

reported by the children was 1.08 ± 0.21 (range of 1-4). Mean value of anti-fat attitudes of children was 3.69 ± 1.52 (range of 1-7). There was no gender difference in level of parental weight-related teasing (boys = 1.08 ± 0.22 , girls = 1.08 ± 0.02) ($t = 0.045$, $p = .964$). Meanwhile, girls (3.96 ± 1.40) showed significantly greater anti-fat attitudes than boys (3.39 ± 1.59) ($t = -2.833$, $p = .005$) (Table 2).

3. Gender difference in effects of parental teasing of children's weight and anti-fat attitudes among children

Gender ($\beta = 0.187$, $t = 2.802$, $p = .005$) and parental weight-related teasing ($\beta = -0.139$, $t = -2.116$, $p = .035$) were significantly associated with anti-fat attitudes among children. In addition, the interaction between gender and parental weight-related teasing was significantly associated with anti-fat attitudes ($\beta = 0.182$, $t = 2.72$, $p = .007$). In other words, the significance

of the association between parental weight-related teasing and anti-fat attitudes among children differed according to children's gender. The total explanatory power of variables was 23.4% (Table 3).

In the simple slope analysis among girls, a higher level of parental weight-related teasing was associated with greater anti-fat attitudes ($b = 2.721$, $t = 4.661$, $p < .001$). Meanwhile, parental weight-related teasing was not associated with greater anti-fat attitudes among boys ($b = 0.361$, $t = 0.626$, $p = .531$) (Figure 1).

IV. Discussion

This study identified gender difference in the association between parental teasing of children's weight and anti-fat attitudes among children aged 5 to 7 years. In our results, parental weight-related teasing was significantly associated with anti-fat attitudes and individuals understand from a very early age how society treats

Table 1. Demographic Characteristics of Participants

Characteristic	Categories	n	%
Gender	Boy	107	48.2
	Girl	115	51.8
Age (yr)	5	58	26.1
	6	96	43.2
	7	68	30.7
Weight	Underweight (<5%)	16	7.2
	Normal weight ($\geq 5\%$, <85%)	142	63.9
	Overweight ($\geq 85\%$, <95%)	35	15.8
	Obesity ($\geq 95\%$)	29	13.1

Table 2. Gender Difference in Parental Weight-related Teasing, and Anti-fat Attitudes of Children

Characteristic	Total	Boy	Girl	t	p
	M \pm S.D	M \pm S.D	N \pm S.D		
Parental teasing	1.08 \pm 0.21	1.08 \pm 0.22	1.08 \pm 0.02	0.045	.964
Anti-fat attitudes of children	3.69 \pm 1.52	3.39 \pm 1.59	3.96 \pm 1.40	-2.833	.005

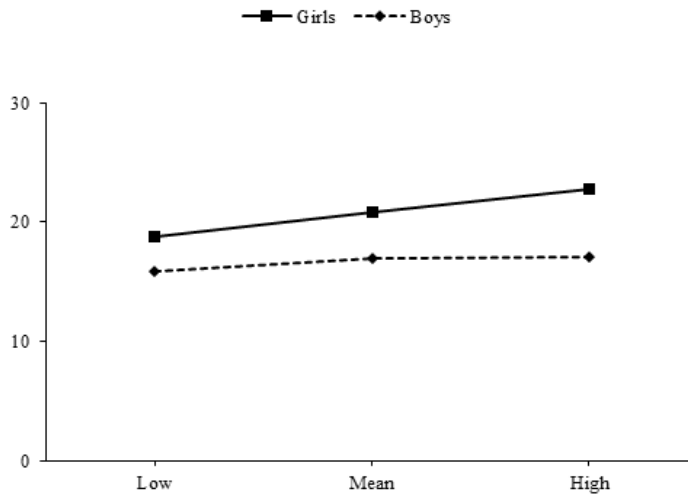


Figure 1. Gender Difference in Effects of Parental Weight-Related Teasing on Anti-Fat Attitude of 5-7 Children

members of stigmatized groups (e.g., people with obesity). Thus, a person who has experienced weight-related teasing might have negative beliefs and attitudes toward obesity. Furthermore, these negative beliefs and attitudes might grow into a fear of rejection by their close group members such as family and peers if the individuals themselves perceive their weight as inappropriate due to societal influence (Hunger & Tomiyama, 2018). With this in mind, if we consider that weight labeling (labeled as too fat)

from family members is the strongest influence on children's unhealthy weight-control behaviors such as eating restriction (Hunger & Tomiyama, 2018), weight-related teasing by family members might be the most significant negative influence on children's attitudes about weight and body image (Ventura & Birch, 2008). In the same vein, it has been found that children were more likely to endorse stereotypes regarding obesity during communication focusing on body shape and weight loss with parents (Davision & Birch,

Table 3. Gender Difference in Effects of Parental Weight-Related Teasing on Anti-Fat Attitude of 5-7 Children

Characteristic	B	SE B	β	t	p
Constant	18.446 [17.453, 19.440]	.504		36.591	<.001
Gender (dummy)	2.840 [.842, 4.836]	1.013	.187	2.802	.005
Parental teasing (centered)	-.661 [-1.664, -.019]	.312	-.139	-2.116	.035
Gender x Parental teasing	1.815 [.505, 3.125]	.667	.182	2.720	.007

Note 1. Adjusted $R^2=0.234$

2004). Furthermore, the association between parental negative comments about children's weight and children having negative attitudes about being overweight is stronger than the association between parents controlling their children's weight and these children having negative attitudes about being overweight (Davison & Birch, 2004). Thus, verbal interactions between parents and children, including teasing, can be considered an important impetus for the formation of anti-fat attitudes in children.

Furthermore, as per our results, more severe parental weight-related teasing was associated with greater anti-fat attitudes among girls, while same level of parental weight-related teasing was not associated with greater anti-fat attitude among boys. Similarly, Haines, Neumark-Sztainer, Eisenberg, and Hannan (2006) reported that weight-related teasing was significantly associated with weight-control behaviors, such as frequent dieting, only among adolescent girls and not adolescent boys. Jin (2007) also reported that female young adults had more distorted self-perceptions of body weight than male young adults. In addition, while association between weight-related teasing and unhealthy weight-control behaviors was significant among adolescent girls and boys before control of weight norms shared with family and peer, after control of the weight norms, weight-related teasing was not associated with unhealthy weight control behaviors among adolescent girls (Neumark -Sztainer, Wall, Story, & Perry, 2003). Thus, we might assume that social norms concerning weight might have significant power to control the effect of weight-related teasing on unhealthy weight-control behaviors among girls. In the same vein, Wedow, Masters, Mollborn, Schnabel, and Boardman (2018) reported

weight-related social norms had more influence on the formation of perception regarding weight in adolescent girls than in adolescent boys. Regarding this link, gender -specific weight -related social norms cause girls to receive more messages about achieving an ideal weight than boys, and these frequently received messages might contribute to the development of negative beliefs and attitudes toward obesity of others and self in girls (Haines et al., 2006). Moreover, parents of girls tended to comment more about their children's body shape and appearance than did parents of boys (McLaughlin, Belon, Smith, & Erickson, 2014). Furthermore, girls were more likely to be concerned about their weight and body appearance than boys (Phares et al., 2004). Girls also perceived obese figures as being less attractive than boys did, and girls were more likely than boys to consider thinner figures to be more attractive (Gardner, Stark, Friedman, & Jackson, 2000), which is associated with being exposed to a culture that emphasizes female thinness.

In Korean society, which is characterized by a Confucian culture, girls generally experience more pressure to control their weight and receive more social messages pushing them to maintain an ideal weight than boys (Kim, 2012), as traditional Korean Confucian culture requires women to uphold social standards more so than men. Meanwhile, under the cultural atmosphere of Confucianism, Korean society is more generous to and accepting of men than it is of women. In this context, Korean girls are expected to maintain certain social standards, including an ideal appearance like thin body shape (Kim, 2008). In addition, Koreans tend to value physical appearance for women and social competency for men. These social and cultural characteristics might cause Korean girls and

parents of daughters to be more concerned about the physical appearance of their daughters than of their sons (Lee et al., 2008). In the same vein, Korean parents with young daughters tend to be significantly more concerned about their children being overweight than are parents with sons (Chae & Ra, 2018). Among girls, parental concerns about their children's weight were associated with weight-control behaviors, but this was not the case with boys (Kim, 2007). In this context, Korean girls might internalize the messages regarding the importance of having an ideal weight than do boys. Thus, it is likely that young Korean girls also hold more anti-fat attitudes than do Korean boys even if they receive the same amount of parental teasing.

It is significant that this study confirmed that the influence of parents, which affects the negative anti-fat attitudes of girls, occurs even at a young age. Subsequently, it is important that health care providers who work in kindergartens and related community health centers develop strategies to decrease teasing in family environments by changing gender-specific weight norms to prevent the development of anti-fat attitudes for girls. Furthermore, they need to educate parents, teachers, and significant caregivers of young children about the negative influence of teasing regarding weight and appearance.

This study has several limitations. First, we recruited samples through convenience sampling methods. Thus, generalization of our results is limited. Second, our study was conducted with Korean children living in Korea. Therefore, our results are derived only from a Korean cultural background. Further study conducted in the context of various societies is needed to reflect unique cultural backgrounds. Lastly, the

reliability of the instruments used in the study was lower than at the time of development, so it is necessary to pay attention to the interpretation.

V. Conclusion

In our study, more severe parental weight-related teasing was associated with increased anti-fat attitudes among 5- to 7-year-old girls but not boys. We suppose that 5- to 7-year-old girls might receive more comments about achieving the ideal weight than boys from their parents because of weight-related social norms, which are more rigid regarding female weight and body size than male in Confucian culture. Thus, we suggest program development to decrease teasing in the family environment such as changing gender-specific weight norms to prevent anti-fat attitudes in Korean young girls. In addition, education about the negative influence of weight-related teasing and parents' words and behaviors on children's anti-fat attitudes should be provided to parents with young children.

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<http://dx.doi.org/10.1093/sf/sox073>

ABSTRACT

Gender Differences Regarding Parental Teasing of Korean Children's Weight and Anti-Fat Attitudes

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Purpose: This study aimed to identify gender differences associated with weight related teasing by parents, and development of anti-fat attitudes among Korean children aged 5 to 7 years. **Methods:** This study used a descriptive cross-sectional design. Questionnaire interviews were conducted by enrolling 222 healthy children having normal development and living with their parents in South Korea. **Results:** Results showed gender and parental weight-related teasing was significantly associated with anti-fat attitudes among children. Significance of the association between parental weight-related teasing and anti-fat attitudes among kindergarten children differed according to the child's gender. Among girls, the higher level of parental weight-related teasing was associated with greater anti-fat attitude. However, parental weight-related teasing was not associated with increased anti-fat attitude among boys. **Conclusion:** Considering our study results, we recommend developing programs aimed towards decreasing teasing in the family environment, such as changing the gender-specific weight norms to prevent anti-fat attitudes in Korean girls.

Key words : Children, Body weight, Obesity, Teasing