

Weight-Based Teasing, Internalizing and Externalizing Behavioral Problems in Adolescents

Kainaat Yousaf¹, Afsheen Masood², Aqsa Abdual Gaffar³, and Aiza Javaid⁴

1. Kainaat Yousaf, MPhil
Research Assistant
Institute of Applied Psychology
University of the Punjab.
Email address: kainaatyousaf8@gmail.com

2. Afsheen Masood, PhD
Assistant Professor
Institute of Applied Psychology
University of the Punjab

3. Aqsa Abdual Gaffar, MPhil
Research Assistant
Institute of Applied Psychology
University of the Punjab

4. Aiza Javaid, MPhil
Research Assistant
Institute of Applied Psychology
University of the Punjab

ABSTRACT

This research aimed to investigate the relationship between weight-based teasing and internalizing and externalizing behavioral problems in adolescents. This is a cross-sectional study, using a non-probability purposive sampling strategy. A total of 200 educated adolescents were sampled, with ages ranging from 11-19 years. Weight-based teasing was positively correlated with internalizing behavioral problems ($r = .80^{**}$, $p < .01$), and weight-based teasing was positively predicting internalizing behavioral problems ($\beta = .84^{**}$, $p < .01$). Gender and institute affiliation differences were also found ($p < .01$). The findings suggest that an increase in weight-based teasing is associated with increased internalizing behavioral problems in adolescents. Females exhibited more internalizing and externalizing behavioral problems as compared to males, whereas private institutes have more internalizing and externalizing behavioral problems as compared to government institutes. This study highlights the need for gender and context-specific interventions to mitigate the negative impact of weight-based teasing on adolescents' mental health.

Keywords weight-based teasing, internalizing behavioral problems, externalizing behavioral problems, adolescents.

INTRODUCTION

Adolescence is recognized as a critical period of processing and handling social interactions, which is an important developmental milestone (Orben et al., 2020). Peers have a significant influence on emotional, social, academic, and behavioral development. However, certain factors can negatively impact the well-being, health, and overall functioning of adolescents, posing a major concern in the field of public health. Teasing appears as a major factor, which results in impairment in social, and academic functioning as well as emotional well-being of an individual (Puhl et al., 2017). Unfortunately, victimization, bullying, and teasing have traditionally been socially accepted as a way of having fun for adolescents, because of media and literature (Schvey et al., 2019).

Around 90% of adolescents around the world who live in low or middle-income countries experience behavioral problems (Nagata et al., 2019). Behavioral problems such as internalizing and externalizing are significantly associated with the negative effect on an individual by disturbing or distorting the quality of life of the individual and others (Scalco et al., 2021). Internalizing behaviors are a subset of behavioral disorders marked by withdrawal, anxiety, and depressive symptoms, among other internalizing or internally focused behaviors. Externalizing behavioral problems are the set of behavioral issues like aggression, disobedience, hyperactivity, impulsivity, and rule-breaking are examples of disruptive and aggressive behaviors which are openly displayed and directed at other people or the environment. (APA, 2020, p. 123). Both

internalizing and externalizing behavior problems are known to frequently show up in children and teenagers (APA, 2013). It is estimated that 3.6% of 10 to 14-year-old and 4.6% of 15 to 19-year-old individuals exhibit behavior problems (WHO, 2019). It is difficult to detect internalizing behavior problems, as they cannot be observed.

Youths suffering from internalizing and externalizing behavior problems also suffer from issues of social withdrawal, feelings of emptiness, irritability, loneliness, self-talking, sadness, guilt, substance abuse, anxiety, and depression (Willner et al., 2016). Behavioral problems are influenced by various factors like weight-based teasing. Weight-based teasing affects not only the victim, behaviorally or psychologically, but also the perpetrator, as they may suffer from guilt and remorse after the act of teasing (Forbes et al., 2019). Weight-based teasing and weight-based victimization appear to be common experiences. Mostly, victimization starts in adolescence and lasts till adulthood (Puhl et al., 2011).

There is a link between weight-based teasing and negative health-related consequences such as disordered eating, hormonal imbalances, loss of motivation for activities and exercise, disrupted body image, depressive symptoms, and low self-esteem (Bucchianeri et al., 2014). Weight-based teasing is the combination of teasing and weight stigma, where weight stigma can be described as a negative attitude related to weight and negative stereotyping. Such stereotypes are developed as a result of rejection and because physical appearance is not culturally acceptable in society (Puhl et al., 2017).

Weight-based teasing is not only done by peers and other members of society but also by family members, like siblings in the form of directions to lose weight. Parents usually do not victimize the individual, instead they show concerns related to diet and developing healthy eating habits. These concerns often produce negative impacts such as

internalizing and externalizing behavioral problems (Pearlman et al., 2019). Males are usually teased for being underweight, while females are mostly teased for being overweight or obese (Bucchianeri et al., 2014).

Theoretical background

The association of weight-based teasing and internalizing and externalizing behavioral problems is better explained by the Social Cognitive Theory. The learning of social weight profile develops a standard of being attractive and those who do not fall under these standards are teased, leading to behavioral problems (Casper & Card, 2017). Not meeting the standards for socially acceptable body weight is associated with a sense of powerlessness and contributes to feelings of victimization in people who experience weight-based teasing (Salavera et al., 2019).

According to the Cognitive Appraisal Theory (Lazarus & Folkman, 1984), people's cognitive assessments of stressors like weight-based teasing might affect their emotional and behavioral reactions. For instance, internalizing issues like depressive symptoms or anxiety may result if weight-based teasing is perceived as dangerous or harmful. On the other hand, weight-based teasing may result in externalizing issues like aggressiveness and resistance to integration into society. Social Comparison Theory adds that people are constantly comparing themselves with others, with respect to their weight and body size and shape. Unfavorable self-perceptions brought on by these societal comparisons can contribute to low self-esteem and dissatisfaction with body and may also contribute to internalized and externalized behavioral issues (Festinger, 1954).

LITERATURE REVIEW

A cross-sectional study revealed that the experience of weight-based teasing was related to the onset of internalizing and externalizing behavioral problems (Jendrzyca & Warschburger, 2016). A longitudinal study further showed that being overweight is more likely to cause depression and anxiety in youth and being overweight during middle childhood increased the risk of internalizing behavior problems in early adolescence (Lewis-Smith et al., 2020). Another study indicated that the past interaction of weight-based teasing was associated with the onset of internalizing problems and externalizing behaviors in adult years (Zuba et al., 2018). Other scholars have shown that family-based teasing can trigger internalizing symptoms and low self-esteem in youth, with more depressive symptoms, eating pathology, and impairment in psychosocial functioning (Pearlman et al., 2020).

A study conducted in India confirmed that weight-based teasing was related to depression and internalizing behavioral problems (Bansal et al., 2023). The same study contributed that gratitude can significantly moderate the relationship between weight-based teasing and depression. Similarly, a study from the developed world argues that weight-based teasing does not contribute to behavioral problems if social support from family and friends is strong for the youth (Van Dale et al., 2014). Another study on weight-based teasing reports that girls experience a greater degree of somatic issues while boys display withdrawal behaviors from society (Israel & Shapiro, 1985). Girls are more psychologically vulnerable to depression than boys, and weight-based bullying from friends and family is shown to have a greater association with depressive symptoms and internalizing symptoms in females (Szwimer et al., 2020). A study conducted in Pakistan found that students in

private schools reported more levels of internalizing and externalizing behavioral problems as compared to students in public schools (Ahmed et al., 2018). This suggests that possibly weight-based teasing is greater in populations from the upper and middle classes, due to status and body consciousness, as opposed to lower classes.

Rationale of study

Pakistan has a high prevalence of obesity, especially among adolescents. According to the Pakistan Demographic and Health Survey, 10.4% of adolescent girls and 3.4% of boys in Pakistan are overweight or obese (NIPS, 2018). This puts them at a higher risk of developing physical and psychological problems. Despite the high prevalence of weight-related issues and the negative impact of weight-based teasing on mental health and behavior, there is limited research on this topic in Pakistan. Conducting research would help understand the issue, as weight-based teasing has been linked to various mental health issues such as depression, anxiety, and acting out behaviors like aggression (Cance et al., 2014). Pakistani adolescents who experience weight-based teasing may be at a higher risk of developing such problems, which could affect their overall well-being.

The present study aims to evaluate the relationship between weight-based teasing, and internalizing, and externalizing behavioral problems. This research would contribute to the standing body or archive of variables, which is neglected in the pre-existing body of literature, especially in Pakistan. Moreover, all the variables have not been studied together in Pakistan. The problems like depression, anxiety, aggression, anti-social behaviors, and suicide rates are increased among adolescents in Pakistan. The findings could help us guide the school counselors to work on teasing and victimization so that adolescents could become more realistic and compassionate to themselves, which would improve their health

and well-being ultimately. This research would help the field of education, counseling psychology, sociology, social and behavioral sciences, and psychopathology by highlighting the need of developing interventions and strategies to address weight-based teasing and its impact on mental health, self-esteem, and social functioning among individuals.

METHODS

Research design

Correlational research with a cross-sectional design was used to examine the relationship between weight-based teasing and internalizing and externalizing behavioral problems in adolescents.

Ethical Considerations

Permission was obtained from the authors of the scales and the Director of the Institute of Applied Psychology, University of Punjab. The worth of the study and the nature of the tools/scales were mentioned in the questionnaire provided to respondents. Prior consent was obtained from the parents of participants before data collection. Questionnaires were sent to the contacts of guardians and the guardians sent back the questionnaire on behalf of adolescents, and it was explicitly stated in the questionnaire that participation was voluntary and that the confidentiality of identity and responses would be maintained. Participants had the full right to withdraw from the study at any time. After obtaining consent, the questionnaires were provided to participants online, and they were thanked for their time.

Sample and Sampling Strategy

Data was collected from 200 guardians of adolescents belonging to different schools and colleges, operating under the public and private sectors of Lahore, comprising 96 males and 104 females. The adolescent age range was 11-19 years ($M = 15.26$, $SD = 2.02$).

Questionnaires were sent over the guardian's contact number. The sample was selected using non-probability purposive sampling according to the following criteria. The inclusion criteria for this study was: (i) Guardians of adolescents, (ii) Adolescents had to be under or overweight according to BMI, and (iii) Both male and female students. The exclusion criteria was (i) Adolescents with any physical disability, (ii) Adolescents with any type of diagnosed psychiatric disorder like depression, schizophrenia, and (iii) Adolescents with any chronic physiological illness.

Hypotheses

The following hypotheses were investigated:

(H1) There is likely to be a significantly positive relationship between weight-based teasing and internalizing and externalizing problems in adolescents.

(H2) There is likely to be a significant gender and educational institutional difference in internalizing and externalizing problems in adolescents who experience weight-based training.

Assessment Measures

The personal information sheet was self-constructed which included variables of age, gender, educational institute affiliation, and family system. Weight-based teasing scale was a self-reported scale used in this study which consisted of 5 items (Eisenberg et al., 2003).

It was a shorter version and had Cronbach's alpha reliability of 0.84 with 5 point rating

scale ranging from 0 = Never to 4 = At least once a week. No item was reverse coded the scale score is 0 to 20.

The Community and Youth Collaborative Institute (CAYCI) internalizing behaviors scale was used to measure internalizing behavior (Anderson et al., 2013). This is a self-reported scale with 6 items accessing the degree of problematic behavior directed inwards. The Cronbach's alpha coefficient was 0.87. It has a 5-point Likert scale ranging from 1= strongly agree to 5= strongly disagree. Overall scale range from a score of 6 to 30.

The CAYCI externalizing behaviors scale was used to measure externalizing behavior (Anderson et al., 2013). This is a self-reported scale with 9 items, but the total score was collected from the average of the response scores from 5 items. The tool had Cronbach's alpha reliability of 0.78 with 5-point rating scale ranging from 0 = Never to 4 = At least once a week. No item was reverse coded, and the scale score is 0 to 20.

RESULTS

The descriptive statistics of the demographic variables are given in Table 3.1. Majority of the adolescents in the study were between the ages of 11 to 15 years (51.5%) and majority were female (52.0%). The majority of participants were from the private education sector (54.5%) and belonged to nuclear families (61.0%). A majority had an income between PKR 50,000-99,999 (80.5%). A majority of the sample (37.5%) had grades above 71%.

Table 3.1
Demographics Showing Sample Characteristics N = (200)

Characteristics	<i>M</i>	<i>SD</i>	<i>f</i>	<i>%</i>
Age (years)	15.26	2.20		
Age with categories				

Characteristics	<i>M</i>	<i>SD</i>	<i>f</i>	%
11-15 years			103	51.5
16-19 years			97	48.5
Gender				
Male			96	48.0
Female			104	52.0
Institute affiliation				
Government			91	45.5
Private			109	54.5
Family System				
Nuclear			122	61.0
Joint			78	39.0
Family Income				
Below or equal to PKR 49,999			15	07.5
Between PKR 50,000-99,999			161	80.5
Above PKR 100,000			24	12.0
Previous grades				
Below 50%			57	28.5
51-60%			34	17.0
61-70%			34	17.0
Above 71%			75	37.5

Note. *M*=Mean; *SD*=Standard Deviation; *f*=frequency; %=percentage

The data analytic strategy began with reliability analysis using Cronbach’s alphas for scales reported in Table 4.1. Reliability analysis indicated that all the scales were highly reliable with the alpha reliabilities greater than the acceptable range of 0.70 (Metcalf & Ashley, 2017).

Table 4.1

Descriptive Statistics and Reliabilities of weight based teasing, internalizing behavioral problems and externalizing behavioral problems (N = 200)

Variable	<i>k</i>	<i>M</i>	<i>SD</i>	Range		Cronbach's α
				Actual	Potential	
Weight Based Teasing	5	11.39	5.30	0 – 20	0 – 20	.89
Internalizing Behavior	6	18.50	7.23	8 – 30	6 – 30	.96
Externalizing Behavior	5	12.16	3.49	0 – 20	0 – 20	.84

Note. *M*=Mean; *SD*=Standard Deviation; value; α = Cronbach alpha, *k*=Number of Items.

Pearson product moment correlation analysis was applied to examine the relationship

between study variables (Table 4.2). Demographic variables were also included in analysis. The results indicated that weight based teasing was positively related to internalizing behavioral problems. Among the group of adolescents females had more internalizing and externalizing behavioral problems. Adolescents belong to private educational institute had internalizing and externalizing behavioral problems.

Table 4.2

Correlations between demographics, weight based teasing, internalizing and externalizing behavioral problems in adolescents (N = 200)

Variable	M	SD	1	2	3	4	5	6	7
1. Age	15.26	2.20	-	-.02	-.16*	-.14	-.11	-.09	-.10
2. Gender	1.52	.50		-	-.11	.51**	.63**	.74**	.25**
3. Family system	1.39	.49			-	-.05	-.02	-.04	.08
4. Educational institute affiliation	1.55	.50				-	.52**	.63**	.21**
5. Weight base teasing	11.39	5.30					-	.80**	.13
6. Internalizing behavior	18.50	7.23						-	.25**
7. Externalizing behavior	12.16	3.49							-

Note: Gender: 1= male, 2= female, Family system: 1= nuclear, 2= joint, Education institute affiliation: 1= Govt, 2 = private.

Multiple hierarchal regression was run to investigate the study hypotheses (Table 4.3, 4.4).

The tolerance value was greater than .2 indicating no multicollinearity (Berk, 1977).

Results indicated that weight-based teasing was a positive predictor of internalizing behavioral problems, controlling for covariates. Females had more internalizing behavioral problem and private institutes had more internalizing behavioral problems. Gender was the only significant predictor of externalizing behavioral problems. Females had more externalizing behavioral problems.

Table 4.3

Multiple hierarchal regression analysis Demographics, weight-based teasing and internalizing behavioral

problems in adolescents (N = 200)

Variable	B	95% C.I		SE	B	R ²	ΔR ²
		LL	UL				
Step 1						.64***	.64***
(Constant)	-1.01	-6.72	4.71	2.90			
Age	-.10	-.38	.19	.14	-.03		
Gender	8.34***	6.91	9.78	.72	.58***		
Family System	.59	-.69	1.87	.65	.04		
Educational Institute	4.84***	3.40	6.28	.73	.33***		
Step 2						.77***	.12***
(Constant)	-1.35	-5.99	3.29	2.35			
Age	-.01	-.24	.23	.12	-.00		
Gender	4.95***	3.61	6.28	.68	.34***		
Family System	.28	-.76	1.32	.53	.02		
Educational Institute	3.00***	1.78	4.22	.62	.21***		
Weight Base Teasing	.65***	.52	.78	.06	.48***		

Note: Gender: 1= male, 2= female, Education institute affiliation: 1= Govt, 2 = private, Family system: 1 = nuclear, 2= joint.

Table 4.4

Multiple hierarchal regression analysis for weight based teasing and externalizing behavioral problems in adolescents (N = 200)

Variable	B	95% C.I		SE	β	R ²	ΔR ²
		LL	UL				
Step 1						.08**	.08***
(Constant)	9.68***	5.27	14.08	2.23			
Age	-.11	-.33	.11	.11	-.07		
Gender	1.43*	.33	2.53	.56	.21*		
Family System	.68	-.31	1.66	.50	.10		
Educational Institute	.68	-.43	1.79	.56	.10		
Step 1						.09**	.01**
(Constant)	9.71***	5.31	14.11	2.23			
Age	-.12	-.34	.10	.11	-.08		
Gender	1.78**	.51	3.05	.64	.26**		
Family System	.71	-.27	1.70	.50	.10		
Educational Institute	.87	-.29	2.03	.59	.12		
Weight Base Teasing	-.07	-.19	.05	.06	-.10		

Note: Gender: 1= male, 2= female, Education institute affiliation: 1= Govt, 2 = private, Family system: 1 = nuclear, 2= joint.

Independent Sample t-test was applied to examine gender differences in behavioral problems. Results are shown in Table 4.5. There was a significant gender difference ($p < .05$) between internalizing and externalizing behaviors. Girls experience more internalizing and externalizing behavioral problems as compared to boys. Cohen's d values indicate the effect size. The value of Cohen's d indicated a high effect size for internalizing

behavioral problems and medium for externalizing behavioral indicated a medium effect size.

Independent Sample t-test were also applied to examine institutional differences in problems (Table 4.5). There was a significant institute affiliation difference ($p < .05$) in internalizing and externalizing behaviors. Adolescents who belong to private schools had more internalizing and externalizing behavioral problems as compared to public institutes. Cohen's d value indicates the effect size. The value of Cohen's d was high in internalizing behavioral problems and low in externalizing behavioral indicating a low effect size.

Table 4.5

Table for Independent Samples t-test for internalizing and externalizing behavioral problems in Boys and Girls (N= 200)

Variables	Male (n=96)		Female (n=104)		<i>t</i> (df)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
	Internalizing behaviors	13.22	5.67	23.65			3.61	-15.59 (160)	
Externalizing behaviors	10.79	3.97	13.61	3.03	-5.59 (177)	.00	-3.80	-1.82	0.80

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; CI= Confidence Interval; *M*= Mean; *SD*= Standard Deviation; *LL*= Lower Limit; *UL*= Upper Limit

Table 4.6

Table for Independent Samples t-test compare internalizing and externalizing behavioral problems in public and private institute (N= 200)

Variables	Public (n = 91)		Private (n = 109)		<i>t</i> (df)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
	Internalizing behaviors	13.85	5.97	22.65			4.97	-11.20(175)	
Externalizing behaviors	10.79	3.71	13.48	3.39	-5.34(198)	.00	-3.68	-1.69	0.76

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; CI= Confidence Interval; *M*= Mean; *SD*= Standard Deviation; *LL*= Lower Limit; *UL*= Upper Limit

DISCUSSION

The spectrum of behavioral problems of adolescents is a rising problem in Pakistan, and across the world. Both internalizing and externalizing behavioral problems are known to be predicted by weight-based teasing, with perpetrators including family and peers. Weight-based teasing can disrupt the identity of an individual and develop a negative self-image that influences behavior negatively, contributes to victimization, and influences the mental health of youth. In many cases perpetrators and society are not aware of the harm caused by weight-based teasing and how it may adversely alter an individual's quality of life and prospects for the future.

In this study, we found that weight-based teasing had a positive relationship with internalizing behavior indicating that those individuals who were teased for being overweight or underweight experience more internalizing behavioral problems. The findings were consistent with existing literature in which weight-based teasing and internalizing behavioral problems were related to behavioral problems (Jendrzyca & Warschburger, 2016; Tan et al., 2022). In Pakistan, there is limited access to effective emotional regulation strategies or support for youth suffering from internalizing and externalizing behavioral problems (Zafar et al., 2020). This lack of support can contribute to further problems in the youth, such as suppression of emotions, eating more to escape from frustration, feelings of guilt as a defense mechanism, and development of more complex mental health problems (Lonigro et al., 2023).

This study also found that significant gender differences exist in internalizing and externalizing behavioral problems. Females experience more internalizing behavioral problems as compared to males. Findings are consistent with other literature, which found

that females had more behavioral problems than males, specifically depression and anxiety (Khan & Avan, 2020). There are several cultural reasons for females exhibiting more behavioral problem, compared to males, such as shaming of overweight females and social belief that overweight women may not receive timely marriage proposals.

We also found a difference in internalizing and externalizing behavioral problems with respect to the type of educational institute. Adolescents studying in private institutes had more internalizing and externalizing behavioral problems as compared to public institutes. Other literature also demonstrates that type of educational institute is a strong predictor of internalizing and externalizing behavioral problems and that students at private institutes have more behavioral problems as compared to public institutes (Bishop et al., 2020). Most of private school students belong to the upper middle class or upper class, with more exposure to media (Rizwan et al., 2022). Media is known to play a strong role in developing attitudes for standard weight and body size, leading to body shaming and body-weight teasing.

Limitations

Tools used in this research have been developed in the West. It is recommended that an indigenous tool be developed to measure study variables in the future. Generalization of the finding could be limited due to the fact that this study was cross-sectional in nature.

Longitudinal research may help in revealing more evidence about the long-term effect of weight-based teasing on youth.

CONCLUSION

The findings of the study revealed that adolescents who experience weight-based teasing have more internalizing behavioral problems. Furthermore, females experience more internalizing behavioral problems as compared to males, and adolescents who belong to private institutes exhibit more internalizing and externalizing behavioral problems. The study offers important insights into the creation of successful interventions and preventative methods intended to address weight-based bullying. Interventions are needed in the country which can help adolescents who have experienced weight-based teasing to develop resilience, coping mechanisms, and self-esteem. Additionally, educational institutes must establish school-based anti-bullying initiatives that target the mitigation of weight-based teasing and sensitization to youth.

Conflict of Interest Statement

There is no conflict of interest to declare.

Funding

This study has not received funding and it was just a part of an academic course.

Ethics and permissions

Informed consent and permission were taken from the guardians prior to the data collection. The guardians completed the survey data on behalf of the adolescents. This study gained clearance from the Ethics Committee of the Institute of Applied Psychology, University of the Punjab, Lahore.

Data sharing and availability statement

Data is available from the corresponding author based on request.

Author Contributions Statement

This study was conceptualized and carried out by KY. The study was supervised by AM. The data was collected by KY, AAG, and AJ. All authors agreed on the final manuscript.

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