

Mitigating Mukbang Harms: The Influence of Nutrition and Dietary Education on Body Image Distortion among Korean Youth

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Abstract: This study investigates how school-based nutrition and dietary education can influence the relationship between frequency of watching mukbang broadcasts and body image distortion among Korean adolescents. Using data from a sample of 51,743 Korean adolescents collected from the 2022 Korea Youth Risk Behavior Survey (KYRBS). The results show that frequent mukbang viewers are more likely to have a distorted body image than those who watch less frequently. Furthermore, the positive relationship is substantially weaker among adolescents who have received school-based nutrition and dietary education than among those who have not. These results suggest that nutrition and dietary education are an important countermeasure to the harms of watching mukbang broadcasts.

Keywords: mukbang, cookbang, education, body image

1. Introduction

The expansion of social media has changed the way adolescents grow and develop. They are now exposed to a lot of curated content about food, lifestyle, and appearance. Particularly, mukbang and cookbang (hereafter referred to as mukbang) has emerged as an internet phenomenon (Cho, 2020; Kang et al., 2020). Mukbang broadcasts is an “audio-visual broadcast in which broadcasters commonly eat large portions of tasty food” (Bölükbaşı et al., 2025, p. 1). Previous studies have reported mixed findings regarding the effects of mukbang broadcasts. These broadcasts offer viewers a sense of “digital commensality” to ease loneliness and provide satisfaction for dieters, and entertain through sensory experiences like Autonomous Sensory Meridian Response (ASMR) (Cho et al., 2017; Hong, 2024; Kircaburun et al., 2021; Kim, 2018; Sanskriti et al., 2023; Spence et al., 2019; Wang et al., 2025). However, research also highlights the potential adverse health consequences associated with mukbang viewing. For example, there are concerns that these broadcasts may normalize unhealthy eating behaviors, such as overeating and binge eating (Lee & Wan, 2023). Furthermore, studies indicate a correlation between mukbang viewing and negative dietary habits which can contribute to weight gain and an increased risk of obesity (Hong, 2024; Kang et al., 2021; Nam & Jung, 2021).

The influence of mukbang is of particular concern for young viewers, who are highly receptive to media during the critical period of identity formation and habit establishment (Hofschire & Greenberg, 2001; Jang et al., 2024; Lee et al., 2024). I examine the dietary behaviors and social comparison to understand variations in body image distortion among mukbang viewers. First, an individual's subjective assessment of their body size differs significantly from their objective reality due to a cognitive misperception (Jeong et al., 2024). The unhealthy dietary habits promoted by mukbang can lead to actual changes in an adolescent's body. Meanwhile, the unrealistic body ideal of the hosts can foster dissatisfaction with these changes (Aparicio-Martinez et al., 2019). This creates a mismatch that is expected to heighten body image distortion. School-based nutrition and dietary education is a promising prevention because it enhances food and dietary literacy (Lee et al., 2021). Teaching adolescents about balanced nutrition, portion control, and the physiological consequences of dietary choices would make them to recognize and avoid the unhealthy eating behaviors displayed in mukbangs.

This study examines the association between mukbang viewing and body image distortion among adolescents, with particular attention to the role of education as a countermeasure. The analysis is based on empirical data from 51,743 Korean middle and high school students in 2022. Building on prior studies indicating that mukbang content can adversely affect adolescents' body image perception, this paper presents findings that call for the empirical testing of targeted educational intervention strategies to mitigate negative body image outcomes resulting from mukbang exposure (Jeong et al., 2024; Kwon & Kwon, 2024; Lee et al., 2024).

My study aims to make two major contributions. First, I affirm that watching mukbang broadcasts has a negative impact on adolescents' body image. Second, my findings provide empirical evidence on the effectiveness of school-based nutrition and dietary education, an understudied area of research. These findings carry important practical implications for public health officials, educators, and clinical practitioners who make decisions in safeguarding adolescent well-being.

2. Theory and Hypotheses

2.1. Mukbang Viewing and Body Image Distortion

Body image distortion is a cognitive misperception in which an individual's subjective assessment of their body size and shape differs from their actual physical appearance (Kim et al., 2023; Sung et al., 2024). This is particularly consequential during adolescence, as it represents a critical developmental period for the formation of body image and healthy eating habits (Kwon & Kwon, 2024). Research shows that adolescents are highly susceptible to body dissatisfaction and disordered eating behaviors. According to Kang et al. (2020), adolescents' dietary habits and health perceptions are increasingly shaped by media exposure, with social media being a major source of content related to food and appearance. Mukbang broadcasts are a popular and influential genre within this content (Jeong et al., 2024; Sung et al., 2024).

I argue that frequent viewing of mukbang content distorts adolescents' body image through dietary behavior and social comparison. To begin with, exposure to mukbang content has been connected to unhealthy dietary behaviors. These include increased consumption of fast food, instant noodles, sugary beverages, and late-night snacks, as well as meal irregularity that contributes to disordered eating attitudes (Galmiche et al., 2019; Hong, 2024; Jang et al., 2024; Nam & Jung, 2021; Sung et al., 2024; Yun et al., 2020). Unhealthy eating patterns often lead to weight gain, which can decrease subjective body image and increase the negative feelings about one's own body and eating habits. In addition, mukbang broadcasts often present an unrealistic body image in which hosts consume hypercaloric food while maintaining slim physiques (Sanskriti et al., 2023). This can create a skewed standard for social comparison, distorting adolescents' understanding of the relationship between food consumption and body weight (Aparicio-Martinez et al., 2019; Kircaburun, 2024; Kircaburun et al., 2021). Following the perspective of earlier studies (Hong, 2024; Jeong et al., 2024; Kircaburun et al., 2021), this study posits that increased viewing frequency positively increases body image distortion. Therefore, this study proposes the following hypothesis:

Hypothesis 1 (H1): Adolescents who frequently watch mukbang content are more likely to have a higher distorted body image compared to those who rarely watch it.

2.2. Effects of Nutrition and Dietary education on Mukbang Viewing and Body Image Distortion

Nutrition and dietary education is an intervention designed to improve health outcomes by enhancing food literacy. Food literacy involves the knowledge, skills, and behaviors necessary to meet nutritional needs and maintain health (Contento et al., 1992; Kwak & Chang, 2008; Wang & Stewart, 2013; Yoon et al., 2012). Such programs provide adolescents with the tools to understand food's impact on personal wellbeing, judge food quality, and interpret nutritional information. Research indicates that well-designed nutrition education can positively influence dietary habits and improve dietary behavior (Harnack et al., 1997; Lee et al., 2024; Ruiz et al., 2021).

I argue that frequent mukbang viewing will reduce body image distortions when accompanied by nutrition and dietary education. First, an educated adolescent is better prepared to analyze mukbang content, recognize the featured foods (Hong & Park, 2017; Jang et al., 2024), and deconstruct the "eating fantasy" in which hosts consume large amounts of food yet remain slim (Sanskriti et al., 2023). This awareness can weaken the mechanisms of social comparison and imitation, making viewers less likely to adopt the unhealthy eating behaviors or internalize the unrealistic body ideals. Thus, the risk of body image distortion is reduced. However, there is a potential for unintended negative consequences, particularly among psychologically vulnerable adolescents. Meaning, nutrition education can increase an individual's focus on food, calories, and body weight. For a viewer with a predisposition toward body dissatisfaction, this heightened awareness, combined with the visual stimulus of mukbang, could trigger a cycle of guilt, anxiety, and restrictive behaviors (Wang et al., 2025). Furthermore, educated viewers may watch mukbang for entertainment but then feel extreme guilt for craving the food. This can lead to compensatory actions such as "endless dieting" or other unhealthy weight control methods, which are associated with body image distortion and eating disorders (Sanskriti et al., 2023; Wang et al., 2025). In such cases, while the education is well-intentioned, it could amplify self-scrutiny and worsen body image by creating a greater internal conflict between desire and dietary knowledge. Therefore, the following is hypothesized:

Hypothesis 2 (H2): School-based nutrition and dietary education will moderate the relationship between mukbang viewing frequency and body image distortion, such that the positive association between frequent mukbang viewing and body image distortion will be weaker among adolescents who have received nutrition and dietary education than among those who have not.

3. Data and Methodology

3.1. Data and Sample

This study uses data from the Korea Youth Risk Behavior Survey (KYRBS), which is administered by the Korea Disease Control and Prevention Agency (KDCA, <https://www.kdca.go.kr/eng/index.do>). The sample is a nationally representative dataset of secondary school students aged 12 to 18 years across South Korea (Hong, 2024; Lee, 2025). The mean age of the participants is 15.10 years, with a standard deviation of 1.74 years. The survey covers students from rural (7%), small-to-medium-sized city (43%), and metropolitan (50%) areas. Fifty one percent of the participants are male, and 49% are female. Structured self-report questionnaires were used to collect information on health and physical behaviors, psychological well-being, patterns of mukbang viewing, and experiences with school-based health education. After removing missing values for key indicators, the final sample included 51,743 student observations.

3.2. Measures and Variables

Dependent Variable

To assess Body Image Distortion (BID) as the dependent variable, participants perceived body shape perception was compared against their objective weight as determined by Body Mass Index (BMI). First, perceived body shape perception was measured using a single-item self-report question: "How would you describe your physical build?" Responses were collected on a 5-point Likert scale and collapsed into three analytical categories: 'thin' (comprising very thin and slightly thin), 'normal', and 'obese' (comprising slightly overweight and very overweight) (Jeong et al., 2024). Next, objective weight status was calculated using self-reported height and weight to determine BMI as weight (kg)/ [height(m)]². Then, the BMI values were categorized into three groups: 'underweight', 'normal weight', and 'overweight', in line with the 2017 Korean growth charts for children and adolescents.

Body image distortion was then operationalized by evaluating the congruence between participants perceived body shape and their objective BMI category. Participants were classified into one of three groups based on this comparison: 'under-perception(1)', 'congruent perception(2)', and 'over-perception(3)'. 'Congruent perception' occurred when an individual's self-perceived body shape perception matched their calculated BMI category, indicating an absence of distortion. 'Under-perception' included normal weight individuals who perceived themselves as thin, as well as individuals in the overweight category who perceived themselves as normal or thin. Similarly, 'over-perception' was defined as normal weight individuals perceiving themselves as obese, or underweight individuals perceiving themselves as normal or obese (Jeong et al., 2024).

Independent variable

The independent variable, frequency of mukbang viewing, was assessed by measuring participants' engagement with mukbang broadcasts. Participants responded to the following question: "How often have you watched mukbang and cookbang in the last 12 months?" Their responses were recorded and transformed into a 4-point numerical scale: 'never watched', 'occasionally watched' (less than once a month to 1–3 times a month), 'frequently watched'(1–4 times a week), and 'almost daily watched' (5 times a week to every day) (Yun et al., 2020).

Following the classification established by Lee (2025), these responses were coded into a binary variable. Participants categorized as infrequent viewers (0) included those in the 'never', 'occasionally', and 'frequently' watched groups. Conversely, frequent viewers (1) were categorized as those who engaged with content on an 'almost daily' basis. This binary reclassification enabled robust comparisons between low- and high-intensity viewers regarding body image distortion.

Moderator

The moderating variable, exposure to school-based nutrition and dietary education, was assessed using a dichotomous self-report measure. Participants were asked: "Have you received any nutrition and eating habits education at school (including during class time, broadcast education, or auditorium sessions) in the past 12 months?" Responses were converted into a binary variable, with participants who reported no exposure within the last year were coded as 0 and those who had received such education were coded as 1.

Control variables

To account for potential confounding effects, the analysis included several covariates established in previous literature. Age was treated as a continuous variable, measured in years. Gender was recorded as a binary

variable 0 for male and 1 for female. Residential area was categorized into three types: rural, small-to-medium-sized, and metropolitan.

Subjective health status was assessed using a general health perception item: "How would you describe your usual state of health?" Participants responded using a 5-point Likert scale ranging from 1 (very healthy) to 5 (very unhealthy), where higher scores indicated poorer perceived health. Physical activity was operationalized as the frequency with which participants walked for at least 10 minutes at a time during the preceding seven days. Responses were recoded into a 4-point scale: 1 (not at all), 2 (1–2 days per week), 3 (3–4 days per week), and 4 (5 or more days per week).

Finally, psychological distress was measured using the Generalized Anxiety Disorder (GAD) 7-item scale (Korea Disease Control and Prevention Agency, 2025). Participants indicated the frequency of anxiety-related interference over the past two weeks using a 4-point Likert scale: 'Not at all' (0), 'for several days' (1), 'for 7 days or more' (2), and 'nearly every day' (3). Total scores were tabulated such that higher values represented greater levels of generalized anxiety (Lee, 2025).

3.3. Analytical Approach

An ordered logistic regression model was used to analyze the relationship between mukbang viewing and body image distortion. This model accounts for the sequential nature of the dependent variable, which ranges from 'under-perception' to 'congruent perception' to 'over-perception'. This approach enables a more precise analysis of how the frequency of mukbang viewing affects the likelihood of shifting between different levels of body perception.

4. Results

Table 1 shows the descriptive statistics and correlations for the key variables. The average body image distortion of Korean adolescents in the sample is 2.11 on a 1-to-3 scale. The highest correlation is observed between General Anxiety Disorder (GAD) and body image distortion ($r = 0.31$). To assess potential multicollinearity issues, I examined the Variance Inflation Factors (VIFs). The highest VIF was 1.13, and the mean VIF was 1.06, indicating no such issues.

Table 2 presents the ordered logistic estimation results for the body image distortion model of mukbang viewers. Model 1 includes the control variables. Age is positively associated with body image distortion ($\beta = 0.032$, $p < .001$). Females have higher odds of body image distortion than males ($\beta = 0.147$, $p < .001$). The residence area shows a negative association ($\beta = -0.065$, $p < .001$), indicating that adolescents living in more urbanized areas (small/mid-sized cities or metropolitan areas) report lower levels of body image distortion than those living in rural areas. Subjective health perception is positively associated with body image distortion ($\beta = 0.161$, $p < .001$). GAD is also positively associated ($\beta = 0.007$, $p < .001$), demonstrating that higher anxiety levels correspond to poorer body image. Physical activity is not significantly associated with body image distortion ($\beta = 0.016$, $p > .1$). Lastly, nutrition and dietary education show no significant association in the baseline model ($\beta = 0.027$, $p > .1$). In summary, body image distortion is more severe among older adolescents, females, those with poorer perceived health, higher anxiety levels, and those living in less urban areas.

Model 2 includes the main effect of the independent variable. The model shows that mukbang viewing is positively and significantly associated with body image distortion ($\beta = 0.156$, $p < .001$), providing support for Hypothesis 1. This result suggests that adolescents who frequently watch mukbang are more likely to experience higher body image distortion than those who watch it infrequently.

Model 3 adds the interaction term between mukbang viewing and nutrition and dietary education on body image distortion. The estimated coefficient of the interaction between mukbang viewing and education is negative and significant ($\beta = -0.139$, $p < .01$), providing support for Hypothesis 2. These results suggest that the positive association between frequent mukbang viewing and body image distortion is weaker among educated participants than among those who are not educated.

5. Discussion

This study investigated the relationship between the frequency of mukbang viewing and body image distortion among Korean adolescents. It also examined the potential mitigating role of school-based nutrition and dietary education in moderating this relationship. The hypotheses were empirically tested using a sample of 51,743 participants from the 2022 Korea Youth Risk Behavior Survey (KYRBS). The analysis supported both hypotheses, indicating that frequent mukbang viewing is significantly associated with higher levels of body image distortion.

(Hypothesis 1), and that this association is weaker among adolescents who have received school-based nutrition and dietary education (Hypothesis 2).

The confirmation of the first hypothesis is consistent with prior studies. The results revealed a positive and statistically significant association between frequent mukbang viewing and body image distortion, supporting the first hypothesis (Hypothesis 1). Frequent mukbang viewing exposes adolescents to unhealthy dietary patterns and decline in fruit and vegetable intake (Hong, 2024; Jang et al., 2024; Sung et al., 2024). This dietary shift can lead to changes in weight and body composition. When adolescents consume the same types of food as those shown in broadcasts, the resulting weight gain can create a discrepancy between their actual body and desired bodies, fostering feelings of being overweight and dissatisfied. Additionally, mukbang hosts often consume vast quantities of high-calorie foods while maintaining a slim physique, presenting an unrealistic body ideal (Sanskriti et al., 2023). This creates a social comparison standard that can distort adolescents' perceptions of the normative relationship between food consumption and body weight, leading them to internalize unattainable standards and fostering body dissatisfaction. They may question why their bodies do not conform to this unrealistic model (Kircaburun et al., 2021). These findings are consistent with broader research on the effects of the media, which shows that exposure to idealized body types is a strong predictor of body dissatisfaction and disordered eating behaviors in youth (Kwon & Kwon, 2024).

The most significant contribution of this study is the outcome of the second hypothesis, which demonstrated that school-based nutrition education mitigates the harmful relationship between mukbang viewing and distorted body image (Hypothesis 2). This finding supports that educated viewers are better able to recognize the nature of mukbang, understand the health implications of the depicted eating behaviors, and resist internalizing unhealthy body ideals. Indeed, the effect of education can be understood through food literacy. Food literacy involves understanding the nutritional value of foods and the consequences of dietary choices (Wang & Stewart, 2013; Yoon et al., 2012). Adolescents with this knowledge can recognize the foods featured in mukbangs as unhealthy and understand the long-term health risks of such a diet. This would make them less likely to imitate these mukbang behaviors (Jang et al., 2024).

This study contributes to public health, education, and clinical practice by emphasizing the importance of initiatives that educate adolescents about food literacy. These initiatives could include public awareness campaigns that educate adolescents and their parents about the unrealistic nature of mukbang content and its potential risks. Furthermore, integrating media literacy components that specifically address mukbang content into standard school nutrition and dietary education curricula could be a highly effective strategy. Finally, it can help clinicians identify at-risk youth who could benefit from targeted counseling on healthy eating, body image issues, and disordered eating.

6. Limitations and Future Research

There are several limitations to this study that should be acknowledged. First, the cross-sectional design precludes establishing causality. Future research should use longitudinal designs to observe the evolution of the relationship between mukbang viewing and body image distortion across adolescents' developmental stages. Second, the data relied on self-report measures, which are subject to recall and social desirability biases. Future research could incorporate more measures, such as digital tracking of media consumption. Third, the nutrition education measure was binary ('received' vs. 'not received') and did not capture the quality of the content specifics of the curriculum. Future studies should investigate which specific components of nutrition and dietary educational programs are most effective. Finally, as the sample consisted of Korean adolescents, further investigation is required to determine the generalizability of these findings to other cultural contexts or age groups.

7. Conclusion

In conclusion, this study provides robust evidence that frequent mukbang viewing is associated with an increased risk of body image distortion among adolescents. Moreover, the study identifies school-based nutrition and healthy eating education as a powerful and effective intervention strategy that can significantly mitigate this harmful association. This finding highlights the importance of equipping young viewers with nutrition and dietary education to promote positive body image and protect adolescent well-being in the modern digital media landscape.

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Table 1: Descriptive statistics and correlation coefficients

	Variable	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9
1	Body image distortion (BID)	2.11	0.79	1	3	1								
2	Age	15.10	1.74	12	18	0.03*	1							
3	Sex	0.49	0.50	0	1	0.06*	0.00	1						
4	Residential area	2.35	0.61	1	3	-0.02*	0.00	0.01	1					
5	Health perception	2.27	0.92	1	5	0.08*	0.07*	0.13*	-0.01	1				
6	Physical activity	3.63	0.79	1	4	0.00	-0.02*	0.00	0.06*	-0.06*	1			
7	Generalized anxiety disorder (GAD)	11.20	4.65	7	28	0.05*	0.03*	0.16*	0.01	0.31*	0.00	1		
8	Nutrition and dietary education	0.46	0.50	0	1	-0.01	-0.25*	-0.02*	0.01	-0.06*	0.05*	-0.02*	1	
9	Mukbang views	0.13	0.34	0	1	0.03*	0.01*	0.07*	-0.02*	0.02*	0.01*	0.07*	0.00	1

Notes:

N=51,743.

Correlations significant at $p < 0.05$.

Table 2: Ordered logistic regression results of mukbang viewing on BID

	Model 1	Model 2	Model 3
Age	0.032*** (0.005)	0.032*** (0.005)	0.032*** (0.005)
Sex	0.147*** (0.017)	0.141*** (0.017)	0.141*** (0.017)
Residential area	-0.065*** (0.013)	-0.063*** (0.013)	-0.063*** (0.013)
Health perception	0.161*** (0.010)	0.162*** (0.010)	0.162*** (0.010)
Physical activity	0.016 (0.010)	0.015 (0.010)	0.015 (0.010)
Generalized anxiety disorder (GAD)	0.007*** (0.002)	0.006*** (0.002)	0.006*** (0.002)
Nutrition and dietary education	0.027 (0.017)	0.027 (0.017)	0.046** (0.018)
Mukbang views(H1)		0.156*** (0.024)	0.219*** (0.033)
Mukbang views × Nutrition and dietary education(H2)			-0.139*** (0.048)
Cut 1	-0.117 (0.093)	-0.112 (0.093)	-0.105 (0.093)
Cut 2	1.424*** (0.093)	1.430*** (0.093)	1.437*** (0.093)
Number of observations	51,743	51,743	51,743
Likelihood Ratio χ^2	600.60***	642.70***	651.12***

Notes:

Standard errors are in parentheses.

Cut 1: Threshold between the lowest category (under-perception) and the next category (congruent perception).

Cut 2: Threshold between the middle category (congruent perception) and the highest category (over-perception).

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$