

The Role of Family: Effects on Adolescents' Body Image and Eating Attitudes

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ABSTRACT

Purpose: Adolescence is a critical period of physical, cognitive, and emotional changes, during which body image and eating attitudes are shaped. This study examines the relationship between family-related factors, body image, and eating attitudes among adolescents.

Methods: A cross-sectional study was conducted with 300 adolescents (133 girls, 167 boys) from three high schools in Bayburt, Türkiye. The data was obtained by researchers in classes under the supervision of teachers. Body image was assessed using the Body Cathexis and Self Scale, and eating attitudes were evaluated with the Eating Attitudes Test-26 (EAT-26). Family-related characteristics, including family type, parental education, and occupation, were collected through a structured questionnaire. Data analysis was performed using the SPSS package program (version 22.0).

Results: The mean Body Cathexis and Self Scale score was significantly higher in boys than girls ($p<0.05$), indicating more positive body image perception. EAT-26 scores showed that 19% of adolescents were at risk for disordered eating, with no significant gender differences ($p>0.05$). Family type ($p=0.009$), maternal mortality ($p=0.004$), and paternal occupation ($p=0.035$) were significantly associated with eating attitudes, whereas no significant relationship was found between family-related factors and body image ($p>0.05$).

Conclusion: Family structure and socioeconomic status influence adolescent eating attitudes, while body image appears less affected by family-related factors. Interventions targeting adolescent health should address family-based support, particularly for those experiencing maternal loss, and promote body image awareness programs, especially among girls. Future research should explore cultural and psychosocial influences on adolescent health behaviors.

Keywords: Adolescent; Body image; Disordered eating behaviour; Family.

ÖZET

Amaç: Ergenlik dönemi, beden imajı ve yeme tutumlarının şekillendiği fiziksel, bilişsel ve duygusal değişimlerin yaşandığı kritik bir dönemdir. Bu çalışma, ergenlerde aile ile ilişkili faktörler, beden imajı ve yeme tutumları arasındaki ilişkiyi incelemektedir.

Yöntem: Bayburt'taki üç lisede öğrenim gören 300 adolesan (133 kız, 167 erkek) ile kesitsel bir çalışma yürütülmüştür. Veriler araştırmacılar tarafından öğretmenlerin gözetiminde sınıflarda toplanmıştır. Beden imajı Vücut Algısı Ölçeği (VÄÖ), yeme tutumları ise Yeme Tutum Testi-26 (YTT-26) ile değerlendirilmiştir. Aile tipi, ebeveyn eğitimi ve mesleği gibi aile ile ilgili özellikler yapılandırılmış bir anket aracılığıyla toplanmıştır. Veri analizi SPSS paket (versiyon 22.0) programı kullanılarak yapılmıştır.

Bulgular: Ortalama VÄÖ puanı erkeklerde kızlara göre anlamlı olarak daha yüksektir ($p<0.05$) ve bu durum erkeklerde daha olumlu beden imajı algısına işaret etmektedir. YTT-26 puanı adolesanların %19'unun düzensiz yeme riski altında olduğunu ve cinsiyetler arasında anlamlı bir fark olmadığını göstermiştir ($p>0.05$). Aile tipi ($p=0.009$), anne ölüm oranı ($p=0.004$) ve baba mesleği ($p=0.035$) yeme tutumu ile anlamlı şekilde ilişkiliyken, aile ile ilgili faktörler ve beden imajı arasında anlamlı bir ilişki bulunmamıştır ($p>0.05$).

Sonuç: Aile yapısı ve sosyoekonomik durum ergenlerin yeme tutumlarını etkilerken, beden imajı aile ile ilgili faktörlerden daha az etkileniyor gibi görünmektedir. Ergen sağlığını hedefleyen müdahaleler, özellikle anne kaybı yaşayanlar için aile temelli desteği ele almalı ve özellikle kızlar arasında beden imajı farkındalık programlarını teşvik etmelidir. Gelecekteki araştırmalar ergenlerin sağlık davranışları üzerindeki kültürel ve psikososyal etkileri araştırmalıdır.

Anahtar Kelimeler: Adolesan; Aile; Beden imajı; Bozulmuş yeme davranışı.

Adolescence is a transition period in which physical, cognitive, emotional, and psychosocial changes occur, and the adulthood of an individual is shaped during that period (1). Along with these significant changes, body image, which expresses an individual's perceptions, thoughts and feelings about the appearance of their own body, is reformed under the influence of several factors such as physical appearance, social environment, personal experiences and cultural influences (2, 3). However, the evaluation of adolescents' body image might result in a misperception of their own body rather than its actual size and shape. Thus, dysfunctional evaluations of body image can affect eating attitudes and might cause disordered eating behaviour.

Body image dissatisfaction that develops during adolescence is associated with health factors such as depression, self-esteem and impaired eating behaviours (4-6). Similarly, eating attitudes, which include beliefs and behaviours about food and eating, change significantly during this period and are influenced by the complex interaction of individual, family and environmental factors (7, 8). Understanding the factors influencing these structures is important for identifying at-risk populations and implementing effective interventions since body image dissatisfaction and eating attitudes are critical in influencing adolescents' health behaviours. If the necessary measures cannot be taken, these disordered behaviours can negatively impact the quality of life by leading to insecurity in social relationships, social isolation and reduced participation in daily activities (9, 10).

Recent studies have intensely examined the role of family-related factors in shaping adolescents' body image and eating attitudes. As a result, family structure, parental education, and occupational status are considered the most important determinants that may contribute to developing health-related behaviours in adolescents (11, 12). Particularly, constituents of family structure, such as family type, parental loss and parents' socio-economic status, may influence adolescents' coping mechanisms, self-esteem, and eating behaviours. It has also been shown that negative comments and attitudes about the body in the family can lead to malnutrition during this period (13). Nevertheless, the results of the studies that examined family-related factors in the literature have been found to be inconsistent since the diversity of norms, expectations, and ideals regarding body image and eating attitudes are different in societies (11-13). These differences can especially lead to inconsistencies in the results of cross-cultural studies. Therefore, more research is required on how family structure, parental characteristics, and environmental factors are influenced in different cultural contexts.

Since cultural or demographic differences play an important role in forming body image and eating attitudes in adolescents, this study examined the relationship between family factors on adolescent body image and eating attitudes. The study findings will contribute to strategies that can be developed for school-based educational programmes, community health interventions, psychological support services, and cultural and socio-economic context-specific policies to promote all aspects of healthy development and prevent the onset of eating disorders in adolescents.

Material and Methods

Participants and Procedure

This cross-sectional study was conducted in Bayburt (Türkiye) with 300 adolescents (133 girls and 167 boys) in grades 9 to 12. Three government high schools in the city centre of Bayburt were chosen to apply the questionnaires. Participants approved a participant information statement, consent form, and questionnaires, followed by the approval of the Research Ethics Committee of Bayburt University (Ethical Approval number 320, date 09.10.2023). Participants were appointed according to the availability of the class in each school, and parental consent forms were conveyed to parents through students two days prior to data collection. If the parent approved the consent form, the adolescent consent form and questionnaires were supplied to the adolescents, and the participants filled out the forms. The data was obtained by researchers in classes under the supervision of teachers. Survey completion took 50 minutes with a maximum of 30 students per class. Furthermore, this study performed a power analysis with the G Power program to determine the sample size. The sample size was determined to be 264 with 95% power.

Measures

General information and familial characteristics were obtained by applying a personal information questionnaire, which researchers prepared. In this questionnaire, some background information such as age, weight, height, family type, the occupation of parents, and the education level of parents were obtained. In the study, Body mass Index (BMI) for age z score was obtained using the WHO Antro Plus application from height and body weight measurements. BMI classification used for according to the World Health Organization as follows.

Overweight: $>+1SD$ (equivalent to BMI 25 kg/m² at 19 years)

Obesity: $>+2SD$ (equivalent to BMI 30 kg/m² at 19 years)

Thinness: $<-2SD$

Severe thinness: $<-3SD$

Body image was measured using Body Cathexis and Self Scale. The Turkish validity and reliability of the scale was conducted (14, 15). This scale consists of 40 clauses aimed to measure the satisfaction of the different parts of the body. Respondents indicate the extent to which they are satisfied with their body parts using a 5-point Likert scale ranging from 1(very dissatisfied) to 5 (very satisfied). Scores range between 40 to 200, and the cut-off point was determined as 135; scores <135 indicate lower dysfunctional body image.

The eating attitude was determined by the Eating Attitude Test 26 (EAT 26), which was revised from the original 40-item questionnaire. The Turkish validity and reliability of the scale was conducted (16, 17). This test consists of 26 items and three subscales, which are personal information (A, seven items), eating habits (B, 26 items), and eating behaviour (C, 5 items). Scale items are evaluated using the 6-point Likert-type scaling method (1=never, 2=rarely, 3=sometimes, 4=often, 5=usually, 6=always). The total score is achieved by counting the scores as follows: scores from 1 to 3 are recoded as 0, 4 is recoded as 1, 5 as 2, and 6 is recoded as 3. Total scores range from 0 to 78, and scores >20 indicate the eating attitude's deterioration.

Statistical analysis

The statistical analysis was carried out using the SPSS package program (version 22.0). The conformity of the variables to the normal distribution was examined using analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk tests). The mean and standard deviation, and distribution range were calculated by descriptive analysis. Pearson's correlation analysis was used to find the correlation between the variables. P value below 0.05 was considered statistically significant.

Results

The study included 300 adolescents, 133 (44.3%) girls and 167 (55.7%) boys. The mean BMI of the adolescents participating in the study was 21.3 ± 3.4 kg/m², and the majority of participants had a BMI for age in the normal range (66.0%). The mean number of siblings of the adolescents was 3.3 ± 1.5 , and most had nuclear families (80.0%). The mother of 4 adolescents and the father of 8 adolescents were dead. Most mothers had completed primary education (36.6%), and most fathers had

completed secondary education (33.9%). The majority of mothers were housewives (83.4%) and the majority of fathers were self-employed (41.8%) (Table 1).

Table 1: General and Family-related Characteristics of Adolescents

General and Familial Characteristics	n (%)
Gender	
Girl	133 (44.3)
Boy	167 (55.7)
Total	300 (100)
Age	
13-14 years	47 (15.7)
15-16 years	166 (55.3)
17-18 years	87 (29.0)
BMI (kg/m²) (Mean \pmSD)	21.3 ± 3.4
BMI for age	
Severe thinness	7 (2.3)
Thinness	39 (13.0)
Normal	198 (66.0)
Overweight	45 (15.0)
Obesity	11 (3.7)
Family type	
Nuclear family	240 (80.0)
Extended family	49 (16.3)
Fragmented family	11 (3.7)
Number of siblings (Mean \pmSD)	3.3 ± 1.5
Mother information	
Dead	4 (1.3)
Alive	296 (98.7)
Mother's education level (n=296)	
Illiterate	7 (2.4)
Literate	10 (3.4)
Primary school graduate	108 (36.6)
Middle school graduate	68 (22.9)
High school graduate	64 (21.6)
University graduate	39 (13.1)
Mother's profession (n=296)	
Housewife	247 (83.4)
Public Officer	27 (9.2)
Laborer	11 (3.7)
Self-employment	11 (3.7)
Father information	
Dead	8 (2.7)
Alive	292 (97.3)
Father's education level (n=292)	
Illiterate	3 (1.1)
Literate	10 (3.4)
Primary school graduate	57 (19.5)
Middle school graduate	56 (19.2)
High school graduate	99 (33.9)
University graduate	67 (22.9)
Father's profession(n=292)	
Unemployed	8 (2.7)
Public Officer	88 (30.1)
Laborer	74 (25.3)
Self-employment	122 (41.8)

The mean of Body Cathexis and Self Scale Total Score was 154.9 ± 23.5 , and the statistical difference between boys and girls is significant ($p < 0.05$). According to the EAT-26 survey, 19.0% of adolescents had a score of 20 or above, and the score from this survey between girls and boys was not found to be statistically significant ($p > 0.05$) (Table 2).

The relationship between family-related factors and adolescents' eating attitudes is shown in Table 3. A statistically significant difference was found between family type ($p = 0.009$), maternal mortality status ($p = 0.004$), father's occupation ($p = 0.035$), and adolescents' eating attitude type. No significant difference was found between other family-related factors and eating attitudes ($p > 0.05$).

Table 2: Body Image and Eating Attitudes of Adolescents

	Gender		Total (n=300)	p
	Girls (n=133)	Boys (n=167)		
Body Cathexis and Self Scale Total Score (Mean \pm SD)	148.8 \pm 23.3	159.8 \pm 22.5	154.9 \pm 23.5	p<0.01*
Eating Attitudes Test (EAT-26) (Median (Min-max))	10.0 (0.0-58.0)	9.0(0.0-57.0)	9.0 (0.0-58.0)	0.52**
Eating Attitudes Test (EAT-26)	n (%)	n (%)	n (%)	
Normal	136 (43.6)	137 (56.4)	243 (81.0)	0.68***
Anorexia Nervosa	27 (47.4)	30 (52.6)	57 (19.0)	

*Independent T test; **Mann Whitney U Test; *** Chi-Square Test (Likelihood)
The significance level was considered as $p < 0.05$

Table 3.: Comparison of Family-related Factors with Eating Attitudes

Family-related Factors	Eating Attitudes Test (EAT-26)			p*
	Normal	Anorexia Nervosa	Total	
Family type	n(%)	n(%)	n(%)	
Nuclear family	202 (84.2)	38(15.8)	240 (100)	0.009
Extended family	32 (65.3)	17 (34.7)	49 (100)	
Fragmented family	9 (81.8)	2 (18.2)	11 (100)	
Number of siblings (Median (min-max))	3.0 (1.0-12.0)	3.0(1.0-11.0)	3.0 (1.0-12.0)	0.51
Mother Information	n(%)	n(%)	n(%)	
Dead	1 (25.0)	3 (75.0)	4 (100)	0.004
Alive	242 (81.8)	54 (18.2)	296 (100)	
Mother's education level (n=296)				
Illiterate	6 (85.7)	1 (14.3)	7 (100)	0.12
Literate	8 (80.0)	2 (20.0)	10 (100)	
Primary school graduate	94 (87.0)	14 (13.0)	108 (100)	
Middle school graduate	48 (70.6)	20 (29.4)	68 (100)	
High school graduate	52 (81.3)	12 (18.7)	64 (100)	
University graduate	34 (87.2)	5 (12.8)	39 (100)	
Mother's profession (n=296)				
Housewife	203 (83.2)	44 (17.8)	247 (100)	0.88
Public Officer	22 (81.5)	5 (18.5)	27 (100)	
Laborer	8 (72.7)	3 (27.3)	11 (100)	
Self-employment	9 (81.8)	2 (18.2)	11(100)	
Father Information				
Dead	6 (75.0)	2 (25.0)	8(100)	0.66
Alive	237 (81.2)	55 (18.8)	292 (100)	
Father's education level (n=292)				
Illiterate	3 (100)	0 (0)	3(100)	0.38
Literate	9 (90.0)	1(10.0)	10 (100)	
Primary school graduate	51 (89.5)	6 (10.5)	57 (100)	
Middle school graduate	44 (78.6)	12 (21.4)	56 (100)	
High school graduate	76 (76.8)	23 (23.2)	99 (100)	
University graduate	54 (80.6)	13 (19.4)	67 (100)	
Father's profession (n=292)				
Unemployed	5 (62.5)	3 (37.5)	8 (100)	0.035
Public Officer	64 (72.7)	24 (27.3)	88 (100)	
Laborer	63 (85.1)	11 (14.9)	74 (100)	
Self-employment	105 (86.1)	17 (13.9)	122 (100)	

* Chi-Square Test (Pearson)
The significance level was considered as $p < 0.05$

The relationship between family-related factors and adolescents' body image is shown in Table 4. No significant

difference was found between family-related factors and eating attitudes ($p>0.05$).

Table 4. Comparison of Family-related Factors with Body Image		
Family-related Factors	Body Cathexis and Self Scale Total Score (Mean±SD)	p*
Family type		
Nuclear family	155.4±23.1	0.51
Extended family	154.4±24.7	
Fragmented family	147.1±27.1	
Number of siblings		
r	-0.044	
p**	0.22	
Mother Information		
Dead	154.8±23.3	0.41
Alive	164.5±38.1	
Mother's education level (n=296)		
Illiterate	158.4±17.8	0.97
Literate	154.8±29.7	
Primary school graduate	154.7±24.1	
Middle school graduate	157.0±23.6	
High school graduate	153.9±23.3	
University graduate	153.1±22.3	
Mother's profession (n=296)		
Housewife	155.0±23.9	0.69
Public Officer	157.7±21.8	
Laborer	146.8±14.2	
Self-employment	153.4±26.6	
Father Information		
Dead	154.6±23.4	0.20
Alive	167.2±25.5	
Father's education level (n=292)		
Illiterate	173.3±28.2	0.14
Literate	162.6±23.5	
Primary school graduate	152.1±22.3	
Middle school graduate	157.7±22.2	
High school graduate	153.6±25.9	
University graduate	155.0±21.4	
Father's profession(n=292)		
Unemployed	159.1±27.3	0.93
Public Officer	155.6±23.4	
Laborer	154.5±24.8	
Self-employment	154.3±22.6	
* One-Way Anova Test, **Pearson Correlation Test		

Discussion

This study investigated adolescents' body image and eating attitudes and examined their associations with family-related factors. The results obtained from this study provided critical insights into these factors and their role in affecting adolescent health. It is known that a homogeneous distribution of the gender group in the sample is important for addressing gender-specific health needs. This study included a relatively balanced gender

distribution, which ensures the reflection of the results for both genders.

Given the potential for physiological, social, and psychological development to vary in adolescents, the sample comprised individuals in adolescence's early and middle stages. The reason for conducting the research in this age group is that the adolescent period, which is a transition period, is important for body image and eating attitudes (2,7). Focusing on early and middle adolescence

aims to provide a comprehensive understanding of developmental conditions and related factors during this transitional period. The mean BMI was 21.3 ± 3.4 kg/m², and the majority of the participants had BMI for age classified as normal. However, a significant proportion of adolescents were overweight, obese, underweight, and severely underweight. These results indicate the double burden of malnutrition in adolescents. These findings are also important for plans and policies that may be developed to control adolescent body weight and are a public health concern.

The majority of adolescents come from nuclear families, which is in line with the widespread use of the nuclear family structure in Türkiye with modernisation (18). The mean sibling number was determined as 3.3 ± 1.5 . It is thought that the number of siblings may be effective in shaping the economic and psychological problems experienced during this period by influencing factors such as the distribution of family resources, parental interest, and support structures. Studies have indicated that the number of siblings in a household can significantly affect adolescents' economic and psychological experiences by affecting parental attention, financial resource allocation, and emotional support. Furthermore, an increase in the number of siblings can lead to decreased parental support, such as time, money, and emotional energy, and potentially affect children's cognitive and emotional development, limiting access to nutritious foods and creating competition for parental attention, thus increasing stress levels among adolescents (19, 20). Fragmented families accounted for a small percentage, which may warrant further investigation into their impact on adolescent well-being.

Regarding parents' education status, the results correlate with the education level of Türkiye. In parallel with the increasing level of education in Türkiye as a result of national policies, the literacy rate in the sample is also found to be high, with a significant proportion of fathers and mothers having a university degree (21). Regarding occupation, the majority of mothers are housewives (83.4%), whereas fathers work in different professions such as self-employment or public officer (30.1%). This situation emphasises the traditional gender roles in society and shows that they contribute to the family income with different budgets. Concerning the parents' educational and professional profiles, it can be seen that the sample has a mixed socio-economic profile.

The study assessed body image and eating attitudes using the Body Cathexis and Self Scale and EAT-26. When the Body Cathexis and Self Scale Total scores were analysed by gender, it was found that boys had more positive body image than girls ($p < 0.05$). The literature suggests that girls are exposed to more social and cultural pressures (22, 23). Therefore, this situation is thought to affect adolescent girls' satisfaction with their body image. In contrast, no significant gender-related difference was observed for EAT-26 scores ($p > 0.05$). It was found that 19% of adolescents were at risk of anorexia nervosa, and there was no significant difference between genders. This finding emphasises the importance of addressing the eating attitudes of both genders in adolescents. However, in terms of gender, there is no difference in the EAT-26 score, and the significant differences in body image together suggest that although body dissatisfaction is more common in girls, this does not necessarily translate into higher rates of eating disorders compared to boys. This difference may reflect differences in coping mechanisms or social influences between the genders.

The study investigated the relationship between family-related factors and eating attitudes. The results revealed that family type, mother's mortality status, and father's profession were significantly related to eating attitudes. In contrast, other factors such as number of siblings, parental education level, and mother's profession were not significantly related. The statistical significance between family type and eating behaviour suggests that adolescents with large and fragmented families may have more unhealthy eating attitudes than those with nuclear families ($p = 0.009$). It is thought that adolescents' dietary habits, eating attitudes, and behaviours may deteriorate with the stressful environment and reduced parental support that may result from disrupting family integrity (11, 12). Similar to the literature, statistical significance was found between maternal mortality status and EAT-26 in this study ($p = 0.004$). It is believed that mothers have an important role in developing and maintaining healthy eating behaviours in their children. The literature has reported that maternal loss during adolescence can be a stressor that can trigger maladaptive coping mechanisms, including disordered eating behaviours, and is associated with an increased risk of developing depression, anxiety, and subsequent eating disorders (11, 12). The death of a mother can be a potential cause of an eating disorder. Therefore, psychosocial interventions are important to improve health-related factors in adolescents experiencing maternal loss.

It is worth noting that family-related factors have a multifaceted relationship with adolescents' eating attitudes. Previous studies pointed out that economic or emotional stress associated with parents' occupational status might affect adolescents' mental health and, consequently, their eating attitudes (24, 25). Similarly, parents' marital status, unemployment status, and duration of employment were found to be associated with the risk of suicidal ideation in children (26, 27). Another finding of this study is that there is a significant relationship between the father's occupation and eating attitudes. The prevalence of eating disorders was found to be higher among adolescents whose fathers were unemployed ($p=0.035$). On the contrary, no significant relationship was found between parental education level or the mother's occupation and adolescents' eating attitudes ($p>0.05$). These results reveal that in Turkish society, where a patriarchal social pattern is often observed, the effect of family structure on eating attitudes is more likely affected by the father's leadership role in the family, and this forms a strong family dynamic and economic basis. Therefore, family-based interventions aimed at promoting an optimal home environment in the community are thought to be important in the prevention of eating disorders in adolescents.

On the other hand, in terms of body image, the study's results indicated no statistically significant association between family-related factors and body image ($p > 0.05$). The lack of significant differences between family types ($p = 0.51$) suggests that structural differences in families, such as being part of a nuclear, extended, or fragmented family, do not play a critical role in shaping adolescents' perceptions of their bodies. Similarly, no significant correlation was observed between the number of siblings and body image ($r=-0.044$, $p=0.22$). Furthermore, no significant difference was found between parents' occupation and education level and adolescents' body image ($p > 0.05$). These findings suggest that qualitative aspects (e.g. family and sibling relationships) should be examined when assessing adolescent body image rather than quantitative data (e.g. family size or number of siblings). Moreover, although parental socioeconomic or educational factors are not determinants of adolescents' body image, according to results from this study, various influences still may primarily affect body image. Recent studies have shown that many conditions, such as social media, family pressure, social pressure, and depression, affect body image during adolescence (5, 28). Notably, there were no significant differences ($p > 0.05$) related to parental death status in the study. This finding suggests

that psychosocial effects due to parental loss may not translate directly into measurable differences in body image scores. It emphasises the limited role of family-related factors in adolescents' body image formation. It is suggested that plans and policies concerning body image that can be implemented may need to consider external influences, such as social media usage and peer relationships, rather than just considering family variables. Future research should investigate other psychosocial and cultural factors better to understand the complex development of body image during adolescence.

Limitations

There are some limitations to the study that need to be considered. Firstly, this study is a cross-sectional study. More large-scale longitudinal studies are needed to investigate the causal relationships of the findings. Furthermore, the study's cross-sectional nature may limit the generalisability of findings to other populations or regions. This study did not comprehensively examine other potential influences, such as peer relationships, media exposure, or mental health status on body image and eating attitudes, so these factors also need to be included in future research.

Conclusion

In conclusion, the study's results suggest that programmes should be developed to promote positive body image, especially among girl adolescents. In addition to this, considering the role of family in the development of adolescents, family-based studies should focus on healthy home environments that may reduce the risk of poor eating habits. Likewise, psychological and nutritional plans and interventions should also be planned to prevent eating disorders in adolescents who have experienced parental loss (especially the loss of the mother). On the other hand, the results showed that socioeconomic indicators such as parental occupation and education are important for studies of healthy eating behaviours in adolescents. Future studies are needed to explore these factors in the development of adolescents. Furthermore, this study designates the need for education and support programmes on adolescents' body image and healthy eating attitudes. Future research should also investigate the underlying factors, such as differences in cultural influences, peer dynamics, and social media use in the development of adolescent health.

Declarations

This manuscript has not previously been published elsewhere.

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Conflicts of interest

The authors declare that they have no conflict of interest.

Ethics approval

The study protocol obtained ethical approval from the Research Ethics Committee of Bayburt University (Ethical Approval number 320, date 09.10.2023).

Availability of data and material

The authors confirm that study data can be accessed if needed.

Authors' contributions

Conceptualization: ÖE, TE, AŞ

Data curation: ÖE, TE, AŞ

Formal analysis: ÖE

Funding acquisition: TE, AŞ

Methodology: ÖE, TE, AŞ

Project administration: TE, AŞ

Visualization: ÖE, TE, AŞ

Writing – original draft: ÖE, TE, AŞ

Writing – review & editing: ÖE, TE, AŞ

All authors reviewed, revised, and approved the final manuscript and made important intellectual contributions.

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