

THE ASSOCIATION BETWEEN PARENTING STYLE AND SOCIAL MEDIA USE INTENSITY WITH THE RISK OF EATING DISORDERS AMONG FEMALE ADOLESCENTS AT SMPN 3 MAKASSAR IN 2026

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ABSTRACT

Background : Eating disorders among female adolescents represent a significant mental health concern influenced by various psychosocial factors, including parenting style and the social media use intensity. Unsupportive parenting and exposure to idealized body standards on social media are believed to contribute to an increased risk of eating disorders. This study aimed to analyze the association between parenting style and social media use intensity with the risk of eating disorders among female adolescents at SMPN 3 Makassar.

Methods : This study employed an observational analytic design with a cross-sectional approach involving 265 respondents selected through purposive sampling technique. Parenting style was assessed using the Parental Authority Questionnaire–Short Version (PAQ-SV), social media use intensity was measured using the Social Networking Time Use Scale (SONTUS), and the risk of eating disorders was assessed using the Eating Attitudes Test-26 (EAT-26). Data were analyzed using the chi-square test and binary logistic regression.

Results : The bivariate analysis showed significant associations between parenting style and the risk of eating disorders ($p = 0.020$), as well as between social media use intensity and the risk of eating disorders ($p = 0.008$). Multivariate analysis showed that permissive parenting (OR = 2.309; 95% CI = 1.021–5.221; $p = 0.044$) and very high social media use intensity (OR = 6.369; 95% CI = 1.743–23.269; $p = 0.005$) were the most dominant factors associated with an increased risk of eating disorders.

Conclusion : Therefore, family-based preventive approaches are needed, including the promotion of authoritative parenting and education on controlled social media use, to reduce the risk of eating disorders among female adolescents.

Keywords : parenting style; social media; eating disorders

INTRODUCTION

Adolescence is a transitional period characterized by significant biological, psychological, and social changes.¹ During this phase, adolescents experience alterations in body composition and increased sensitivity to body image and social evaluation, making them more vulnerable to eating disorders, particularly among female adolescents.² According to the World Health Organization (WHO), approximately 14 million people in the world, including 3 million children and adolescents, are affected by eating disorders. Between 1990 and 2021, the incidence increased from 301 to 355 per 100,000 population, with prevalence in females nearly 86% higher than in males.³

Eating disorders are abnormal eating behaviors characterized by excessive or insufficient energy intake.

These disorders reflect an imbalance between the body's energy requirements and energy consumption, which may be influenced by an obsession with ideal body standards.⁴ Eating disorder is not only impact nutritional status and mental health, but can also lead to serious medical complications, including metabolic disorders, electrolyte imbalances, anemia, menstrual cycle disturbances, decreased estrogen levels, and an increased risk of infertility, which may affect future reproductive health.⁵

Parenting style has a crucial role in shaping adolescents's emotional regulation and health-related behaviors. Authoritative parenting tends to provide balanced emotional support and control, thereby protecting adolescents from risky behaviors, including disordered eating. In contrast, authoritarian and permissive parenting

styles are often characterized by imbalanced control and emotional responsiveness, which may increase vulnerability to psychological distress and maladaptive coping behaviors, including unhealthy eating patterns.⁶ In addition to family-related factors, the high intensity of social media use also contributes to an increased risk of eating disorders. Social media often presents content promoting idealized body standards, which can trigger social comparison, leading to body image dissatisfaction and extreme dieting behaviors. Higher intensity of social media use increases exposure to such content, reinforcing maladaptive eating behaviors.²

Based on these considerations, this study aims to analyze the association between parenting style and social media use intensity with the risk of eating disorders among female adolescents at SMPN 3 Makassar. The findings of this study are expected to serve as a basis for developing targeted promotive and preventive interventions to support the health of female adolescents.

LITERATURE REVIEW

Parenting Style

Parenting style is the pattern of interactions between parents and children, including how parents set rules, provide emotional support, guide behavior, and instill values and norms.⁷ Theoretically, parenting styles are understood through two main dimensions: control and warmth. Based on these dimensions, Baumrind classified parenting styles into three main types: authoritarian, characterized by high control and low warmth; permissive, characterized by high warmth and low control; and democratic, characterized by a balance between control and warmth.⁸ Among adolescents, imbalances in these dimensions may contribute to behavioral problems, psychological stress, and an increased risk of eating disorders.

Social Media Use Intensity

Social media use intensity refers to the frequency and duration of using digital platforms such as Instagram, TikTok, WhatsApp, and Snapchat in daily life. For adolescents, social media serves not only as a means of communication but also as a space for self-expression and identity formation.⁹ Exposure to beauty content can influence how adolescents perceive themselves and their bodies. Repeated exposure to unrealistic beauty standards, idealized body shapes, and extreme dieting trends commonly found on social media may lead to body dissatisfaction, which in turn increases the risk of unhealthy eating behaviors and the development of eating disorders.¹⁰

Eating Disorder

Eating disorders are psychological conditions characterized by abnormal eating patterns and distorted

perceptions of body shape and weight.¹¹ Eating disorders are classified into several types, including anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant/restrictive food intake disorder, pica, rumination disorder, and other specified feeding or eating disorder.¹² The consequences of eating disorders include malnutrition, significant weight loss, decreased bone density, reproductive disorders, delayed physical and cognitive development, reduced resistance to infection, and negative impacts on learning ability and academic performance.^{13,14} Eating disorders require serious attention and appropriate interventions to prevent long-term complications.

MATERIAL AND METHODS

This study was conducted at SMPN 3 Makassar using an observational analytic design with a cross-sectional approach in January 2026. The study sample consisted of 265 respondents selected using a purposive sampling technique.

The inclusion criteria were female adolescent enrolled as students at SMPN 3 Makassar, 12–15 years, having and living with parents, being in good health, owning a mobile phone, using social media, and willing to participate in the study by signing the informed consent. The exclusion criteria in this study were female adolescent with a history of eating disorders clinically diagnosed by healthcare professionals and have severe mental disorders that could interfere with the questionnaire completion process.

Data collection was conducted after respondents received an explanation of the study's objectives, procedures, and benefits, and provided their consent through an informed consent form. The research instruments consisted of several parts, including an informed consent form, respondent demographic data, the Parental Authority Questionnaire–Short Version (PAQ-SV) to assess parenting styles, the Social Networking Time Use Scale (SONTUS) to measure social media use intensity, and the Eating Attitudes Test-26 (EAT-26) to assess the risk of eating disorders.

Parenting styles were categorized into democratic, authoritarian, and permissive. The questionnaire used to assess parenting styles consisted of 20 items divided into three sections. The first section represented democratic parenting, the second section represented authoritarian parenting, and the third section represented permissive parenting. The scores for each section were summed and averaged, and the section with the highest mean score was identified as the dominant parenting style, classifying respondents into one of the three parenting style categories. The social media use intensity was categorized into low, moderate, high, and very high based on the total score obtained. A score of 5–9 indicates low intensity, a score of 10–14 indicates moderate intensity, a score of 15–19 indicates high intensity, and a score of >19 indicates very high intensity. The risk of eating disorders was determined based on the EAT-26 score, with a score of ≥ 20 categorized as being at risk.

The data were analyzed using univariate, bivariate, and multivariate analysis. Univariate analysis was performed to describe respondent characteristics and the distribution of study variables. Bivariate analysis was employed the chi-square test to assess the association between independent and dependent variables. Variables found to be significant were further analyzed using binary logistic regression to identify the most dominant factors associated with the risk of eating disorders. A p-value of < 0.05 was considered

statistically significant. This study protocol was approved by the Ethics Committee of Universitas Islam Negeri Alauddin Makassar (No. E.146/KEPK/FKIK/XII/2025).

RESULTS

This study involved 265 respondents from SMPN 3 Makassar. Table 1 presents the distribution of respondents' characteristics, including age, grade, and parental status.

Table 1. Distribution of respondents' characteristics

Characteristics	Frequency (n)	Percentage (%)	Total (%)
Age			
12 years	38	14,34	100
13 years	73	27,55	
14 years	101	38,11	
15 years	53	20,00	
Class			
Grade 7	69	26,00	100
Grade 8	110	41,50	
Grade 9	86	32,50	
Parental status			
Complete	244	92,10	100
Single	21	7,90	

Based on age distribution, the majority of respondents were 14 years old with 101 respondents (38.11%), followed by 13 years with 73 respondents (27.55%), 15 years with 53 respondents (20.00%), and 12 years with 38 respondents (14.34%). Based on class, most respondents were in grade 8 with 110 respondents (41.50%), followed by grade 9 with

86 respondents (32.50%) and grade 7 with 69 respondents (26.00%). Based on parental status, the majority of respondents had both parents with 244 respondents (92.10%), while 21 respondents (7.90%) had single parents.

Table 2. Distribution of study variables

Characteristics	Frequency (n)	Percentage (%)	Total (%)
Parenting style			
Democratic	169	63,77	100
Authoritarian	63	23,78	
Permissive	33	12,45	
Social media use intensity			
Low	132	49,81	100
Moderate	87	32,83	
High	34	12,83	
Very high	12	4,53	
Risk of eating disorder			
Not at risk	195	73,60	100
At risk	70	26,40	

Based on the results of the univariate analysis in Table 2, the distribution of study variables showed that the majority of respondents had a democratic parenting style

with 169 respondents (63,77%), followed by authoritarian parenting style with 63 respondents (23,78%) and permissive parenting style with 33 respondents (12,45%).

Based on social media use intensity, the majority of respondents were in the low category with 132 respondents (49,81%), followed by the moderate category with 87 respondents (32,83%), the high category with 34 respondents (12,83%), and the very high category with 12 respondents (4,53%).

Based on the risk of eating disorders, the majority of respondents were categorized as not at risk with 195 respondents (73,60%), while 70 respondents (26,40%) were categorized as at risk.

Table 3. Association between parenting style with the risk of eating disorders

Parenting Style	Risk of eating disorder				Total		p-value*
	No risk		At risk		n	%	
	n	%	n	%			
Democratic	134	79,3	35	20,7	169	100	0,020
Authoritarian	40	63,5	23	36,5	63	100	
Permisif	21	63,6	12	36,4	33	100	

*Chi-square test

Based on the results of bivariate analysis in Table 3 regarding the association between parenting style and the risk of eating disorders, it was found that in the democratic parenting group, 134 respondents (79,3%) were not at risk and 35 respondents (20,7%) were at risk of eating disorders. In the authoritarian parenting group, 40 respondents (63,5%) were not at risk and 23 respondents (36,5%) were at risk of

eating disorders. Meanwhile, in the permissive parenting group, 21 respondents (63,6%) were not at risk and 12 respondents (36,4%) were at risk of eating disorders. The chi-square test results indicated a statistically significant association between parenting style and the risk of eating disorders (p-value = 0,020).

Table 4. Association between social media use intensity and the risk of eating disorders

Social media use intensity	Risk of eating disorder				Total		p-value*
	No risk		At risk		n	%	
	n	%	n	%			
Low	103	78,0	29	22,0	132	100	0,008
Moderate	62	71,3	25	28,7	87	100	
High	26	76,5	8	23,5	34	100	
Very high	4	33,3	8	66,7	12	100	

*Chi-square test

Based on the results of bivariate analysis in Table 4 regarding the association between the social media use intensity and the risk of eating disorders, it was found that in the low-intensity group, 103 respondents (78,0%) were not at risk and 29 respondents (22,0%) were at risk of eating disorders. In the moderate-intensity group, 62 respondents (71,3%) were not at risk and 25 respondents (28,7%) were at risk of eating disorders. In the high-intensity group, 26

respondents (76,5%) were not at risk and 8 respondents (23,5%) were at risk of eating disorders. In the very high-intensity group, 4 respondents (33,3%) were not at risk and 8 respondents (66,7%) were at risk of eating disorders. The chi-square test results indicated a statistically significant association between the intensity of social media use and the risk of eating disorders (p-value = 0,008).

Table 5. Multivariate analysis of factors associated with the risk of eating disorders

Variable	OR (95%CI)	p-value*
Parenting style		
Democratic	Reference = 1,0	0,041
Authoritarian	1,957 (1,015-3,773)	0,045
Permissive	2,309 (1,021-5,221)	0,044
Social media use intensity		
Low		
Moderate	Reference = 1,0	0,038

High	1,430 (0,759-2,692)	0,268
Very high	1,010 (0,408-2,504)	0,982
	6,369 (1,743-23,269)	0,005

*Logistic regression test

Based on the results of multivariate analysis in Table 5, it was found that the most dominant variable categories were permissive parenting style and very high intensity of social media use.

Parenting style was significantly associated with the risk of eating disorders. Authoritarian parenting style had a 1,957 times higher risk of eating disorders compared to democratic parenting style (OR = 1,957; 95% CI = 1,015–3,773; $p = 0,045$). Permissive parenting style had a 2,309 times higher risk compared to respondents with democratic parenting style (OR = 2,309; 95% CI = 1,021–5,221; $p = 0,044$).

The result of social media use intensity showed that very high intensity was significantly associated with the risk of eating disorders. Using low intensity as the reference category, the obtained values were OR = 6,369, 95% CI = 1,743–23,269, and $p = 0,005$. This indicates that respondents with very high intensity had a 6,369 times higher risk of eating disorders compared to those with low intensity. Meanwhile, moderate intensity (OR = 1,430, 95% CI = 0,759–2,692, $p = 0,268$) and high intensity (OR = 1,010, 95% CI = 0,408–2,504, and $p = 0,982$) did not show a statistically significant association with the risk of eating disorders.

DISCUSSION

The results of this study indicate a significant association between parenting styles and social media use intensity with the risk of eating disorders among female adolescent at SMPN 3 Makassar. Authoritarian and permissive parenting styles were found to increase the risk of eating disorders. Authoritarian parenting is characterized by strict control, high demands, and a lack of emotional support and two-way communication. These conditions can lead to psychological distress and increased stress among adolescents. In response, adolescents tend to develop unhealthy eating behaviors as a coping mechanism and a means of exerting self-control. This aligns with the study of Hampshire et al., who reported that parenting styles characterized by high control and low responsiveness are associated with an increased risk of eating disorders.¹⁵

In permissive parenting, parents tend to provide excessive freedom without clear boundaries, which may increase the likelihood of uncontrolled eating behaviors in adolescents. This aligns with the study of Nida et al., which indicated that permissive parenting is associated with children's eating behaviors.¹⁶ In contrast, the risk of eating disorders tends to be lower in adolescents raised with a democratic parenting style. Democratic parenting is characterized by a balance between appropriate control and high emotional support, as well as open communication between parents and children, leading to more adaptive

emotional regulation and better self-control, thereby reducing the likelihood of disordered eating behaviors and the risk of eating disorders. This aligns with a study of Kohli, who identified democratic parenting as a protective factor against the risk of eating disorders.¹⁷

The social media use intensity has a significant association with the risk of eating disorders. This can be explained through psychosocial mechanisms. Repeated exposure to unrealistic ideal body images on social media encourages social comparison and the internalization of appearance standards, leading to body dissatisfaction. This dissatisfaction acts as a mediator for the development of unhealthy eating behaviors, such as extreme dietary restriction, binge eating, or compensatory behaviors. Furthermore, social media algorithms tend to reinforce exposure to similar content, creating a form of digital pressure that increases the risk of eating disorders.¹⁸ This aligns with the study of Dahlgren et al., who reported that social media use is closely associated with increased eating disorder symptoms through the internalization of appearance ideals and high social pressure, where adolescents frequently exposed to image-based and video-based content show higher levels of unhealthy eating symptoms.¹⁹

These findings align with the study of Khotimah, which reported a significant association between TikTok addiction and eating disorders among high school adolescents, where higher levels of social media addiction were correlated with a higher prevalence of eating disorders.²⁰ However, although theoretically higher intensity of social media use is associated with increased risk of eating disorders, this study found a lower risk in the high-intensity group. This finding may be explained by differences in the type of content consumed. Respondents in the high-intensity group may have been exposed not only to idealized body content but also to entertainment, educational, or socially supportive content that may have neutral or even protective effects. Additionally, the number of respondents in this group was smaller compared to the moderate-intensity group, which may have influenced the proportion of risk observed.

This study has several limitations. Data collection relied on self-report questionnaires, which depend on the respondents' understanding. Furthermore, the instrument used in this study only assessed the risk of eating disorders, not the clinical diagnoses established healthcare professionals. Therefore, the findings may not fully represent actual clinical conditions.

CONCLUSION AND RECOMMENDATIONS

The findings of this study indicate that the majority of parents have adopted a democratic parenting style, most respondents reported low intensity of social media use, and the majority of female adolescents were not at risk of eating

disorders. There were significant associations between parenting style and the risk of eating disorders, as well as between the intensity of social media use and the risk of eating disorders among female adolescents at SMPN 3 Makassar. Multivariate analysis showed that permissive parenting style and very high intensity of social media use were the variables most strongly associated with the risk of eating disorders.

Based on these findings, it is recommended that female adolescents increase their awareness of healthy eating behaviors, develop a positive body image, and use social media wisely. Parents are encouraged to adopt a democratic parenting style with open communication and emotional support, while also provide appropriate supervision of social media use. Schools are encouraged to support through health education, counseling services, and promotive and preventive programs related to eating behaviors and body image. Future researchers are encouraged to include additional variables such as stress, sleep quality, and peer pressure, and to use longitudinal or interventional study designs to further explore causal relationships.

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