

The Effect of Problematic Internet Use on Body Image in Teenage Girls Who Use Tiktok in Indonesia

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Abstract. Problematic internet use among adolescent girls on TikTok in Indonesia has become increasingly evident, as prolonged engagement exposes them to unrealistic beauty ideals. Such content, often emphasizing thinness and flawless skin, may foster negative social comparisons, body dissatisfaction, and heightened psychological distress. The present study investigated the impact of problematic internet use on body image among female adolescents aged 12–21 who actively use TikTok. Employing a quantitative design with purposive sampling, data were obtained from 349 participants. Results of a simple regression analysis demonstrated a significant negative association between problematic internet use and body image ($t = -5.90$, $p = 0.001$). The R^2 value of 0.0887 indicated that problematic internet use accounted for 8.87% of the variance in body image. These findings underscore the detrimental consequences of excessive and uncontrolled TikTok use, and highlight the importance of preventive strategies, awareness programs, and responsible media practices by content creators.

Keywords: Adolescents, body image, problematic internet use

1 Introduction

TikTok, a short-form video-based social media application originating from China, experienced rapid growth since its launch in 2016 and became highly popular in Indonesia starting in 2019. By July 2024, the number of its users in Indonesia had reached 157.6 million [1]. Adolescents, particularly adolescent girls, were the dominant users of the platform as they perceived TikTok as a means of self-expression and social interaction [2]. However, behind its popularity, TikTok also raised concerns regarding its impact on adolescents' body image. Adolescents were an age group in the process of forming their identity and were highly influenced by their social environment [3]. Exposure to TikTok content that frequently portrayed unrealistic beauty standards could have triggered unhealthy social comparisons and decreased satisfaction with their own bodies [4]. This phenomenon was closely related to problematic internet use, in which adolescents excessively used social media to seek validation and social recognition, ultimately affecting their mental health and body image [5, 6]. Problematic internet use has been shown to negatively affect adolescent mental health by increasing symptoms of depression, anxiety,

and psychological distress. These effects are thought to occur through mechanisms such as maladaptive social comparison, fear of missing out, and sleep disruption [7].

A preliminary study conducted on five adolescent girls showed that social media, including TikTok, had a significant influence on how they perceived their own bodies and caused psychological pressures such as stress and insecurity. Although several studies had examined the relationship between social media and body image, the results remained varied some indicated a positive correlation [8, 9], while others found no significant association [10].

Based on this background, the present study sought to address a gap in the literature by examining the relationship between problematic internet use and body image among adolescent girls who use TikTok in Indonesia. Problematic use, characterized by excessive engagement and exposure to content promoting idealized body shapes or extreme dieting, has been shown to reduce body satisfaction through mechanisms such as upward social comparison and the internalization of unrealistic beauty standards [11, 12]. This investigation is important for understanding the impact of social media on adolescents' psychological well-being and for informing the design of relevant intervention strategies.

2 Literature Review

Body image referred to an individual's perception of themselves, particularly regarding their physical appearance, with a focus on the body shape of adolescents. During adolescence, individuals experienced bodily changes due to puberty, and at that time, it was crucial for them to be able to accept the changes occurring in their bodies [13]. Body image could be defined as a person's experience of their own physical condition, which included perspectives, thoughts, and behaviors related to their perceived or interpreted physical appearance [14].

There were five aspects of body image. Appearance evaluation referred to the overall assessment of one's physical condition. Appearance orientation described the extent to which individuals cared about their appearance and made efforts to maintain and enhance it. Body area satisfaction indicated the degree to which individuals felt satisfied with specific parts of their body. Overweight preoccupation measured how concerned individuals were about their body weight. Self-classified weight referred to how individuals perceived their own weight, ranging from very underweight to overweight [14].

Problematic internet use referred to internet addiction, internet misuse, internet dependency, and compulsive internet use, which indicated an excessive and unhealthy attachment to internet-based technology [15]. Problematic Internet Use (PIU) was defined as a pattern of inappropriate or excessive internet use that resulted in disturbances or problems in various areas of an individual's life, such as social, psychological, occupational, or academic domains [16].

There were three dimensions of problematic internet use. The obsession dimension referred to a mental preoccupation with the internet, characterized by habitual daydreaming and fantasizing about the virtual world, as well as anxiety and depression resulting from the lack of online activity. The neglect dimension involved ignoring daily activities, basic needs, or responsibilities. The control disorder dimension referred to difficulties in regulating internet use, such as spending more time online than originally intended [16].

3 Method

This study aimed to examine the effect of problematic internet use on body image among adolescent girls. Therefore, a quantitative approach with a correlational study design was employed to achieve this objective. Problematic internet use was measured using the Problematic Internet Use Questionnaire (PIUQ), which was originally developed [16]. The researcher modified the PIUQ scale, which had previously been adapted [17]. This measurement tool consisted of 18 items that assessed three dimensions: obsession, neglect, and control disorder. Body image was measured using the Multidimensional Body Self-Relations Questionnaire - Appearance Scale (MBSRQ-AS), consisting of 34 items that measured five aspects: appearance evaluation, appearance orientation, body area satisfaction, overweight preoccupation, and self-classified weight. This instrument was also modified by the researcher [18]. The population in this study consisted of adolescent girls in Indonesia. According to recent data, the population was estimated at 73,000,000 individuals. The sample size in this study was 271 participants, determined using Isaac's table. Sampling was conducted using a non-probability sampling technique, specifically purposive sampling.

4 Result

4.1 Demographic Data

Demographic data were used to describe the basic characteristics of the respondents in this study, namely female adolescent TikTok users in Indonesia. The information included age, city of origin, and body weight.

Table 1. Demographic Data

Characteristics		Frequency	Percentage
Adolescent Girls	Late Adolescence	275	78,8 %
	Early Adolescence	74	21,2 %
City of Origin	Big City	138	39,54 %
	Small Town	211	60,46 %
Body weight	Overweight	239	68,48 %
	Underweight	109	31,23 %

Data Description

Table 2. Data Description

Variable	N	Min	Max	Mean	SD
Problematic Internet Use	349	18	54	44,7	13,2
Body Image	349	81	94	74,0	7,59

Based on these results, the scores of each variable were categorized into three levels: high, moderate, and low. The category scores were determined using the following calculation method:

Table 3. Variable Score Categorization

Variable	Low	Medium	High
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Problematic Internet Use	14,9 %	69,1 %	16,0 %
Body Image	15,8 %	67,6 %	16,6 %

Based on the results presented in the table above, the majority of respondents (69.1%) were classified in the moderate category of problematic internet use, while 14.9% fell into the low category and 16.0% into the high category. This indicates that most respondents exhibit a concerning level of problematic internet use, with a smaller proportion at a particularly high level. Regarding body image, the majority of respondents (67.6%) reported a moderate perception, 16.6% were in the high category, and 15.8% in the low category. These findings suggest that most respondents hold a relatively positive perception of their body image.

Normality Test

In this study, a normality test was conducted using the Kolmogorov-Smirnov method.

Table 4. Normality Test Results

<i>Kolmogorov-Smirnov</i>	p
0,0370	0,727

Based on the table above, it can be seen that the results of the normality test showed a normal distribution in this study. The results indicated that the p-value of 0.727 was greater than the α value of 0.05, thus it could be concluded that the data in this study followed a normal distribution. Accordingly, the normality assumption was satisfied, confirming that the dataset is appropriate for subsequent parametric statistical analyses.

Linearity Test

Table 5. Linearity Test

Variable	Problematic Internet Use	Body Image
Problematic Internet Use	Pearson's rho	
	p-value	
Body Image	Pearson's rho	-0,302
	p-value	-0,001

The linearity test assessment showed that the variable problematic internet use towards body image had a significance value of <0.001 and a Pearson's rho value of -0.302 , indicating that the relationship was linear and negative. This meant that the higher the level of problematic internet use, the lower the individual's perception of body image. This negative relationship suggested that problematic internet use could have a detrimental effect on an individual's body image, likely due to exposure to body idealization content on social media, which could influence one's perception of their own body.

Simple Linear Regression Test

Table 6. Simple Linear Regression Test

Variable	Coef-	t	p	R-Squared
Total <i>Problematic Internet Use</i>	-0,173	-5,90	<0,001	0,887

Based on the table above, the results of the simple linear regression analysis indicated that problematic internet use significantly affected body image in adolescent girls. The regression coefficient value ($B = -0.173$) showed a negative relationship, meaning that the higher the level of problematic internet use, the lower the body image score of the individual. This relationship was found to be statistically significant with a t-value of -5.90 and a p-value less than 0.001 ($p < 0.001$). Furthermore, the R-squared value of 0.887 indicated that 88.7% of the variation in body image could be explained by problematic internet use. These findings suggested a strong and significant negative impact of problematic internet use on the body image of adolescent girls.

Difference Test

Table 7. Difference Test of Problematic Internet Use

Factor	N	p	Mean	Median	SD	SE
General	349	<0,001	44,7	44	13,2	0,708
Adolescent Girls						
Late Adolescence	275	0,046	43,9	43,0	13,1	0,789
Early Adolescence	74		47,4	48,5	13,5	1,57
City of Origin						
Big City	138	0,094	43,2	43,0	14,0	1,19
Small Town	211		45,6	45,0	12,7	0,871

Based on the results presented in the difference test table, there was a significant difference in the level of Problematic Internet Use (PIU) between early adolescent and late adolescent girls, with mean scores of 47.4 and 43.9, respectively, and a p-value of 0.046 ($p < 0.05$). This indicated that early adolescents tended to have a higher level of PIU. However, no significant difference was found based on city of origin, as adolescents from large cities had a mean score of 43.2, while those from smaller cities had a mean score of 45.6, with a p-value of 0.094 ($p > 0.05$). Therefore, city of origin did not significantly affect the level of PIU.

Table 8. Difference Test of Body Image

Factor	N	p	Mean	Median	SD	SE
General	349	<0,001	74,0	74	7,59	0,406
Adolescent Girls						
Late Adolescence	275	0,311	74,2	75,2	7,09	0,428
Early Adolescence	74		73,2	72,5	9,21	1,07

		City of Origin				
Big City	138	0,959	74,0	75,0	7,99	0,680
Small Town	211		74,0	74,0	7,33	0,505

Based on the results presented in the difference test table, there was a significant difference in body image perception, with a mean score of 74.0 and a significance value of $p < 0.001$. However, no significant differences were found based on demographic factors such as age, body weight, and city of origin. The mean body image scores for late and early adolescents were 74.2 and 73.2, respectively ($p = 0.311$); Therefore, age, and city of origin did not significantly influence the body image perception of female adolescent TikTok users in this study.

5 Discussion

The findings of the study indicated a negative relationship between problematic internet use and body image among adolescent girls who used TikTok. The higher the level of problematic internet use, the lower the positive perception of their bodies. This finding was supported by various studies that demonstrated how exposure to social media content promoting idealized beauty standards negatively impacted body image [19, 20, 11].

Demographically, early adolescents exhibited higher levels of compared to late adolescents, which was presumed to be due to their less mature self-regulation [21]. However, no significant differences were found in problematic internet use or body image based on city of residence or body weight. This supported the notion that psychosocial factors, such as the internalization of beauty standards and social comparison, played a more influential role than geographic characteristics [22, 23].

From a psychological perspective, problematic internet use dimensions such as obsession, neglect, and control disorder contributed to excessive exposure to idealized body content, which in turn affected body image components such as appearance evaluation and weight-related anxiety. Although problematic internet use only partially explained variations in body image, the findings underscored problematic social media use as a significant factor in the development of negative body image. A limitation of this study was its cross-sectional design, which did not allow for the observation of long-term changes. Additionally, it did not account for other contributing factors such as social support, personal experiences, or mental health conditions, all of which may also influence body image.

6 Conclusion

Based on the results of the study, it could be concluded that there was a significant influence of problematic internet use on body image perception among female adolescent TikTok users in Indonesia. The study explicitly demonstrated that the higher the level of unhealthy or uncontrolled internet use, the lower the adolescents' positive perception of their own bodies. Therefore, the working hypothesis stating that problematic internet use had an effect on body image was accepted. This negative influence suggested that excessive exposure to social media content promoting unrealistic beauty standards could reduce adolescents' self-acceptance regarding their physical appearance. Consequently, these findings highlighted the importance of supervision and education about healthy social media use among adolescents, particularly girls.

The findings were expected to encourage female adolescent TikTok users to be more mindful and critical in using social media, especially when consuming and comparing themselves to content that promotes unrealistic beauty ideals. Adolescents were advised to limit their time on TikTok and be more selective in following accounts or content that positively contribute to their mental well-being and self-image. It was also important to provide adolescents with the understanding that self-worth is not solely determined by physical appearance, but also by character, abilities, and personal achievements.

References

- [1] Fatika AR. 10 Negara dengan Pengguna TikTok Terbesar, Indonesia Urutan Berapa? GoodStates. 2024.
- [2] Adawiyah DPR. Pengaruh Penggunaan Aplikasi TikTok terhadap Kepercayaan Diri Remaja di Kabupaten Sampang. *J Komun.* 2020;14(2):135–48. doi:10.21107/ilkom.v14i2.7504.
- [3] Latifah O, Rahmadani, Yarni L. Perkembangan Masa Remaja. *Dewantara J Ilmu Sos Pendidik dan Hum.* 2024;3(2):187–94. doi:10.56910/jispendiora.v3i2.1578.
- [4] Chinta S, Ghassani A, Lidwina M. Dampak Standar Kecantikan bagi Perempuan di Indonesia. *Pros Semin Nas.* 2023;1440–8.
- [5] Garvin G. Hubungan antara Kesepian dengan Problematic Internet Use pada Remaja. *Psikostudia J Psikol.* 2019;8(1):15. doi:10.30872/psikostudia.v8i1.2384.
- [6] Asmawati A, Pramesty AF, Afiah TR. Pengaruh Media Sosial terhadap Gaya Hidup Remaja. *CICES.* 2022;8(2):138–48. doi:10.33050/cices.v8i2.2105.
- [7] Keles B, McCrae N, Grealish A. A systematic review: The influence of social media on depression, anxiety and psychological distress in adolescents. *Int J Adolesc Youth.* 2020;25(1):79–93. doi:10.1080/02673843.2019.1590851.
- [8] Reflin O, Radjaki N, Kristinawati W, Fakultas Psikologi, Universitas Kristen Satya Wacana. Hubungan Intensitas Penggunaan Media Sosial TikTok dengan Body Image pada Generasi Z. *J Innov Res Knowl.* 2024;4(2):813–24.
- [9] Azahra SA. Pengaruh Sosial Media terhadap Body Image pada Mahasiswa di Universitas Bhayangkara Jakarta Raya. *Indones J Bus Innov Technol Humanit.* 2024;1(1):31–43.
- [10] Pamirma MYE, Satwika YW. Hubungan antara paparan media dengan body image pada remaja perempuan. *Character J Penelit Psikol.* 2022;9(6):2–10. Available from: <https://ejournal.unesa.ac.id/index.php/character/article/view/47316>
- [11] Blackburn MR, Hogg RC. #ForYou? The impact of pro-ana TikTok content on body image dissatisfaction and internalisation of societal beauty standards. *PLoS One.* 2024;19(8):1–29. doi:10.1371/journal.pone.0307597.
- [12] Zeng W, Luo Y, Chen H. Does thin-ideal internalization increase adolescent girls' problematic social media use? The role of selfie-related behaviors and friendship quality. *Youth Soc.* 2024;56(3):447–74. doi:10.1177/0044118X231176849.
- [13] Burns RB. *Konsep Diri: Teori, Pengukuran, Perkembangan dan Perilaku.* Jakarta: Arcan; 1993.
- [14] Cash TF, Pruzinsky T. *Body Image: A Handbook of Theory, Research, and Clinical Practice.* New York: Guilford Press; 2003.
- [15] Tokunaga RS, Rains SA. An evaluation of two characterizations of the relationships between problematic internet use, time spent using the internet, and psychosocial problems. *Hum Commun Res.* 2010;36(4):512–45. doi:10.1111/j.1468-2958.2010.01386.x.

- [16] Demetrovics Z, Szeredi B, Rózsa S. The three-factor model of internet addiction: The development of the problematic internet use questionnaire. *Behav Res Methods*. 2008;40(2):563–74. doi:10.3758/BRM.40.2.563.
- [17] Agriyani MA, Widyastuti T. Adaptasi Skala Problematic Internet Use Questionnaire (PIUQ) versi Indonesia. *Psikodimensia Kaj Ilm Psikol*. 2023;22(2):157–67. doi:10.24167/psidim.
- [18] Itani D. Body Image, Self-Esteem and Academic Achievement of 8th and 11th Grade Males and Females. *Lebanese American University*. 2011.
- [19] Liu J. The influence of the body image presented through TikTok trend videos and its possible reasons. In: *Proc 2nd Int Conf Lang Art Cult Exch (ICLACE 2021)*. 2021;559:359–63. doi:10.2991/assehr.k.210609.072.
- [20] Shahzad S, Zeib F. Exploring the influence of TikTok videos on body image: An insight into body shaming and body dissatisfaction phenomenon. *Migration Lett*. 2024 Mar.
- [21] Marino C, Gini G, Vieno A, Spada MM. A comprehensive meta-analysis on problematic Facebook use. *Comput Human Behav*. 2018;83:262–77. doi:10.1016/j.chb.2018.02.009.
- [22] Vondráčková P, Gabrhelík R. Prevention of internet addiction: A systematic review. *J Behav Addict*. 2016;5(4):568–79. doi:10.1556/2006.5.2016.085.
- [23] Tiggemann M, Anderberg I. Social media is not real: The effect of “Instagram vs reality” images on women’s social comparison and body image. *New Media Soc*. 2020;22(12):2183–99. doi:10.1177/1461444819888720.