

## The Effect of Tiktok Usage Behavior on Body Image in Jenderal Soedirman University Students

### *Pengaruh Perilaku Penggunaan Tiktok Terhadap Citra Tubuh pada Mahasiswa Universitas Jenderal Soedirman*

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#### **Abstract**

*This study aims to determine the effect of gender, socioeconomic status, social support, TikTok usage duration, TikTok body shape content exposure, and TikTok user activity level on body image. We try to combine theory from Cash and Pruzinski (2002), Grogan (2001), and uses and effects theory by Sven Windahl (1979) to identify various variables (including TikTok) that can affect body image. This research is quantitative cross-sectional. It involved 220 students taken from the population of 19,992 students using an incidental sampling technique. Data analysis used univariate, bivariate (chi-square), and multivariate (multiple logistic regression). Variables related to body image are social support ( $p = 0.033$ ), body shape content exposure ( $p = 0.001$ ), and user activity level ( $p = 0.00$ ). The Variable that affects body image is the user activity level in the low-high category ( $p = 0.005$ , OR = 10.644).*

**Keywords:** TikTok, body image, student

#### **Abstrak**

*Penelitian bertujuan untuk mengetahui pengaruh jenis kelamin, status sosioekonomi, dukungan sosial, durasi penggunaan TikTok, paparan konten bentuk tubuh TikTok, dan tingkat aktivitas pengguna TikTok pada citra tubuh. Kami mencoba mengkombinasikan teori dari Cash and Pruzinski (2002), Grogan (2001), dan teori uses and effects oleh Sven Windahl (1979) untuk mengidentifikasi berbagai variabel (termasuk TikTok) yang dapat berpengaruh terhadap citra tubuh. Penelitian ini berjenis kuantitatif cross sectional. Populasi penelitian adalah 19.992 mahasiswa Unsoed dengan sampel berjumlah 220. Teknik penentuan sampel menggunakan incidental sampling. Analisis data menggunakan univariat, bivariat (chi-square), dan multivariat (regresi logistik berganda). Variabel yang berhubungan terhadap citra tubuh adalah dukungan sosial ( $p = 0,033$ ), paparan konten bentuk tubuh ( $p = 0,001$ ), dan tingkat aktivitas pengguna ( $p = 0,00$ ). Variabel yang berpengaruh terhadap citra tubuh adalah tingkat aktivitas pengguna pada rentang kategori rendah-tinggi ( $p = 0,005$ , OR = 10,644).*

**Kata kunci:** TikTok, citra tubuh, mahasiswa

## INTRODUCTION

Body image is a picture of an individual's body that is formed from their mind to show what they are like (Schilder, 1950). Negative body image has been known to harm health conditions, both mentally and physically. There have been many findings that state the relationship between body image with anxiety, depression, and eating disorders (Kavehfarsani et al., 2020; Prnjak et al., 2021; Soares Filho et al., 2020; Verrastro et al., 2020).

Cash and Pruzinski (2002) & Grogan (2001) explain that body image is influenced by five factors. These factors are gender, mass media, interpersonal relationships, age, and socio-culture. Women are more at risk of developing negative body image than men. The mass media has a role to provide an "ideal" picture of a person's body that is accepted by society. Interpersonal relationships are related to the tendency to compare oneself with others and feedback on input from the social environment. In terms of age, negative body image or body dissatisfaction often first appears during adolescence. And the last factor is the sociocultural demands on the ideal body shape and conditions that can lead into negative body image.

Study on Accounting and Nutrition students at Universitas Jenderal Soedirman (Unsoed) in 2018 showed that 52.1% of accounting students and 43.8% of nutrition students had a negative body image (Mulyani et al., 2018). Similar findings in Coimbatore, India showed 77.6% of female students had body dissatisfaction. The ideal body concept shown by the Western media (such as a thin, slim, and tall body shape) no longer only applies to women in the West but also applies to women in the Asian region (Ganesan et al., 2018).

One important factor that influences body image is mass media exposure. Mass media provides certain characteristics of the ideal body shape for both genders. Good-looking men are often shown as people of normal weight with muscular bodies. Meanwhile, beautiful women are often portrayed unrealistically as underweight people. In the past, old media like magazines are the main exposure to the ideal body shape. But as technology grows, new media like social media replaces the role of old media in providing exposure to the ideal body shape (Cash & Pruzinsky, 2002).

The new media effects, especially social media, on a person depends on how much exposure they receive. The uses and effect theory by Sven Windahl (1979) explains how media use produces multiple effects on individuals. The basic assumption is that media effects will be determined by the duration of usage, the type of media content, and the relationship between the user and the media content (Sendjaja, 1999). The new media also had some advantages over old media that can strengthen its effect on the user, including (1) enabling interaction between users; (2) allowing the simultaneous receipt, change, and redistribution of cultural objects; (3) providing global contacts; and (4) providing modern/ postmodern subjects (McQuail, 2011).

Various studies have shown social media influences on body image (Cohen et al., 2017a; Fardouly et al., 2017). Research shows that the use of Facebook in young women aged 18-29 years has a significant positive effect on the internalization of views of thin bodies as an ideal body and body shape-checking routines. Study conducted on an 18-25-year-old age group in Australia showed that the use of Instagram had a significant effect on self-objectification and became a mediating variable in the behavior of comparing appearances to celebrities. Instagram users who often see pictures of fit bodies also have a big effect on body image.

In the context of body image, new media like social media has its strong points. Social media can show pictures of the ideal body shape that feel closer and more real to the user (for example pictures from friends, family, co-workers, celebrities, or even oneself). This is different

from the old media which mainly showed pictures of good-looking icons that didn't feel close to the audience such as models and celebrities. This makes the influence of social media feel more real and closer to its users (Fardouly et al., 2017).

Currently, the new social media TikTok has arrived in the virtual world. TikTok became known in 2019 and is in great demand by teenagers. TikTok comes from the Chinese technology company ByteDance and is the international version of the Douyin app. TikTok is a platform for sharing short videos that are 15 to 60 seconds long (Kaye et al., 2020). Reporting results from eMarketer in October 2020 show that TikTok users in Indonesia are estimated to have reached 22 million users and become the country with the second largest number of TikTok users in the world after The United States (Williamson, 2020). Survey results from *Statista* show the largest proportion of TikTok users as of April 2022 is aged 18-24 years with a percentage of 41.7%, followed by the age group 25-34 years with a percentage of 31% (Ceci, 2022).

There is currently little research on the impact of TikTok on body image due to its young age. However, several studies have been conducted to discuss the potential influence of TikTok on body image. TikTok continues to popularize the "ideal" body shape considered attractive to the public. One of TikTok's iconic cultures is that there are challenges for users. Sometimes the challenges also show the user's body shape. In addition, the algorithm owned by TikTok can harm the user's body image (Khattab, 2020; Liu, 2021). The ForYourPage (FYP) feature on TikTok (like the "explore" feature on Instagram) is designed to adapt the type of content that users see and like. So TikTok only presents certain content that users often interact with. TikTok's algorithm causes its users to be highly segmented. This is where TikTok becomes a threat to the body image of its users, those who already feel to have an imperfect body shape will continue to be exposed with content about the ideal body shape by TikTok. Then these conditions can lead to a negative body image. Furthermore, TikTok can encourage unhealthy diet and exercise behaviors (Liu, 2021).

Although social media provides benefits in human life, social media brings harm to mental health. One of them is the negative influence on body image (body image). We tried to provide current findings on TikTok effects on Body Image, especially in adolescents and young adults. Considering the similarities between TikTok's features and other social media (including likes, comments, and displaying videos), we hypothesize that TikTok may have negative effects on body image. Therefore, a study was carried out with the title "The Effect of Tiktok Usage Behavior on Body Image in Jenderal Soedirman University Students" to determine the impact of using TikTok on body image.

## METHOD

The type of research conducted is quantitative research with a cross-sectional design. Data was collected in May-June 2022 at Universitas Jenderal Soedirman (Unsoed). The population in this study were all Unsoed students with a total of 19,992 students. The required sample size is 185 respondents and 220 respondents were collected. The sampling technique used was incidental sampling with adjustments to the proportion of the number of samples for each faculty. Random sampling could not be conducted because the researcher did not have data on Unsoed student TikTok users. We hypothesize that there is an effect of gender, sociocultural factors, and TikTok usage behavior on body image in students of Universitas Jenderal Soedirman.

We try to combine two theories in determining the independent variables that have the potential to affect body image. From Cash and Pruzinski (2002) & Grogan (2001), we try to

formulate the variables of gender, sociocultural conditions (including socioeconomic status and social support), and mass media. Then we try to explore the variables of mass media using the uses and effects theory approach by Sven Windahl (1979). Three TikTok usage variables that we have formulated are TikTok usage duration, TikTok body shape content exposure, and TikTok user activity level. The dependent variable in this study is body image. The analysis used was univariate, bivariate analysis (chi-square), and multivariate analysis (multiple logistic regression).

The instrument used in this research has passed the ethical test by the Health Research Ethics Commission of the Unsoed Faculty of Health Sciences with no.681/EC/KEPK/III/2022. The questionnaire used to measure social support variables is the Multidimensional Scale of Perceived Social Support (MSPSS). The questionnaire adapted and developed to measure body shape content exposure variables is the Facebook Questionnaire (FBQ), while the user's activity level variable uses an adaptation of the questionnaire used by Stein, Krause, and Ohler (2021). Body image variables were measured using the Body Shape Questionnaire version 16B (BSQ-16B). Cut off points for social support, TikTok usage duration, TikTok body shape content exposure, TikTok user activity level, and body image variables described in the result section.

Validity and reliability tests were conducted at Muhammadiyah University Purwokerto (UMP). The questionnaire passed the validity test if the Pearson correlation ( $r$  count)  $>$   $r$  table (0.361) and the sig. (2-tailed) or  $p$ -value  $\leq$  0.05. The questionnaire passes the reliability test if Cronbach Alpha  $>$  0.6. The questionnaires used to measure body shape content exposure, user activity level, social support, and body image variables were tested for validity and reliability. The results of validity and reliability are described in the points below.

- a. In the body shape content exposure questionnaire, question number 1 regarding the user's profile photo did not pass the validity test. This question was deleted because a TikTok user's profile photo may not show the user's photos.
- b. In the user activity level variable, the question items that did not pass were numbers 1, 4, and 6. Question number 1 was deleted because it was considered irrelevant (this question asked about a user's profile photo like number 1 in the body shape content exposure questionnaire). Question number 6 (about viewing the number of likes) was deleted because it has been represented in question item number 7 (giving likes). Question item number 4 (about reading the comment) is changed by asking for more specific content related to body image. The changes are "I see other people's accounts/ profiles" to "I see other people's accounts/ profiles that often post content about diet, exercise, beauty, fashion/ clothing, models/ celebrities, or dancing/ dancing".
- c. All questions on social support and body image variables passed the validity test.
- d. All variables pass the reliability test.

## RESULT

### Demographic Characteristics

Demographic characteristics in table 1 shows that the respondents in this study were mostly in the young adult age group (77.23%), studying in the group of science and engineering faculty (54%), year of class 2018 (39.55%), female (79.09%), had a high socioeconomic status (60%), have high social support (66.18%). Respondents' social support categorized as low if the score, high if the score, and moderate if the score is between 34.8 and 61.2.

**Table 1** Demographic Characteristics of Students

Variable	Category	Frequency (n=220)	%
Age Group	Adolescent (15-19)	50	22.73
	Young Adult (20-24)	170	77.23
Faculty	Group of science and engineering faculty	116	54
	Group of sosial dan humanities faculty	97	46
Year of Class	2016	1	0.45
	2017	1	0.45
	2018	87	39.55
	2019	43	19.55
	2020	48	17.27
	2021	50	22.73
Gender	Female	174	79.09
	Male	46	20.91
Socioeconomic Status	Low Income (<Rp3,100,000/ month)	88	40
	High Income (≥Rp3,100,000/ month)	132	60
Social Support	Low (score ≤34.8)	4	1.81
	Moderate (score 34.8-61.2)	66	30
	High (score ≥61.2)	150	66.18

### TikTok Usage and Body Image

TikTok usage in table 2 shows that most respondents have high duration of TikTok usage (57.73%), moderate exposure body shape content (50%), and moderate user activity level (51%). Whereas in the body image variable, most respondents were categorized as having a positive body image (55.46%).

**Table 2** TikTok Usage and Body Image of Student

Variable	Category	Frequency (n=220)	%
TikTok Usage Duration	Low (<90 minutes/day)	93	42.27
	High (≤90 minutes/ day)	127	57.73
TikTok Body Shape Content Exposure	Low (score ≤16.333)	32	14.54
	Moderate (score 16.333-25.667)	110	50
	High (score ≥25.667)	78	35.46
TikTok User Activity Level	Low (score ≤39.667)	94	42.73
	Moderate (score 39.667-62.333)	112	51
	High (score ≥62.333)	14	6.37
Body Image	Positive (score ≤51)	122	55.46
	Negative (score >51)	98	44.54

### Correlation between Demographic Characteristic and Tiktok Related Variables

The chi-square analysis shows the variables that correlate with body image are social support ( $p = 0.033$ ), TikTok body shape content exposure ( $p = 0.001$ ), and TikTok user activity level ( $p = 0.00$ ). The chi-square analysis is presented in table 3 below.

**Table 3** Correlation between Demographic Characteristic and Tiktok related variables

Variable	Category	Body Image				P
		Positive		Negative		
		$\Sigma$	(%)	$\Sigma$	(%)	
Gender	Female	29	63	17	37	0.318
	Male	93	53.4	81	46.6	
Socioeconomic Status	Low Income (<Rp3,100,000/month)	54	61.4	34	38.6	0.193
	High Income ( $\geq$ Rp3,100,000/month)	68	51.5	64	48.5	
Social Support	Low	3	75	1	25	0.033
	Moderate	28	42.4	38	57.6	
	High	91	55.5	98	44.5	
TikTok Usage Duration	Low	66	52	61	48	0.281
	High	56	60.2	37	39.8	
TikTok Body Shape Content Exposure	Low	25	78.1	7	21.9	0.001
	Moderate	65	59.1	45	40.9	
	High	32	41	46	78	
TikTok User Activity Level	Low	65	69.1	29	30,9	0.000
	Moderate	55	49.1	57	50.9	
	High	2	14.3	12	85.7	

Researchers then conducted a multivariate analysis using the enter method multiple logistic regression. From the results of the chi-square analysis, the variables declared as candidates for multivariate analysis were socioeconomic status, social support, TikTok Body Shape Content Exposure, and TikTok user activity level. However, the researcher still included all variables because of the findings of previous research by Gonzales IV & Balshill (2021), Marengo *et al* (2018), and Martanatasha & Primadini (2019) which stated that there was an effect of gender and social media usage duration on body image.

The first modeling of multiple logistic regression shows that the variable that passes the multivariate test ( $p < 0.05$ ) is TikTok User Activity Level in the low-high category range. Then the researcher continues the modeling until no more variables can be excluded from the modeling. The multivariate test was then conducted until the fifth modeling and found that the variable that had an effect on body image was the user's activity level in the low-high category range ( $p = 0.005$ , OR = 10.644). The final modeling results from the multivariate test are shown in table 4 below.

**Table 4** Final Model of Multiple Logistic Regression

Variables	B	Sig. (p value)	Exp(B)	95% CI for Exp(B)	
				Lower	Upper
Gender	0.329	0.380	0.386	1.390	0.660
Social Support (Low-Moderate)	1.204	1.230	0.328	3.334	0.299
Social Support (Low-High)	0.294	1.215	0.809	1.342	0.124
TikTok Body Shape Content Exposure (Low-Moderate)	0.716	0.519	0.168	2.046	0.740
TikTok Body Shape Content Exposure (Low-High)	1.014	0.554	0.067	2.756	0.930
TikTok User Activity Level (Low-Moderate)	0.564	0.327	0.085	1.757	0.926
TikTok User Activity Level (Low-High)	2.365	0.841	0.005	10.644	2.046

## DISCUSSION

This study shows that out of three TikTok usage behavior, the user activity level has a significant effect on body image. We only found a correlation between TikTok body shape content exposure and body image. There is no correlation between TikTok usage duration and body image. The highest body shape content exposure is fashion, but other content (sport, beauty, model/ celebrity, and dancing) is also considered to have high exposure. Fashion content also being the most searched and followed content. The most frequent activities on TikTok are giving likes, comments, and seeing accounts that post body image-related content. The average use of TikTok per day is one hour and 55 minutes.

Additional variables in this research are gender, socioeconomic status, and social support. The only variable that correlates with body image is social support. Interestingly, we did not find any correlation/ effect of gender on body image. This is contrary to popular belief that females have a higher risk of having body image problems. Women tend to have body image due to social pressure on women to strive for a slender, toned body shape. Most would choose to be thinner than they currently are. Those body shapes are associated with youth, control, and success. This pressure promotes the objectification of the body in women and the disproportionate allocation of energies to keep in shape (Grogan, 2001). Much research already supported this belief such as done across U.S. that stated women have higher occurrences of probable eating disorders and elevated symptoms of eating disorders compared to men (Gonzales & Blashill, 2021). It may be a sign to consider that body image started to become a problem for men. Another research in Semarang, Indonesia finds that 57.9% of male college students aged 18-21 have a negative body image (Sugiar & Dieny, 2018). Different from women that pursue a slim body, men drive for a muscular body (Gonzales & Blashill, 2021).

This research can be another proof of social media activity's negative effects on body image, especially TikTok as the new one. Past research already demonstrated how social media activity can affect the body image of their user. Research on college students shows comments on body shape content on Instagram and Facebook that reflect beauty standards can increase negative body image (Hogue & Mills, 2019). Likes, as a common feature on social media, also already proved to have a negative effect on body image. Another research on college students reported that high frequencies of likes-based activity on Instagram can lead to facial dissatisfaction (Tiggemann et al., 2018). Even research conducted in the Korean context also reported that high social media activity (such as using posts, likes, and comments features) among young women significantly influences body dissatisfaction (Lee & Lee, 2017).

This research result regarding body shape content exposure is opposed by past research

that already shows its effect on body image. Research showed that Facebook and Instagram usage to view appearance-based content can affect young women's body image by internalizing thin-ideal body values, body shape surveillance, and drive for thinness (Cohen et al., 2017b). Similar findings show being frequently exposed to “fitspiration image” on Instagram is associated with greater concern about body image (Fardouly et al., 2017). These differences may be due to exposure to content that may positively contribute to better body image in media social. This is proven by an experiment to understand the effect of body positivity (the social media movement to embrace the imperfect body and changing beauty standards in society). It shows that body positivity exposure to social media may increase body satisfaction and appreciation (Cohen et al., 2019). Having in-line results, an experiment on women aged 18-30 years also showed that “Instagram vs Reality” trends affect the decrease of body image dissatisfaction. “Instagram vs Reality” is a trend to show a comparison between the ideal body that is often shared on social media and the natural/ real body (Tiggemann & Anderberg, 2019).

Unlike previous research, we did not find relationships or effects of social media usage duration especially TikTok with body image. Research on male and female students in North Italy shows using social media for more than two hours can significantly affect body image (Marengo et al., 2018). Similar research in Jakarta, Indonesia shows there is a significant effect of the combination between usage frequencies and duration with body image in women Instagram users (Martanatah & Primadini, 2019). This result difference may occur because respondents have body image-related content exposure less than non-body-image-related content. TikTok has an interaction-based algorithm, which means that certain types of content exposure are determined by user interaction with the content such as giving likes, comments, or shares (Klug et al., 2021). We found that from the 17 items questionnaire in the user activity variable, the 12-item questionnaire was most answered with a range of “very rarely” and “sometimes”. It can mean that from overall TikTok usage duration, most respondents are not exposed to body image related content.

Only 1 of the 3 behavioral factors for using TikTok shows a significant effect on body image as depicted in the uses and effect theory. While the theory of uses and effects state the relationship between media usage duration and its effect, it's very important to mention that we can only measure overall TikTok usage duration and not only specifically measure duration from getting body image content exposure. So, the data of the TikTok usage duration variable that we get cannot fully measure the TikTok duration effect on the body image. Meanwhile, on the frequency of exposure to content, new media is more flexible, allowing users to get exposure to broader content. This is different from the old media which has segmented content according to the user's wants and needs. So even though users are exposed to content that harms body image, at the same time it is also possible for users to get content that has a positive impact on body image.

This research is still far from perfect. As a new social media, there is little research about TikTok, especially its effect on body image. We hardly find a comparable reference about TikTok's effects on body image and mostly use other social media research (such as Instagram and Facebook) as references, both for instrument adaptation and discussing the results. We also tried to standardize the frequency of answer choices so the respondents have the same perception. We believe the instrument still can be developed so it has more accuracy to measure TikTok usage behavior than in-line TikTok algorithms.



## CONCLUSION

The variable that had an effect on body image was the user's activity level in the low-high category range ( $p = 0.005$ ,  $OR = 10.644$ ). High activity level of TikTok increased the risk of having a negative body image by 10.644 times more than the low. Even though TikTok brings a new wave to the entertainment world, this wave can inevitably bring harm to human health. TikTok offers a short video format that seems interesting, diverse, and interactive, but unknowingly may have hidden effects on its user. It is only a matter of time for researchers to reveal the true face of TikTok. This should be an alert for TikTok users to start limiting the usage of TikTok to maintain good mental health while exposed with body image related content.

We hope this research can be a starting point for other researchers to find a better understanding of TikTok effects for mental health, especially body image. Since we could not get precise data on TikTok users in the population, we had to use a less effective sampling technique which is incidental sampling. This may have an impact on the accuracy of the research results. We highly recommend researchers in the future use a better sampling technique. We suggest other research to develop better instruments that have the ability to measure usage behavior more precisely and in line with the TikTok algorithm. We also suggest not only measuring content that has a negative effect on body image, but also content that has positive effect on body image at the same time.

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